Chemical Weapons Proliferation

Policy Issues Pending an International Treaty

2ND ANNUAL CONFERENCE
ON CHEMICAL WARFARE
VRIJE UNIVERSITEIT BRUSSEL,
16 MARCH 1990

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Preface

On 16 March 1990, the *Vrije Universiteit Brussel* (VUB) and the *Groupe de Recherche et d'Information sur la Paix* (GRIP) organized the 2nd Annual Conference on Chemical Warfare on the theme: "Chemical Weapons Proliferation: Policy Issues Pending an International Treaty". The crisis over the chemical production plant at Rabta in Libya (1989) pointed to the alarming extent of the problem of chemical weapons proliferation. To curb the transfer of production facilities and raw materials for chemical weapons, export controls are needed on international and national levels. The accent of the Brussels conference was on problems involving the implementation of such control mechanisms.

The first part of the present publication analyses the mechanisms behind the Imhausen/Rabta affair and the way in which the government of the Federal Republic of Germany reacted to international pressure. Both in the Federal Republic and in Belgium new export controls have been promulgated since the conference. These developments explain why these proceedings have not been published earlier, as we wanted to include the latest legislative measures. We are extremely grateful to Joachim Badelt of the Berghof-Stiftung in Berlin for writing - at short notice - the second chapter *After the Imhausen/Rabta Case* late last year. In the second part of this book, which contains the actual proceedings of the conference, the chapter *Belgium as a Transiting Country in the Imhausen-Rabta Affair* has also been updated.

We also express our gratitude for the financial support we have received from the *Nationaal Fonds voor Wetenschappelijk Onderzoek* (National Fund for Scientific Research), the Ministry for Economic Affairs, the Free University of Brussels, the National Lottery, the Francophone Community and the Ministry of Education of the Francophone Community. We wish to thank Robert Berloznik for summarizing the conference discussions. Finally, we are also very grateful to the administrative staff of GRIP and the Centre for Polemology for their logistic support, without which the conference would not have been possible.

Jean Pascal Zanders
Eric Remacle
May 1991

These proceedings are also published in French as *Eric Remacle & Jean Pascal Zanders (Ed.): La prolifération des armes chimiques. Actes du colloque du 16 mars 1990. Dossier "Notes et Documents", n °145-147.* These can be obtained from GRIP, Rue Van Hoorde, 33, B-1030 Brussels.

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Introduction

Between 7 and 11 January 1989, the world community met in Paris to reaffirm their commitment to the 1925 Geneva Protocol and to a future global ban on chemical weapons. 1988 had been a particularly horrendous year. Iraq had employed chemical agents against Iranian troops at an unprecedented scale. Baghdad also openly admitted to using them, defying international condemnation. Halabja symbolized the Kurdish plight. Their situation was only to worsen after the cease-fire. Repeated massive chemical attacks forced tens of thousands Kurdish civilians to flee to neighbouring Turkey and Iran, two countries where they are also persecuted. In September, both President Reagan and President Mitterrand expressed the necessity to hold an international conference before the United Nations.

During the days immediately preceding the conference, the United States brought their dispute with the Federal Republic over German participation in the construction of a chemical weapons plant in Libya to a head. Frustrated with German non-action, Washington left the back corridors of diplomacy and brought the issue into the open. The Rabta affair is therefore probably the best documented case of chemical weapons proliferation. It also had ramifications in other countries, such as Belgium, thus allowing insight into the kind of trade constructions set up to provide a country with technology, expertise and chemical compounds for its domestic production of chemical weapons. Moreover, both countries conducted inquiries into their involvement, and both governments are currently working on draft legislation to curb further exports related to the manufacture of chemical weapons. However, the most recent information indicates that in West Germany and in Belgium institutional resistance to the new regulations may be growing. In the

Federal Republic the Christian-democrat coalition parties are accused of consciously delaying the legislative process. Renewed American concern over Germany's attitude may explain why the Rabta issue suddenly resurfaced in March 1990. Apparently, the European Commission too has prepared new regulatory proposals, but meets with resistance from some member states.

Mechanisms behind chemical weapons proliferation

The issue of chemical weapons proliferation is complex. It involves technology transfers and the trade in industrial equipment and chemicals which often have legitimate non-military applications. Many developing countries are establishing a broad chemical industrial base. Without an international treaty banning chemical warfare with a stringent verification regime on the production of toxic chemicals, the potential for manufacturing crude chemical weapons is widespread. It is generally believed that no market exists for ready-to-use chemical munitions, although - in an apparently isolated case - a London based arms dealer was arrested for trying to buy 500 sarin bombs for Iran in January 1989[1]. However, it is extremely difficult to predict whether such incidents will not become part of a broader pattern. Chemical weapons proliferation, as it is presently being discussed, constitutes a flow of precursor chemicals, high technology and expertise from North to South, from industrial to industrialising countries. Third World countries are commonly viewed as recipients, potentially interested in domestic production of chemical warfare agents. Seldom, they are considered as a proliferation source of ready made chemical munitions in their own right. This is in part reflected by the common export control measures accepted by industrialised nations, while few, if any, efforts have been undertaken to encourage Third World countries to take similar steps. Nevertheless, underlying many of the allegations and accusations against Libya is the fear that one day it may become an independent supplier of agent and munition end products.

Adding to the complexity of the proliferation problem is the sheer impossibility of states or independent investigators to establish beyond any doubt whether a country is engaging in a chemical armaments programme or pursuing legitimate commercial goals. The West German Federal Intelligence Service, for example, believed for more than five years that Libya possessed a chemical weapons production plant near Abu Kammash (Bu Kemmesh), for which German firms had provided the equipment. On 13 October 1988, it officially retracted its assessment after

[1] P. Murtagh & M. Tran, 14 January 1989.

a prolonged period of doubts[2]. The case illustrates the dilemma's facing a government confronted with the alleged complicity of nationals in overseas chemical armament programmes. One can only speculate on the extent to which the Federal government hesitated to act on the Rabta allegations as a result of the Abu Kammash affair. Nevertheless, the example raises questions concerning the nature and the amount of evidence required before a government can or will take legal action against a firm violating export regulations.

Similar uncertainties pertain to the moment when the government must intervene. Brad Roberts, for instance, discerned two steps in the proliferation process[3]. In a first phase, a spread of the will and the means to obtain a chemical capability takes place. The next stage involves actual production and possible use. For many countries, the growth of the political will for a chemical armament programme is virtually impossible to track. If the US binary production plan is anything to go by, a prolonged process of incremental decision-making inside politico-military bodies determines the course of policy. Binary weapons were first conceived in the 1950s. Pressure to augment research funds and start production increased after the 1973 Yom Kippur war, when it was discovered that Soviet-made tanks were capable of operating in a NBC-environment. In December 1987 production of the first binary artillery shells started. After a series of setbacks, forces in favour of the programme had gained sufficient momentum to overcome resistance on Capitol Hill and to survive bitter acrimony inside NATO.

Iraq too must have pursued a chemical capability for almost two decades. Baghdad's interest in chemical warfare was reported as early as spring 1965[4]. Ten years later, it was trying to buy a complete pesticides plant in the United States and Europe. However, the world's attention was drawn to the development only after the United Nations had confirmed the use of chemical weapons in March 1984. Many of the firms that later became known to have been involved in Iraq's chemical warfare programme insisted they had had no reasons to assume that Baghdad was engaging in illegal activities. At that time, failing to detect the first stage of Iraq's intentions may have been a valid excuse for both the governments and the companies involved.

Today, one might expect that the greater awareness of both the chemical industry and governments ought to enable them to detect indications of a nation pursuing a chemical capability

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[2] *Unterrichtung durch die Bundesregierung,* 15 February 1989, pp. 4-5. The report mentions other similar cases.

[3] Joint Hearing before the Committee on Foreign Relations and the Subcommittee on Energy, Nuclear Proliferation and Government Processes, 28 June 1984, p. 50.

[4] Allegations of the use of gas were made by the Kurdish Democratic Party in May 1965. In September 1964 Iraq was rumoured to be purchasing large quantities of gas masks and by March 1965 there was widespread surmise these might be connected with an imminent offensive against the Kurds. Both Switzerland and Germany were claimed to be the suppliers of the weapons and the masks were said to be obtained through Egypt from Switzerland. (The Times, 26 March 1965 and 21 May 1965, as reported in J. P. Perry Robinson, 1971, p.162.)

at a much earlier stage. Yet, many countries, and the smaller ones in particular, have to rely on intelligence gathering by larger allies for much of their information. As allegations and assertions often serve propaganda purposes, they may display a large degree of scepticism about the validity of the information received, and thus fail to take the necessary measures at the appropriate time.

The Reagan Administration, for example, accused some twenty to thirty countries of being possessor states as it was intensifying its campaign to rally support for the binary weapons production programme. Early in 1989, the CIA repeated its estimate that "as many as 20 countries"[5] *may* be developing these weapons. In fact, there exists little certainty about the number of possessor states or their identity. Sources are often "leaked" US intelligence documents and all but a few provide irrefutable evidence. A critical note or nuance frequently disappears when quoted in the press, thus adding to the general sense of insecurity. One may wonder to what extend this serves the interests of the rapidly expanding branch of the chemical defence industry[6]. Similar comments can be made regarding US assertions of Soviet non-compliance with existing arms control treaties. More than once, the evidence put forward proved to be less than conclusive. With particular reference to the Rabta case, the U.S bombing of Tripoli in 1986 and the clash between fighters over the Gulf of Sidra a couple of days before the opening of the Paris Conference must have increased German scepticism regarding the scale of the affair. Washington, for its part, is very concerned about this credibility gap[7]:

> "[...], there are countries in the world who believe that any accusation we make against the Soviet Union is simply part of cold war rhetoric, and they demand a higher degree of proof that what we are doing is not simply bashing the Soviets, [...]."

Such frustration made Washington decide to go public on the Rabta issue.

The proliferation problem is compounded further by a disarmament controversy emerging between industrial and industrializing countries. The failure of the nuclear powers to comply with

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[5] R. L. Koenig, 2 February 1989.

[6] S. J. Lundin, J. P. Perry Robinson & R. Trapp, 1988, p.102. From 1982 onwards, the chapters on chemical and biological warfare in the SIPRI Yearbooks provide a detailed account of allegations.

Only the USA and the USSR have formally declared possessing military relevant chemical stocks. Iraq has admitted to using chemical weapons. North Korea and Syria are invariably being named. At the 1989 Paris Conference on chemical disarmament, Israel hinted it possessed a chemical capability. France, on the other hand, was generally believed to have stockpiled chemical munitions, but in 1988 President Mitterand declared before the UN to have no such weapons.

The problem also poses itself the other way round. At the Geneva Disarmament Conference, few countries have declared their non-possession of chemical weapons, in spite of the fact this will be one of the basic provisions of the future treaty.

[7] Testimony by US Ambassador C. Flowerree, Joint Hearing, 28 June 1984, p.78.

the disarmament provision laid down in Article 6 of the Treaty on the Non-Proliferation of Nuclear Weapons has aroused suspicions about the security implications of a chemical warfare convention amongst many Third World nations. Especially in the Middle East, there seems to be a growing linkage between chemical and nuclear deterrents[8]. Moreover, the Gulf War, from which Iraq dubiously appeared as victor, gave many countries in the East-West periphery the impression that chemicals are once again a very effective - and permitted - weapon. Moreover, it is far from established that the moral and emotional revulsion born in the trenches during the First World War, is shared by those nations. Therefore, failure to conclude a global ban could well lift the taboo from chemical weapons, thus opening the way for conventionalization. Even so, the very technical approach and the difficulties to reach the smallest of accords at the current chemical weapons talks must convince many governments of the effectiveness of these weapons. A similar evolution motivated Japan's leaders not to ratify the Geneva Protocol in the late 1920s. To many Third World countries, progress at the Geneva Conference is too slow. A chemical deterrent offers more security in the short term. Such beliefs are at the heart of the proliferation issue. There thus exists a very close relationship between the spread of these weapons and the protracted disarmament talks. Only the successful conclusion of a global treaty with an intrusive inspection regime for the chemical industry can solve the problem.

According to a Congressional report investigating the potential proliferation consequences of the U.S. binary production programme, many of the necessary preconditions for the spread of chemical weapons exist under all circumstances[9]:

- the international legal regime for the control of chemical weapons is neither comprehensive, universal, nor adequately verifiable;
- the few laws of war that exist today derive their strength largely from the threat of reprisal in kind, thus justifying weapons stockpiles for deterrence purposes, though these tend to perpetuate the threat they are intended to deter, and to stimulate newcomers to adopt the same approach;
- there may be a growing perception that changes in CBW technology increased the military utility of such weapons for certain defence needs of Third World nations.

J.P. Perry Robinson distinguishes between four main promoters of chemical weapons proliferation: the pressure of armament or vertical proliferation on the one hand and three forms

[8] (-), 7 January 1989; J.P. Collette, 10 January 1989; C. Tréan, 10 January 1989; C. Lorieux, 11 January 1989 and 13 January 1989; E. Cody, 13 January 1989.

The issue had already been raised by Arab representatives fearing Israel's putative nuclear capability during the mid-seventies (J.P. Perry Robinson, 1982, p. 336).

[9] Report prepared for the Subcommittee on International Security and Scientific Affairs, 24 April 1984, pp. 16-17.

of horizontal proliferation on the other, namely force integration, the poor man's deterrent apprehension and the adversary's lack of a chemical defence or deterrent[10].

(i) The *pressure of armament* or vertical proliferation is best illustrated by the U.S. binary production programme. Key to defining this promoter is the theory stating that *"the level of armament of a state at a particular moment, whether in quantitative or qualitative terms, is set by subsidiary processes of supply and demand"*[11]. On the one hand, there is the military demand as specified in national security requirements. These stimulate programmes for acquiring, maintaining and deploying weapons. On the other, there is the industrial and scientific capacity to supply a nation with weapons. Theoretically, there should exist an equilibrium between pull and push forces. However, numerous other factors, such as political and institutional considerations, play an equally important role, so that often countries are armed at much higher levels than security needs warrant. As a result, demand may be as much a reflection of supply as vice versa. Additionally, the degree of *assimilation* of a particular arms category into mainstream military theory also determines the nature of the armament process. The process of assimilation may be defined as *"the process whereby, for a novel technology, supply and demand become reconciled with one another"*[12]. Chemical weapons, for example, are little or not at all assimilated in most countries. Their use being outlawed, public opinion's strong display of abhorrence, technical constraints, etc. relegate them to the periphery of military doctrine. As such, maintaining or building up chemical stockpiles are a typical example of supply-led armament. Removing technical constraints may be very influential for incorporating a specific type of armament within the prevailing military doctrine and organisation. So, if supply institutions can somehow inflate the perceived need for that specific type of armament, while reducing the opportunity costs for its incorporation - i.e. the costs for the military institutions and doctrine to adapt themselves to the new weapon and to discard the ones it will replace - the pull of demand may very rapidly accelerate its assimilation[13]. In the course of the U.S. binary production programme, these intermediate steps were clearly discernable. The U.S. Chemical Corps, which survived legislative attempts to have it dissolved, is the institutional pillar behind the supply of chemical weapons. The presentation of novel technology (binary systems instead of unitary, which are safer to handle and to store) was followed by a new perceived military usefulness (the possibility of implementing new tactics) and vulnerability of own forces (a "rediscovered" Soviet and terrorist threat, resulting in a need for a credible deterrent). An increasing number of allegations and the confirmed employment of chemical warfare agents in the Gulf further

[10] J.P. Perry Robinson, 1982, pp. 322-339.

[11] J.P. Perry Robinson, 1982, p. 322. The theory is further elaborated in J.P. Perry Robinson, 1989.

[12] J.P. Perry Robinson, 1989, p. 120.

[13] J.P. Perry Robinson, 1989, p. 117.

contributed to the right kind of atmosphere for launching a rearmament programme. Although this assimilation process still is in its initial stages, the longer it takes to conclude a comprehensive treaty banning chemical warfare, the greater the institutional resistance against it being signed and ratified will become[14]. Similarly, the more advanced a production programme, the stronger institutional opposition to it being abandoned will grow. However, as Perry Robinson concludes, *"this in turn would hardly fail to stimulate a more general proliferation of the weapons, including proliferation into regions where they might well acquire a far greater military significance than the existing deployments currently display"*.[15]

(ii) *Force integration*, the first promoter of horizontal proliferation Perry Robinson discerned, is the pressure which is exerted on the other members of a military alliance to incorporate novel weaponry in their arsenals. As such, it constitutes a lateral extension of vertical proliferation. The 1986 debates on the U.S. Force Goal to obtain NATO approval for the binary production programme and for deployment in Europe in case of a major international crisis is a case in point.

(iii) *The poor man's deterrent apprehension* refers on the one hand to the spread of chemical weapons to Third World countries and on the other to the potential acquisition of a weapon of mass destruction by terrorist organisations. In developing countries, a perceived or real threat to the national security may lie at the base. The fear may be heightened by geographical factors, such as the concentration of economic and cultural activities in large urban centres[16]. Central governments may also consider chemical weapons to be an effective means of controlling rebellious natives or as a counter-insurgency instrument. Such tactics were employed as early as the 1920s by the British in Afghanistan, and later by U.S. troops in Viêt-Nam. More recently, thousands of Kurdish civilians and guerillas fell victim to similar Iraqi campaigns. Currently, attention is mostly focused on the Middle East, where the spread of chemical weapons seems to be closely associated with the proliferation of high technology weaponry, such as ballistic missiles and long-range bombers. Moreover, Arab countries tend to view chemical weapons as a counter-balance for Israel's regional nuclear monopoly. Nevertheless, actual use is in some instances very difficult to demonstrate beyond any doubt. Some notable cases were the alleged

[14] Such a process accounted for the US Senate's failure to ratify the Geneva Protocol in the second half of the 1920s. Yet, on 29 March 1922, it had ratified the Washington Treaty, which contained a provision banning the use of chemicals in war. That Treaty never entered into force as France failed to ratify it over a dispute concerning naval forces. However, between 1922 and 1925, year of the signing of the Geneva Protocol, the pro-chemical lobby gathered sufficient momentum to overcome any moral or emotional revulsion amongst politicians and ultimately succeeded in blocking ratification.

[15] J.P. Perry Robinson, 1989, p. 122.

[16] Report prepared for the Subcommittee on International Security and Scientific Affairs, 24 April 1984, pp. 19-20.

use of yellow rain in Indochina, of mycotoxins in the Gulf war, and more recently, of nerve agents in Angola.

The terrorist threat was often raised during the Reagan legislature[17]. The European press too occasionally referred to subnational proliferation of chemical weapons. In 1982, for example, phials with chemical agents were reportedly discovered in arms caches of as diverse groups as the PLO in Beirut and neo-nazis in West Germany. The USA apparently saw one of the largest manhunts ever to apprehend a mentally-ill engineer, who had threatened to assassinate the president with a crude nerve agent he had actually made[18]. In 1986, Shi'ite fighters in Lebanon were accused of launching projectiles containing agents which caused vomiting and diarrhoea into the Burj al-Barajinah refugee camp. These are but a sample of alleged incidents reported in the press and literature.

Few claims, however, have been substantiated with hard evidence. In 1984 a Congressional report noted that *"during the last decade, only minor incidents of terrorism using chemical agents [had] occurred, and their effects did not approach the recognized potential of chemical terrorism"*. The report added that *"while there is a literature on the possibility of terrorists using complicated chemical, biological and radiological (CBR) weapons, it was primarily inspired by the controversy in the mid-1970s over the prospect of theft of nuclear materials, their dissemination as radiological agents, or even their fabrication into crude, low-yield explosive devices by terrorists"*[19]. The authors, however, agreed with specialist literature that the matter constituted *"an ultimately unknown and as yet unrealized threat"*[20], but given the growing sophistication of weaponry used by terrorist organisations *"a greater likelihood of CBR terrorism [...] is plausible"*[21]. Lately, the overall terrorist threat appraisal appears to have returned to more normal proportions. For example, in a testimony to the U.S. Senate Governmental Affairs Committee in February 1989[22], CIA director Webster suggested that Libya could sell chemical weapons to Middle East states, but added he possessed no evidence that a terrorist group had obtained such weapons.

(iv) The final promoter of chemical weapons proliferation, *the adversary's lack of chemical defence or deterrent*, is considered to be a major contributing factor in all instances in which chemical weapons have been employed since the First World War. Gas became an important instrument for policing rebellious territories in the colonies during the intra-war years. Moreover,

[17] cfr. J.D. Douglass Jr. & N.C. Livingstone, February 1984 and 1987.

[18] J.D. Douglass Jr. & N.C. Livingstone, February 1984, p.14.

[19] Report prepared for the Subcommittee on International Security and Scientific Affairs, 24 April 1984, p.31.

[20] Ibidem, p.34.

[21] Ibidem, p.36.

[22] R.L. Koenig, 2 February 1989.

the colonial powers did not consider themselves to be bound by international law as regards indigenous tribes, as treaties were signed between states and not peoples. The Geneva Protocol - which binds parties between themselves - was breached during Italy's Ethiopian campaign and during the Gulf War.

Chemical weapons proliferation is stimulated by an interaction of two or more of these promoters. The relative weight of each of them in that process depends on the circumstances under which it takes place. For example, in a region of high tension, the quest for a chemical capability - either to offset a regional nuclear or conventional monopoly or supremacy or to counter the adversary's chemical threat - might be characterized by little diversification in means of delivery and hasty production of relatively crude agents. On the other hand, the proliferation process may be very slow, during which a wide range of means of delivery is developed for more sophisticated chemical agents. That country thus obtains the capacity to fight a major chemical war. Indeed, proliferation mechanisms may be set in motion by a simple fact as the temperament of a single leader, bent on enhancing his stature in the region. In general, much is determined by the extent to which a country or a group of countries feel bound by *de facto* constraints on their acquisition.

Although not much has as yet been written about it, a new form of proliferation seems to be developing, namely that of foreign industrial interests in domestic chemical warfare production programmes. Until recently, whereas foreign companies may have provided the technology and raw materials, the actual production of chemical weapons has always been a purely national undertaking. Nowadays, European firms, for example, are increasingly involved in the U.S. binary production programme. The actual 155mm binary artillery shell is being manufactured by a subdivision of the British firm Ferranti. After a £215 million fraud scandal, Ferranti is considered to be financially unstable and parts of the consortium may be up for sale to foreign investors. Dichloride for the Multiple Launch Rocket System (MLRS) binary charge is produced by Combustion Engineering. Mid-November 1988 that firm was taken over by the Swedish-Swiss Brown-Boveri[23], i.e. by companies from non-NATO states. Although such an evolution may still be limited to and between free-market countries, it raises numerous questions. For one thing, how can a government adapt its chemical weapons production programme to a changing political and strategic environment, if it is controlled by foreign industrial interests? Moreover, how can that government guarantee that the manufacturing expertise and secrets will not be used to win similar contracts in other countries? The former question relates to the institutional factor behind the supply of chemical weapons; the latter adds a new qualitative aspect to the problem of horizontal

[23] Communication by J.P. Perry Robinson at the second conference of the Information Network on CBW, London, November 1989.

proliferation. As such, this issue requires further investigation, especially with reference to the question whether a subdivision can escape national legislation on chemical weapons export to which the parent company is subjected[24].

The proliferation issue during the 80s

The alleged use of chemical weapons by the Soviet Union in Afghanistan and by some of its client states in Indochina raised concern about proliferation in the West. The Gulf War, however, forced governments of industrial states to act. The increasingly intensive employment of lethal chemicals from 1983 onwards raised many questions as to how Iraq obtained the know-how and base materials for large scale domestic production[25]. Early accusations were directed at Warsaw Pact countries. East Germany was said to have begun building a plant for the manufacture of gas in Iraq a few months before the Gulf War broke out in 1980[26]. Belgian toxicologist, Aubin Heyndrickx also alleged that the USSR had supplied the chemicals. The compounds he had found on the bodies of Iranian soldiers were supposedly unknown in the West, while Iraq did not possess the capability to produce them domestically[27]. However, by the end of March 1984, the C.I.A. identified a first Western firm as supplier of laboratory technology to Iraq. The intelligence report added that Karl Kolb - a scientific and technical supply company in West Germany - had probably unknowingly aided Baghdad in its quest for nerve gas by delivering a complete pesticides plant. Prior to the shipments, which had been going on for at least two years, the company had obtained all required export licenses from the West German government[28]. This particular case points to one potential for chemical weapons proliferation that will always be present: whilst the chemical industry probably has little interest in chemical warfare programmes as such, it is very eager to develop an agro- and petro-chemical production base in Third World countries. The trade in pesticides and insecticides is particularly aggressive, as proven by the fact

[24] Such type of provision exists, for example, in the Federal Republic. According to paragraph 4a of the Weapons of War Control Act, arms traders with West German citizenship pursuing their activities outside the Federal Republic must be registered and their activities licensed by the Federal Government, even if the weaponry was not produced or stored in the Federal Republic.

[25] cfr. (-), 5 March 1984; O. Johnston, 6 March 1984. At that time some early reports mentioned the existence of three production plants for chemical agents (M. Getler, 6 March 1984). Iran accused Britain of providing the weapons, a charge initially denied by London (J. Perera, 22 December 1983; (-), 12 January 1984; (-), 5 March 1984; B. Bloom, 7 March 1984).

[26] (-), 8 March 1984.

[27] G. Yerkey, 13 March 1984.

[28] S.M. Hersh, 30 March 1984.

that several toxic chemicals which are banned in industrial countries for health reasons, are still in production in developing countries.

As more countries became known to be implicated in Iraq's chemical production scheme[29], many Western governments swiftly adopted regulatory measures. Shortly after the first U.N. report on chemical warfare in the Gulf, the USA intercepted suspect shipments to the belligerents. They had already adopted some export controls in the early sixties. Chemical warfare agents were on the Munitions Control List of the Department of State. Direct precursors to chemical agents, but with civil applications were administered by the Department of Commerce. Other compounds with a primarily civil use were not subjected to export regulations. One shipment to Iraq intercepted in March 1984 consisted of potassium fluoride. This precursor to nerve agents belonged to the latter category. Representatives of the Departments of Defence, Commerce and the intelligence community reviewed civil-use chemicals and finally drafted a list with five products not to be exported to either belligerent in the Gulf War. Two weeks later, on 30 March 1984, these measures became effective. The industry, which had been consulted on the issue, was requested to provide information on the availability of these commodities to Iran and Iraq from other industrialised countries. The list has been periodically reviewed by the interagency group[30].

At the same time, Washington urged other industrial nations to control chemical exports tightly[31]. On 10 April 1984, the foreign ministers of Belgium, Denmark, the Netherlands, the United Kingdom and West Germany approved a plan to license such shipments. They would press other European Community members to take similar steps. A committee would list the products and countries requiring approval[32].

The ideas eventually took shape within the Organisation for Economic Cooperation and Development (OECD). The governments of member countries adopted in concerted fashion a series of export controls on precursor chemicals. The Australian Group - formerly known as the

[29] Late in 1975 Iraq had apparently contacted a US firm, Pfaudler Co, to build a pesticide plant. Although a protocol was signed between both parties on 24 January 1976, the contract was not followed up because the Iraqis were not interested in building a pilot plant first. Iraqi officials then contacted a British firm, ICI, but a contract was eventually signed with an Italian company. After initially denying Iranian charges, British officials acknowledged in April 1984 that in 1983 British firms had shipped large quantities of precursors for nerve agents and mustard gas to both Iran and Iraq. (P. Channon, Minister for Trade, Written reply on 12 April 1984. See also: A. Veitch, 6 April 1984; I. Mather & R. McKie, 13 April 1984; K. DeYoung, 13 April 1984.)

[30] Statement of L.H. Olmer, Under Secretary for International Trade, US Department of State. Joint Hearing, 28 June 1984, pp.27-32.

[31] S.M. Hersh, 30 March 1984; D. Oberdorfer, 31 March 1984.

[32] J. Tagliabue, 11 April 1984; K. DeYoung, 13 April 1984.

Brussels Club - consists of twenty-one members[33]. They have drawn up a core export control list, currently comprising 9 products, and a warning-list of 41 chemicals[34]. The measures, however, are taken on a voluntary basis. This implies that national laws apply. Each state also determines freely which products it will subject to export controls. All participants have accepted the core export control list of eight chemicals. Most countries have extended the national export regulations to a varying number of products from the warning list[35]. Some governments apply the additional list *erga omnes*, others limit the exports to some specified countries, such as Iran and Iraq. The warning list is circulated to the chemical industry as well, so it can take supplementary voluntary measures. The sector has also been requested to inform governmental agencies of foreign purchase enquiries about these products. In 1984, the Federal Republic also enacted export controls on technology and equipment needed to operate a chemical weapons plant.

Eastern Europe also expressed concern about chemical weapons proliferation. On 15 January 1986, Mikhail Gorbachev proposed a sort of chemical weapons non-proliferation treaty. However, as the proposition also called for the USA and the USSR *"not to transfer chemical weapons and technology to any other part, and not to deploy them in the territory of others"*[36], it was rejected by the West. Obviously, Gorbachev sought to block any deployment of U.S. binary munitions in Europe as well. In February, Pravda announced that Moscow had promulgated export regulations for chemicals with dual use. A license would only be granted if the importing country formally guaranteed that the chemicals would not be used for military purposes. No exception was made for members of the Council for Mutual Economic Assistance (CMEA)[37]. During March and September, Washington and Moscow held bilateral talks on the spread of chemical weapons in Berne. No results were made public. Similar measures were discussed at a CMEA meeting in Leipzig in 1987. It is not unreasonable to assume that consultation between the OECD and CMEA was promoted as a result of the bilateral discussions. At the time of writing, these were still being held.

Some countries, such as Finland and Pakistan enacted such procedures independently[38]. On 28 February 1989, delegates of 28 countries agreed to a draft of a system controlling the *import* of toxic chemicals, which would be administered by the United Nations Environmental

[33] Early in 1986 these were the E.C. members, Australia, Canada, Japan, New Zealand, Norway and the USA. In September 1987 they were joined by the E.C. Commission and Switzerland and on 8 July 1989 by Austria.

[34] See Appendix.

[35] West Germany added a ninth product in December 1988, i.e. a couple of weeks before the Imhausen's association with the Rabta plant was disclosed by the USA.

[36] As quoted by M. Walker, June 1986, pp. 107-108.

[37] (-), 13 February 1986.

[38] S.J. Lundin, J.P. Perry Robinson & R. Trapp, 1988, pp. 103-104.

Programme. It requires exporters of dangerous substances to receive written approval from participating states before shipment of the chemicals. In practice the UN would distribute a list of dangerous chemicals to the participating countries. After receiving confirmation from the country accepting the importation of the substance, the agency would notify the government of the exporting country, which in turn informs the seller[39]. The system was devised to reduce safety hazards from pesticides in Third World countries. Nevertheless, it was believed to be a useful instrument for monitoring trade in potential precursors for nerve agents.

After 1986, members of the Australian Group continued to expand the scope of the export controls. On 10 August 1987, the U.S. extended the export rules to all countries, except for 18 industrialized ones. At the December 1988 session, the Australian Group added thionyl chloride as ninth product to the core export control list. However, after the Rabta affair, officials acknowledged that the legislation still contained numerous loopholes, especially regarding technology transfers. At the end of January 1989, the West German government launched a diplomatic offensive to repair its tarnished image. After ensuring Spain's support, then chairing the E.C. Ministerial Council, for measures within the framework of the European Political Cooperation, Bonn urged Jacques Delors to place export controls on the agenda of the E.C. Commission at the earliest possible date. On 20 February 1989, the Commission adopted the regulation[40] - almost five years after it had originally been rejected by France, Greece and Denmark on grounds of its military-related nature. At the International Government-Industry Conference against Chemical Weapons, held in Canberra from 18 to 22 September 1989, the USA announced it would expand its control list to 50 dual-use chemicals[41]. In December 1989, all Australian Group members adopted that warning list.

Within the Australian Group, governments also share intelligence on the involvement of particular firms in the construction or supply of chemical weapons plants. As a result, shipments could be traced to their sources and governments were able to proceed with legal investigations. By the end of 1986, the Federal Republic was investigating twelve firms. However, as no laws or regulations had been broken, charges eventually had to be dropped. Similar situations arose in other countries. In fact, between 1984 and the present, only one firm in a member country of the Australian Group was taken to court successfully. In 1985, Dutch officials raided Melchemie, a small trading firm in Arnhem, and seized documents proving that chemicals on the export control list had been shipped to Iraq. The next year, the firm was fined 100,000 Dutch Guilders and faced a one year shutdown in case of repetition. Less spectacular, but by far more efficacious,

[39] Arms Control Reporter, Entry: 17 February 1989, p. 704.B.371 (3-89).

[40] Council Regulation (EEC) N° 428/89 of 20 February 1989 concerning the export of certain chemical products. Published in: Official Journal of the European Communities, 22 February 1989, N° L50/1-50/2.

[41] USIS, 22 September 1989, pp.2-3.

are the instances in which diplomacy actually prevents the conscious or unwitting participation of Western companies in the chemical warfare programmes of Third World regimes. In one recent documented case[42], the U.S. Government succeeded in preventing a Dutch subsidiary of British firm from constructing a potential chemical weapons plant in Iran. Suspicions were aroused as the pesticide plant was to process phosphorous pentasulphide, a key precursor to the nerve agent VX. After U.S. lobbying within the Australian Group, the Dutch Government interceded to block the sale. The Hague was guaranteed confidentiality, a key condition for ensuring maximal cooperation. Swiss and Italian firms, subsequently approached by Teheran, also pulled out of negotiations after U.S. pressure. European diplomats now believe construction has been halted.

Libya's alleged involvement in CW-programmes: 1980-90

During the second half of the 1970s, Western sources started reporting an increasing number of infringements on the chemical warfare regime by Soviet client states. At the same time, an enormous gap between Warsaw Pact and NATO forces was "discovered". The information, usually from intelligence sources, was all but verifiable. This renewed attention may have resulted from a resumption of the negotiations on a chemical warfare ban on the one hand, and from institutional pressure in the USA to recommence chemical weapons production on the other. During the first half of the 80s, the debates on both aspects intensified, the latter in particular being fuelled by allegations of Soviet forces employing chemical agents in Afghanistan and the yellow rain controversy in South-East Asia. From December 1983 onwards, claims of Iraqi chemical attacks started to gain more credibility.

Parallel to these developments, the number of countries alleged to be possessor states also rose sharply. The CIA named Libya, as well as other Middle East countries, for the first time in its *Special National Intelligence Estimate 11-17-83* of 15 September 1983[43]. According to unspecified reports, Qadhafi, who was increasingly being linked to international terrorism, received a ton of the nerve agent tabun from France[44]. As the terrorist threat was reaching near-hysteria in Washington after a series of attacks on U.S. military personnel and installations in Europe, security advisers more and more reckoned with chemical attacks by terrorist

[42] I. Mather & S. Grant, 4 February 1990.

[43] J.P. Perry Robinson, 1985, p. 172.

[44] J.D. Douglass Jr. & N.C. Livingstone, February 1984, p.18

organisations (of Marxist-Leninist signature)[45]. The campaign peaked on 15 April 1986, when U.S. planes bombed Tripoli in revenge for an attack on U.S. servicemen in Berlin, in which Libya was believed to be involved. That summer, the USA conducted large military manoeuvres, some together with Egypt, near the Libyan borders and consulted its European allies on economic sanctions. Both Great Britain and the Federal Republic took steps to limit the sale of technology with potential military application to Tripoli[46]. Nevertheless, accusations of Tripoli's chemical capability were contradicted by a 1984 Israeli report, stating that the Libyan stockpile was unconfirmed[47].

Throughout 1986 reports on Libya's chemical capability were conflicting. British intelligence sources asserted that the USSR had supplied nerve agent warheads for Scud-B missiles. U.S. officials claimed that Libya's chemical weapons production capability had been assisted by exports from Western Europe[48]. However, official reports and testimonies, for instance to U.S. Congress, did not mention Libya amongst the significant possessors of chemical weapons. Unofficial accusations still appeared to be derived from the 1983 *Special National Intelligence Estimate*[49].

During the Gulf War, Tripoli was accused of either helping Iran acquiring a chemical production capability or of supplying it with chemical agents. Teheran fiercely denied intentions to obtain a chemical capability. According to an article in the British *Sunday Telegraph* of 23 November 1986, quoting British intelligence sources, Tripoli had passed on the Soviet Scud-B warheads to Syria and Iran. The Soviets vehemently denied supplying Libya with chemically capable warheads[50]. The story, however, seems to be completely contradicted by a deal between both countries involving the exchange of Soviet supplied sophisticated anti-shipping mines for Iran in return for chemical weapons for Libyan forces in Chad. The Soviet intervention to block the shipment of mines to the Gulf upholds that part of the report. However, many doubts persisted about transfer of chemicals. U.S. officials questioned their own initial intelligence reports and a special mission with an SR-71 reconnaissance plane failed to produce photographic evidence of the shipment[51]. The incident, notwithstanding, implies that at that time Libya either did not possess chemical weapons or that its stocks were insufficient to sustain a chemical campaign in

[45] Ibidem, pp. 18-22; W. Beecher, 7 February 1989.

[46] B. Gwertzman, 29 August 1986.

[47] The Middle East Military Balance 1984, published by the Jaffee Center for Strategic Studies (Tel Aviv), as quoted by J.P. Perry Robinson, 1987, pp. 110-111, Table 5.4 + notes.

[48] J.P. Perry Robinson, 1987, pp. 110-111, Table 5.4 + notes.

[49] S.J. Lundin, J.P. Perry Robinson & R. Trapp, 1988, p. 102.

[50] As quoted in: Arms Control Reporter, Entry 23 November 1986, pp. 704.B.207/208 (1-87).

[51] E. Sciolino, 12 September 1987.

the limited war with Chad. In December 1986, Libya had been accused by the Chadian government of President Habré of using chemicals and napalm against their troops[52]. The claims were repeated in September 1987, apparently after the announcement of a cease-fire on the eleventh. The USA supported the assertions and had already sent 2,000 gas masks to Chad a month earlier[53]. U.S. sources added that Tripoli had already employed chemical warfare agents during the 1983 war with Chad. The attack, however, had backfired, killing several Libyan soldiers, as a result of malfunctioning munitions or the wind blowing in the wrong direction[54]. The accusations have never been corroborated by independent sources, not even by members of the French forces present in Chad. The Chadian permanent representative to the United Nations did not refer to these accusations in his August 1987 report on the war to the UN Security Council.

The Chadian claims nevertheless gave rise to Western speculation on Libyan chemical weapons production sites. The West German intelligence service had reported as early as April 1980 that Qadhafi wanted to establish a domestic production installation and was trying to obtain the raw materials from European countries. In July 1983, it informed the Bonn government that the plant was located near Bu Kemmesh (Abu Kammash) and had started production of mustard gas at the end of 1981. It finally had to rescind its assessment in October 1988[55]. In the meantime, the service, which was receiving numerous reports from both Western and Eastern sources that German firms were involved in the construction of a chemical weapons production plant, focused on the nuclear research centre at Tajura. In January 1986, it stated that a section for the production of mustard gas had been newly constructed. A month later, the centre was also connected to the manufacture of the nerve agent sarin. An intelligence briefing on 22 June 1987 referred for the first time to Rabta, just north of Garian. The plant was expected to start daily production of 1-3 tons of sarin from September 1987 onwards[56]. During the second half of 1988, new details started emerging at a dramatic pace in the Federal Republic. At the beginning of 1988, U.S. sources from their side pointed to a site at Matan-as-Sarra, in the south-eastern corner of Libya and about a hundred kilometres above the border with Chad. The article in *The Christian Science Monitor*[57] stated further that the summer before the base had been overrun by Chadian forces *"but subsequently rebuilt and beefed up by Libya"*. Reports at the time of the attack, however, only mention an airfield with a hard runway, which played a key role for Libyan

[52] (-), 13 December 1986.

[53] M.R. Gordon, 26 December 1987.

[54] Nightline, ABC-Network, 3 January 1989, 11:30 p.m. (Transcript in: Current News, Special Edition, Chemical Weapons, n° 1774, 31 January 1989.)

[55] *Unterrichtung durch die Bundesregierung,* 15 February 1989, pp. 4-5.

[56] *Unterrichtung durch die Bundesregierung,* 15 February 1989, pp. 5-7.

[57] 5 February 1988, as quoted in: Arms Control Reporter, p. 704.B.257 (3-88).

air strikes on Chadian villages[58]. No other open reports seem to mention this site. A various times, some other locations were cited, such as the region around Sabhah in south-west Libya[59]. Nevertheless, at the hight of the Rabta crisis, U.S. officials indicated they had several other sites under surveillance[60]. In September 1989, a German construction firm completed an underground air base for Libya, which had full NBC protective equipment. Apparently, similar bases had been constructed in Israel, Saudi Arabia and Iraq, indicating the seriousness of the proliferation in the region[61].

While the crisis over the Rabta complex was reaching its climax in mid-January 1989, Libya was once again accused of launching chemical attacks. Sudanese rebels claimed that in late 1988 Libyan pilots, flying for the Khartoum government, which incidentally was also backed by the USA, dropped chemical bombs on a garrison at Nasir in southern Sudan[62]. Allegations were denied by all sides involved. Tripoli was said to have flown chemicals it had obtained from Iran into Somalia on 7 October 1988. Francesco Rutelli of Italy's Radical party, asserted that these agents had been used to bombard rebels in northern Somalia, adding that the Somalian president had been to Libya to obtain more chemical weapons. These charges too were disavowed by both governments[63].

On 7 March 1990, an anonymous spokesperson for the U.S. Administration claimed that the Rabta plant had begun producing small quantities of mustard and nerve agents. Operational capability had only been achieved at the end of last year. However, the facility had no yet reached full capacity. Libya still maintained that it only possessed a pharmaceutical plant near Rabta[64] and that the new accusations were part of new U.S. disinformation campaign. On television, the Libyan Ambassador to the United Nations, Ali Treiki, declared that a statement had been given

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[58] (-), 7 September 1987.

[59] Letter dated 28 October 1987 from the West German embassy in Tripoli, quoted in *Bericht der Bundesregierung*, 15 February 1989, p.7. Details were to be communicated at a later date, when available. The report by the Federal Government makes no further mention of Sabhah.

[60] E.A. Wayne & G. Thatcher, 13 January 1989.

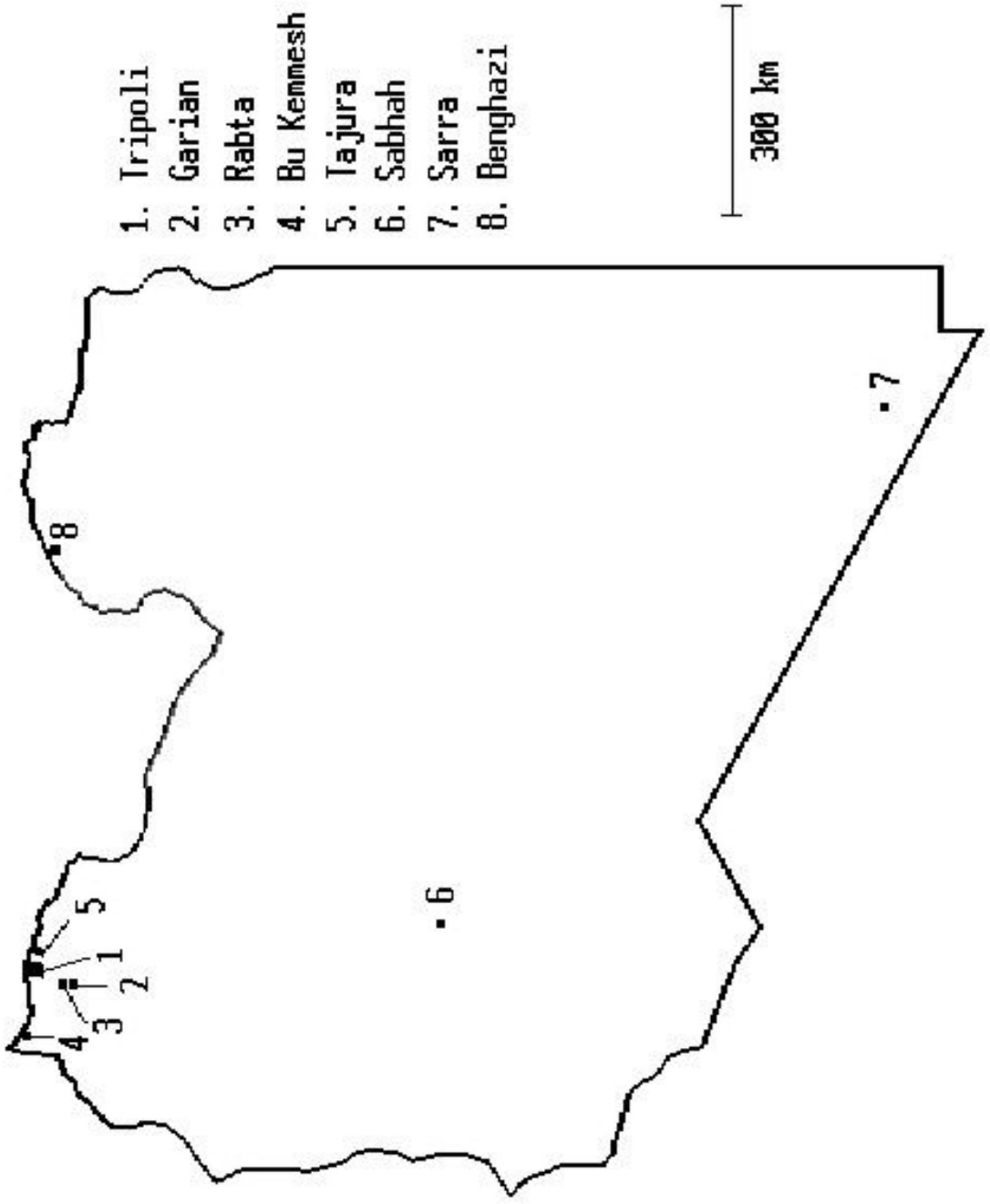
[61] Arms Control Reporter, Entry: September 1989, pp. 704.B.395-396 (9-89).

[62] R. Pear, 11 January 1989.

The Sudanese Government of the democratically elected Prime minister Sadeq al-Mahdi was supported by the United States. However, he also enjoyed Libya's support for his policy of islamization and in his war against the animistic and christian south. Washington repeatedly expressed its annoyance about the close relationship with Tripoli. He was ousted in a bloodless coup on 30 June 1989. The new leadership shares Qadhafi's revolutionary and pan-arabian ideas.

[63] Arms Control Reporter, Entry: 9 January 1989, p. 704.B.330 (2-89).

[64] Headline News, Cable Network News (C.N.N.), 7 March 1990, noon C.E.T.


1. Tripoli
2. Garian
3. Rabta
4. Bu Kemmesh
5. Tajura
6. Sabhah
7. Sarra
8. Benghazi
300 km

to the Secretary General denying any Libyan intention to produce chemical weapons. When challenged by Neil Livingstone, a terrorism expert in the Reagan Administration, the Ambassador failed to name what pharmaceuticals were being manufactured at the plant, claiming he is not an expert. However, he added that Libya was ready to open up the Rabta plant for inspection by the United Nations[65].

The U.S. Defence Intelligence Agency believed that by that time already as much as 30 tons of mustard gas had been produced. Another building for filling the chemical agent into plastic containers had just been completed. Sufficient containers for 150 bombs were thought to be ready, while every day five new ones were being added to the stockpile[66]. The intelligence report added further that the plant was under complete Libyan military control and that it was ready for full-scale manufacturing of mustard gas and nerve agents[67]. However, the West German intelligence service, which had been briefing the USA on the new developments for several months, rejected the possibility of a nerve agent production capability. It added that the Libyans had been using makeshift production methods for the 30 tons of blister agent, resulting in extensive corrosion to the unsuited equipment[68].

The renewed allegations raised questions about their timing. Contrary to the previous year, few circumstantial indications were available. White House Press Secretary, Marlin Fitzwater, for one thing, hinted that industrial countries were once more involved in Libya's chemical warfare programme[69]. Although he declined to name any of them, some reports suggested West German companies and specialists are implicated again[70]. General of the reserves and former head of the Israeli military intelligence service Aharon Levran affirmed that *"despite the official withdrawal of West German firms from Libya, it seems that dozens of engineers and technicians have continued to work privately at Rabta"*[71]. Although the Federal Government had promulgated a law expressly forbidding German nationals to work at the Rabta plant, the assertions of renewed German involvement followed shortly after a very critical article in the leading newsmagazine *Die Zeit*, accusing Kohl of being very lax in implementing new regulations and of failing to enact new laws announced at the Canberra Conference in September 1989[72]. On the other hand, the disclosures also came after a row between Bonn and Washington over the Libyan chemical threat.

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[65] The World Today, Cable Network News (C.N.N.), 8 March 1990, 00:15 h. C.E.T.
[66] (-), 8 March 1990; M.R. Gordon, 9 March 1990.
[67] P. Pringle, 8 March 1990.
[68] (-) [1], 9 March 1990.
[69] D. McDonald, 8 March 1990.
[70] (-) [3], 9 March 1990.
[71] M. Henry, 9 March 1990.
[72] W. Hoffmann, 23 February 1990.

Foreign Minister Genscher's proposal for an international inspection with the aim of inducing Libya to cease production of chemical warfare agents at a meeting of West European foreign ministers on 17 February 1990 drew a sharp rebuke from the Bush Administration three days later. The German Ambassador to the USA, who was summoned to the State Department on 23 February, was told that Washington would accept nothing less than a dismantlement of the Rabta plant[73]. In a rerun of events in January 1989, the White House might have decided to disclose its information.

Washington might also have been moving to isolate Qadhafi from the other Arab countries. During the previous months, Colonel Qadhafi has retreated to the background of international politics and made efforts to solve outstanding conflicts with neighbouring countries. However, only a couple of days after the U.S. disclosures, the Libyan leader and General Omar Hassan Ahmed Bashir, Sudanese military ruler since June 1989, announced they would sign integration pacts that would unite both nations in four years time. Sudan is the largest country in Africa[74]. The move is being interpreted as a provocation against Egypt, which supported the Islamic regime in order to weaken the ties between Khartoum and Tripoli[75]. By suggesting that Tripoli's acquisition of a weapon of mass destruction posed a real military threat to the region, and even to other Arab countries who had just formed the Arab Cooperation Council, President Bush might have hoped his claim would spark off Arab diplomatic activity to prevent the undoing of the fragile regional geopolitical balance. Nevertheless, hints by the Bush Administration that it might take out the site by military means, were likely to increase tension in the Middle East once more.

West Germany's Export Policy before the Rabta Allegations

The Imhausen-Rabta affair is but one example of German export scandals involving technology and materials for the development and production of advanced weaponry. One of the leading experts on arms transfers, Michael Brzoska, attributes these cases to a combination of weak laws, economic interest and an export-oriented ideology, based on fear of losing competitiveness on the world market. Moreover, as the Federal Republic has limited political ambitions outside its own region, it displays an unjudgemental attitude towards many kinds of Third World regimes, such as Qadhafi's, on the one hand and has few out-of-area interests to

[73] M.R. Gordon, 9 March 1990.

[74] (-), 5 March 1990.

[75] (-) [3], 9 March 1990.

promote through export rules on the other[76]. However, regarding the latter point, Bonn's policies are no worse than those of many other capitals. For instance, France and West Germany both perceive the need for an independent arms industry. Limited domestic demand and the resulting high cost per unit increase pressures for sales abroad. France, by contrast, claims widespread security concerns in overseas territories, in particular in the Middle East and North Africa. It too has few problems in recognizing, for example, the legitimacy of Libya's leadership when economic interests are involved. Although both sides recently faced each other in Chad, Paris is already reconsidering the postponed sale of advanced warplanes to Qadhafi. For similar reasons, after the cease-fire, Paris was in a rush to restore economic ties with both belligerents in the Gulf War, although it had supported Iraq during the hostilities. Two likely explanations why these policies do not generally lead to a public outcry in France are the broad national consensus on security matters and the government's endorsement or even active promotion of such arms transfers.

Nevertheless, the general atmosphere generated by West Germany's export-oriented trade policy has beyond any doubt contributed to many of the scandals. Since 1952 exports have continuously surpassed imports. The annual surplus on the balance of trade rose from 706 million DM in 1952 to a first record high of 50.8 billion DM in 1974. After several lean years, a new steep rise started in 1986 (53.6 billion DM), crossing the 70 billion DM barrier in 1987. Officials justify this export drive by pointing to trade deficits in other sectors, such as services. Germany's high population density and lack of natural resources underlie the government's constant concern with world trade. On it depend investments, revenues, employment - one person in four works for the export - and the standard of living[77].

In spite of the pre-eminent free market climate, West Germany has enacted several export control mechanisms. According to Art. 26, §2 of the Federal Constitution governmental permission is required to manufacture, forward or transport weapons[78]. Arms transfers are additionally regulated by the Weapons of War Control Act *(Gesetz über die Kontrolle van Kriegswaffen*, often called *Kriegswaffenkontrollgesetz)* of 20 April 1961 and subsequent amendments; the Foreign Trade Act *(Außenwirtschaftsgesetz)* of 28 April 1961 and amendments; and the Foreign Trade Order *(Politische Grundsätze der Bundesregierung für den Export von*

[76] M. Brzoska, July 1989, pp.32-33. However, during the summer of 1986, West Germany, at US request, moved to limit its contacts with Tripoli (B. Gwertzman, 28 August 1986).

[77] *Tatsachen über Deutschland*, p. 194; Britannica Book of the Year, 1989, Entry: "Germany, Federal Republic of". All figures are in current prices.

[78] *"Zur Kriegführung bestimmte Waffen dürfen nur mit Genehmigung der Bundesregierung hergestellt, befördert und in Verkehr gebracht werden."*

Kriegswaffen und sonstigen Rüstungsgütern, also known as *Außenwirtschaftsverordnung)* of 28 April 1982.

Given the export-oriented climate, it comes as no surprise that the high unemployment statistics during the first half of the 80s increased pressure on the Federal Government to ease up on arms export restrictions. Budget constraints also led to a sharp decline of domestic orders for weaponry. The strict interpretation of the regulations under Chancellor Brandt during the 70s was abandoned near the end of Schmidt's tenure in 1982[79]. The German arms industry, which became closely interconnected and thus more powerful and competitive after a series of take-overs, forced Chancellor Kohl into relaxing export controls even further. It mainly argued the preservation of jobs and technological progress in key military areas. Kohl himself deflected any potential criticism and reference to Germany's military past by asserting that he belongs to "a post-war generation, that prefers to look forward without dwelling on the past"[80].

In 1988 the FRG sold major weapon systems abroad for a total value of $1,455 million, representing ± 0.2% of all exports. It ranked sixth amongst the world's leading arms suppliers[81]. Members of the Federal Government nevertheless consider these laws to be very restrictive and in the interest of the West German economy:

> "Our position is clear! We shall stick to our restrictive weapons export. This conforms to our historical responsibilities and the ethical foundation of our foreign policy and it conforms to our economic interests. An extensive weapons export policy - which means primarily arms transfers to the Middle East - would harm our international relations and would put jobs in Germany at risk. We are now the prime exporter of civil products to the Middle East. We would lose a part of these markets if we were to go into arms sales. [...]"[82]

The Weapons of War Control Act covers only weapons specifically designed for use in war, but not their components or know-how. "Weapons" are defined and listed in an annex to the Act, which is periodically revised[83]. The implementation of this law thus bears no relevance to the present discussion of chemical weapons proliferation. The Foreign Trade Act applies to all other military related products subjected to export controls. These are also listed in an annex. It was adopted to comply with agreements made within the Coordinating Council on Mutual East-West Trade (COCOM). The regulations also apply to sales to the Third World. In 1982, the Act was

[79] M. Brzoska, July 1989, p.33.

[80] W. Getler, 29 August 1986.

[81] I. Anthony, 1989, p. 199, Table 6.2.

[82] From a press-release by Foreign Minister Genscher, 19 January 1987, as quoted in *Stichworte zur Sicherheitspolitik, Presse- und Informationsdienst der Bundesregierung,* February 1987, p.48.

[83] A. Courades Allebeck, 1989, p. 329. Many of the technical aspects are taken from the feature *Rüstungsexportpolitik* in *Stichworte zur Sicherheitspolitik, Presse- und Informationsdienst der Bundesregierung,* January 1987, pp. 13-19.

supplemented by the Foreign Trade order, specifying a number of political guidelines for issuing export licenses.

The Federal Economy Office, an agency under the Ministry of Economics in Eschborn im Taunus, is responsible for licensing the sales under the Foreign Trade Act. Politically sensitive sales need the approval of the ministers for Foreign Affairs, of Defence and Economics. If necessary, the Federal Security Council *(Bundessicherheitsrat)* is also consulted. Its decisions are irrevocable. Rejections of applications under the *Kriegswaffenkontrollgesetz* cannot be appealed. The *Außenwirtschaftsgesetz*, by contrast, contains no such provision. However, in Eschborn a staff of about 80 must review some 80,000 export license applications per year. Few people possess the necessary technical expertise[84]. These circumstances reduce the effectiveness of the regulations to a large extent.

Export controls on precursors for chemical agents are specified in Orders altering the *Außenwirtschaftsverordnung*. Order 52, containing a first list, entered into force on 15 May 1984. It was supplemented by an additional list on 15 December 1986 (Order 57). On 9 August 1984, Order 56 modifying the Foreign Trade Order and Order 53 modifying the export list for chemicals, supplemented the original list with a Section D. It decreed Federal approval for the export of chemical plants, parts of plants or equipment *"which may be suited for research, production, processing or testing of organo-phosphorous compounds, mustard gas or other highly toxic compounds"*. However, the license is not required for exports to other O.E.C.D countries[85]. On 15 November 1984, following indications that German firms were involved in the construction of a chemical weapons plant in Libya, the Federal Economy Office was instructed that all export applications for products listed under Section D for that country had to be submitted to the Federal Government. This was extended to all listed products on 22 January 1986.

The West German customs possess wide powers to trace and curb export infractions[86]. The service is organized both vertically and horizontally. At the local level, customs officers check all incoming and outgoing goods on trade prohibitions and restrictions. A exportation confirmation is entered on the export declaration, which is then sent to the Federal Administration for Statistics. The customs may demand extra documents, such as a declaration by the Ministry for Economic Affairs allowing the exportation. In case of doubt, they call in specialists from the Federal Economy Office or from other authorities. Additionally, 105 specially trained customs officers regularly check balances, records and other documents of firms to ascertain their compliance with export regulations. The companies are legally required to hand over all documents and to assist customs officers. About 1,500 such controls are carried out annually, of which 2/3 concern exports and 1/3 imports. If necessary, special series of controls are carried out. These checks on international trade activities, however, do not imply that the company is suspected of violating regulations. In case of irregularities, customs officers may act on behalf of the Public Prosecutor. In this capacity they proceed with criminal investigations

[84] M. Brzoska, July 1989, p.33.

[85] *Unterrichtung durch die Bundesregierung*, 15 February 1989, pp. 2 + 28.

[86] *Unterrichtung durch die Bundesregierung*, 15 February 1989, pp. 28-30.

independently of the regular police forces. They possess the same rights as the judicial police and can search premises, make seizures or initiate other judicial inquiries.

Notwithstanding, the Foreign Trade Act guarantees the free market principles to a maximum. Restrictions must be conceived in such a way, that they cause the least possible hindrance to the freedom of economic activities[87]. If an export license is refused, the Federal Economy Office must justify its refusal. One of the few possible justifications summed up in §7 of the law is the risk of disturbing the peaceful co-existence between two states. On the other hand, the Act also insists on safeguarding domestic economic interests, which for this reason may supersede any consideration of peaceful co-existence[88].

Together with the governmental report on the German involvement with the Rabta plant, Chancellor Kohl submitted a series of proposals to enhance export controls on strategic chemicals, substances for biological weapons and on related technologies and equipment[89]. On the one hand, the Federal Government seeks to improve the existing database and the exchange of data between the different services and the industry. Special arrangements will be negotiated with the latter to protect industrial secrets. Consultations regarding the sale of specialized agro-chemical or pharmaceutical plants are also planned. The German chemical industry has already declared its willingness to cooperate on the matter. Other measures intend to ameliorate collaboration between the different judicial services and the customs. On the other hand, Kohl proposed a strengthening of the export control regime and a stiffening of punitive measures. The number of chemical compounds requiring an export licence would be increased to seventeen, while the extended list of - at that time - 35 products would be circulated to the chemical industry. The technology export list is to be supplemented with equipment items for to manufacturing biological weapons. Export and transit controls and licensing requirements will be extended to all destinations, rather than be limited to certain sensitive countries. The only exception are other O.E.C.D. members[90], because they all have more or less similar export regulations and because in any case, the intense trade between those countries makes systematic control impractical. The Federal Government also planned to increase the number of customs officers and add new specifications to the end-use certificate. The transfer of chemicals and components to produce chemical and biological weapons would henceforth also be submitted to the Weapons of War Control Act[91]. As such, infringing Federal trade regulations abroad would

[87] *"Beschränkungen [...] sind so zu gestalten, daß in die Freiheit der Wirtschaftlichen Tätigkeit so wenig wie möglich eingegriffen wird."* As quoted in: B. Adam, E. Remacle, Et Al., March 1989, p. 31. Brzoska testifies that the control regime was so lax that firms which had illegally exported weapons or technology only received short probation terms. One court ruling said that the company being tried *"had been led to believe, by experience, that the government was not very intent on enforcing controls"*, thus creating an environment which *"made it easier for them to decide to carry out their misdeeds"*. (July 1989, pp. 33-34)

[88] B. Adam, E. Remacle, Et Al.; March 1989, p.31.

[89] *Unterrichtung durch die Bundesregierung*, 15 February 1989, pp. 23-27 + Annex 2.

[90] Australia, Austria, Belgium, Canada, Commission of the European Communities, Denmark, Federal Republic of Germany, Finland, France, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, The Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States of America and Yugoslavia.

[91] Exception is made for technology to destroy such weapons and facilities.

become convictable. Violators risk between 2 and 15 years imprisonment and fines up to 1 million Marks. In addition, a part of the company's net profit may be impounded.

Some measures were passed on 15 March 1989 and entered into force on 1 April. On 4 October another 17 chemicals were submitted to export licenses. However, decisions on some of the more profound regulations, such as those proposed in the Bill to Improve the Control of Foreign Trade and to Ban Nuclear, Biological and Chemical Weapons *(Gesetzesentwurf zur "Verbesserung der Überwachung des Außenwirtschaftsverkehrs und zum Verbot von Atomwaffen, biologischen und chemischen Waffen)*[92], were repeatedly postponed and the Government failed to meet its 1 January 1990 deadline. Delaying tactics by the CDU/CSU christian-democratic parties were blamed. Amongst the proposed regulations not yet implemented at the time of writing were the persecution of people working abroad on forbidden projects and the inclusion of scientific research in the three types of armament. Moreover, both parties wished to reduce the suggested prison sentences. The delays increased frictions with Washington once more, resulting in the U.S. refusal to relax certain COCOM restrictions[93] and were possibly the cause for the new disclosures concerning Libya's chemical warfare programme in March 1990.

[92] *Stand der Gesetzgebung des Bundes. 61. Lieferung vom 6.6.1989, E. Wirtschaft E16.* In this document, the Federal Government indicated its opposition to the bill, whereas the *Bundesrat* supported it.

[93] W. Hoffmann, 23 February 1990.

Appendix: List of chemicals

(i) Core export control list

thiodiglycol
phosphoryl chloride
dimethyl methylphosphonate
methylphosphonyl difluoride
methylphosphonyl dichloride
dimethyl hydrogen phosphite
phosphorus trichloride
trimethyl phosphite
thionyl chloride

(ii) Warning list

N-methyl-3-piperinidol
2-N,N-diisopropylaminoethyl chloride
2-N, N-diisopropylaminoethyl mercaptan
3-quinuclidinol
potassium fluoride
2-chloroethanol
dimethylamine
diethyl ethylphosphonate
diethyl N,N-dimethylphosphoramidate
diethyl hydrogen phosphite
dimethylammonium chloride
ethylphosphonous dichloride
ethylphosphonyl dichloride
ethylphosphonyl difluoride
hydrogen fluoride
methyl benzilate
methylphosphonous dichloride
2-N,N-diisopropylaminoethyl alcohol
pinacolyl alcohol
substance QL
(= 2-N,N-diisopropylaminoethyl ethyl methylphosphonite)
triethyl phosphite
arsenic trichloride
benzilic acid
diethyl methylphosphonite

dimethyl ethylphosphonate
ethylphosphonous difluoride
methylphosphonous difluoride
3-quinuclidone
phosphorous pentachloride
pinacolone
potassium cyanide
ammonium bifluoride
potassium bifluoride
sodium bifluoride
sodium fluoride
sodium cyanide
tris-ethanolamine
phosphorous pentasulphide
di-isopropylamine
diethylaminoethanol
sodium sulphide

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Joachim Badelt

After the Imhausen/Rabta Case

Amending the FRG's Foreign Trade Legislation

The trigger: the Imhausen/Rabta case[1]

At the turn of 1988-1989, the U.S. administration leaked information to the press that West German companies were participating in the construction of a chemical weapons plant in Rabta. It was also reported that since August 1988, there had been intense U.S. *"diplomatic activity aimed at forcing the Western companies out of the project"*.[2] A few days before the Paris Conference on the Prohibition of Chemical Weapons, the U.S. administration took the opportunity to pressure the German government to revise its export policy.[3] Later, it emerged that discreet talks and U.S. intelligence information had not produced the anticipated response from the federal government. Consequently, Washington abandoned the path of quiet diplomacy and opted instead for public attacks.

In both countries, the news media published an increasing number of details on the Rabta project and a possible German involvement. Chancellor Kohl reacted for the first time on 5 January 1989. In a message to President Reagan, he complained of an *"escalating campaign"*, that did not help solving the issue. Above all, he criticised the lack of *"legal evidence"* in the American accusations against the implicated German company. Nevertheless, he stated that the Federal Republic was prepared *"to take the consequences"* and, if necessary, to amend the laws concerned.[4]

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[1] Throughout this paper, we refer to the Imhausen/Rabta "case" rather than the frequently used characterisations "scandal" or "affair" precisely to underline the fact that, rather than representing an exception, the activities of Imhausen in Libya were not atypical of the FRG approach to exports.

[2] New York Times, as quoted in CWC Bulletin, No. 4 (May) 1989, p. 4 (Chronology: 1st January 1989).

[3] On the FRG's export policy and the foreign trade legislation see: Jean Pascal Zanders, Mechanisms behind the Imhausen-Rabta Affair, in this volume.

[4] *Frankfurter Allgemeine Zeitung*, 7th January 1989.

However, evidence of the involvement of West German firms accumulated steadily. Together with a growing public pressure, this soon forced the Federal government to announce measures to strengthen the foreign trade legislation. Stringent export controls were also to be introduced.

Initial reactions of the FRG government

Chancellor Kohl declared that the *"legal instruments of the Federal Republic"* would be *"significantly amended and strengthened"*.[5] At a meeting on 10th January, the Federal Cabinet agreed on new export regulations. The minimum penalty for contravening the Foreign Trade Act was to be increased. Furthermore, even the mere *"endangerement"* of the legal rights would be punishable by imprisonment. Under existing regulations, this applied only if they were impaired. The Cabinet also announced an increase of the maximum fine from 500,000 to 1 million DM. An important new element was the plan to prosecute German nationals *"participating"* in the production of biological and chemical weapons **abroad**. In addition, new administrative measures, together with amendments to the laws on data protection and statistics, would simplify the exchange of information between the services involved.

While expounding these measures at a press conference, Federal Minister of Economics Haussmann, however, made it clear that export restrictions were to remain an exception to the basic free trade rule. Since approximately 1.5 million export consignments leave the Federal Republic every month, these could never all be checked. Moreover, implementing these measures would be prohibitively expensive.[6]

The German government's declaration of intent resulted in political success. A few days later, on 15 January, then President-elect Bush defended the German leader's integrity: *"I know that Chancellor Kohl is strongly opposed to the proliferation of chemical weapons and he has also expressed this clearly."*[7] Thus, the German rhetoric had a calming effect on the controversy between the two states. Yet Germany's fundamental principle of guaranteeing the widest possible foreign trade freedom had not in any way been called into question.

Amending the foreign trade legislation

After promising to strengthen the provisions of the foreign trade legislation, the CDU/CSU-FDP coalition government was obliged to act.

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[5] *Die Welt,* 9th January 1989.

[6] *Frankfurter AAllgemeine Zeitung,* 11th January 1989.

[7] As quoted in *Frankfurter Allgemeine Zeitung,* 16th January 1989.

1. The Federal Cabinet's proposals of February 1989

The *Report of the Federal Government to the German Bundestag* of 15 February 1989 detailed the proposed measures.[8] These can be summarized in four central points of action.

1. New export restrictions on goods with military applications.
   Goods and technical documents that could be misused for the development and production of biological and chemical weapons would be subject to export licences. Extended licensing requirements for exporting technical documents and transmitting sensitive information, that could be used in weapons manufacturing processes, were to be introduced. Several Third World countries so far exempt from this provision, would be placed on the list. Furthermore, the number of chemical substances on the export list (section C, part I) was to be increased from 8 to 17.[9]

2. Strengthening the existing regulations on fines and penalties.
   The proposal also envisaged penalties ranging from 2 to 15 years imprisonment. The maximum fine was to be increased from 500,000 to 1 million DM. The proposal to sanction any German citizen participating in the production or proliferation of biological and chemical weapons constituted a major innovation. Indeed, he would be liable to prosecution irrespective of the fact whether he was operating on German territory or abroad. The novel concept of *promotion* (*Förderung*) was explicitely introduced to cover a very wide spectrum of prohibited activities. However, transactions with other NATO member states were explicitly exempted. This implied that, for example, promoting chemical weapons production in Iraq would be an offence. On the other hand, assisting the U.S. binary production programme would not be considered a crime.[10]

3. Improving the data bases of the controlling authorities and the exchange of information between them.
   To this end the Federal Economy Office *(Bundesamt für Wirtschaft)*, the Customs Criminal Institute *(Zollkriminalinstitut)* and the Federal Criminal Office *(Bundeskriminalamt)* will be provided with *"modern methods of data processing"*.

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[8] *Bericht der Bundesregierung an den Deutschen Bundestag entsprechend seiner Entschließung vom 18.1.1989, Bundestagsdrucksache (BT.Drs.)* (Print of the German Bundestag) 11/3995, 15th February 1989.
The report also includes 39 pages of detailed information about the Federal Government's knowledge of West German industrial involvement in Rabta, exactly when that knowledge was acquired, and which departments and offices of government had been informed.

[9] The export control list was again expanded by the Federal Cabinet on 4th October 1989, by adding another 25 chemicals to the list of 17 that were already controlled.

[10] The latter provision could have created an important loophole in the new legislation. Not all NATO members have enforced strict transit controls, nor do they all have regulations on the export and transit of technology and knowledge. German companies could have thus shipped their commodities to another NATO member, where a local shipping agent would "divert" these to the originally intended destination. Imhausen had set up such a link over - amongst others - Belgium, that had almost no transit controls. However, the most recent bill the Belgian government will submit to parliament later in 1991, will exclude any such future constructions involving firms on Belgian territory. (See also: Jean Pascal Zanders, Chemical Weapons Proliferation, Belgium as a Transiting Country in the Imhausen-Rabta Affair, in this volume.)

Inter alia, a new obligation to register sensitive exports was to be introduced. This obligation would also apply to *"all CW agents precursors as well as plants and typical equipment suitable for the production of chemical warfare agents"*.

4. These new legal provisions will expand the tasks and responsibilities of the agencies involved. Therefore, the Federal Government also decided to increase their staff levels and the material resources. For example, it has announced that the number of personnel for the principal export monitoring agency, the Federal Economy Office, would be tripled from 70 to 210.

2. The draft legislation of May 1989

At the end of May 1989, the draft legislation announced in February was submitted to the German Bundestag. It contained amendments to several laws and regulations, in particular to the Foreign Trade Act[11] and the Weapons of War Control Act.[12] In essence, it followed the government's initial proposals. However, there was one significant change.

The concept of *"promotion"* had been defined very broadly in the February proposals to include as wide a spectrum of activities as possible. This approach was reversed in the draft legislation. Penalties were only envisaged for *"reckless promotion"* of the development and proliferation of chemical weapons. In German criminal law, *"recklessness" ("Leichtfertigkeit")* is generally understood to be equivalent to *"gross negligence" ("Grobe Fahrlässigkeit")*.[13] The onus of proof on the prosecution in such cases would therefore be much greater than originally announced. For example, under the new proposal, the prosecution would fail if it cannot demonstrate that a company delivering equipment for an alleged pesticide plant should have had some idea of its real purpose.

On 23 June 1989, the draft legislation was laid before several Bundestag committees. The principal one was of course the Economics Committee. Consultations also took place within the Committees on Foreign Affairs, Law, Defence, the Budget, Research and Technology, and the Environment.

The Economics Committee held a public hearing on the draft legislation on 23 October.[14] Representatives of German industry expressed their reservations about the envisaged strengthening of penalties. They objected in particular to the increase in the maximum penalty and to the provision making *"reckless promotion"* a criminal offence. They claimed that this concept would lead to unacceptable legal uncertainty. Furthermore, they argued, the industry's

[11] *Außenwirtschaftsgesetz vom 28. April 1961 (AWG) (BGBl. I, S. 481ff., S. 495 und 1555f. in der Fassung der Änderungen, Bundesministerium der Justiz-Fundstellennachweis A, Ausgabe Dezember 1988, S. 210).*

[12] *Gesetz über die Kontrolle von Kriegswaffen vom 20. April 1961 (KWKG) (BGBL. 1916 I, S. 444-450).*

[13] See the report by the Federal Ministry of Justice: *Der Bundesminister der Justiz, Gutachtliche Stellungnahme zu den Änderungsvorschlägen zur KWKG-Novelle, II A 2 - 7002/1 - 33 0312/89, n.d.*

[14] *Öffentliche Anhörung des Ausschusses für Wirtschaft, Stenographisches Protokoll Nr. 56, 23. Oktober 1989.*

responsibility to investigate the true purpose of exports would disadvantage them in international competition.

3. Opposition in the Economics Committee and the legal advice of the Federal Ministry of Justice

The criticism of West German industry was not without effect on members of the governing parties CDU/CSU and FDP. They increasingly distanced themselves from the original draft and demanded several modifications. These included:

- limitation of *promotion* of the development, production etc. of ABC-weapons to *substantial* actions;[15]
- penalisation only of *intentional*, not of *reckless* promotion;
- no penalisation of activities in the area of ABC-weapons by Germans abroad;
- reduction of the minimum penalty from two years' imprisonment to one year;
- exemption of scientific personnel and research activities as well as international cooperation from accountability.[16]

The opposition of coalition party members to the government's draft legislation further delayed its passage. In contrast, the opposition party SPD continued to demand that the government's draft legislation be passed in its original form.[17]

On 14 November, the coalition party leaders requested Federal Minister of Justice Engelhardt (FDP) to prepare a legal report on the proposed amendments in an attempt to resolve the conflict between the members of the majority parties in the Economics Committee and the Economics Ministry.

Engelhardt's report, more than 90 pages long, was completed early in January 1990. It recommended that the draft legislation of the Federal Government be adopted. It also characterised the proposals as appropriate, reasonable and *"acceptable for the legal system"*. About the minimum penalty for contravening the law, however, the report pointed out that Article 16 of the Weapons of War Control Act lays down a minimum sentence of one year's imprisonment for illegal handling of conventional weapons. Therefore, *"it seems appropriate to envisage a higher minimum penalty of two years for the illegal handling of even more dangerous weapons of mass destruction"*. As under Federal law prison sentences of less than two years can

[15] This is a literal translation of the relevant passage in the expertise of the Federal Ministry of Justice. What appears to be meant is that the CDU/CSU demanded that the promotion of the development, production etc. of ABC-weapons should only be punishable if it were substantial.

[16] *Der Bundesminister der Justiz, Gutachtliche Stellungnahme zu den Änderungsvorschlägen zur KWKG-Novelle, II A 2 - 7002/1 - 33 0312/89, n.d.*

[17] *BT.Drs. 11/7221,* 25th May 1990.

be suspended, the Justice Department wanted to increase the deterrent effect of the proposed legislation.[18]

The report did not resolve the conflict between the Ministry of Economics and the coalition party members in the Bundestag. On the contrary, it caused a curious situation in which members of the CDU/CSU and the FDP voiced their opposition to the ministry's recommendations, while the opposition parties SPD and DIE GRÜNEN expressed their satisfaction.[19]

4. The final draft legislation of May 1990

The line of conflict within the government was thus drawn between those MPs representing the German industry's interests on the one hand and the Ministries of Economics and Justice on the other. It is therefore not unrealistic to suppose that the export-oriented industries subjected the CDU/CSU and FDP members of the Bundestag's Committee of Economics to much intensive lobbying during that period.

A compromise was nevertheless achieved on 30 March 1990. After intensive consultations, the parties had finally agreed on a draft for the new arms-export-control legislation.

Contrary to the original governmental amendment, the CDU/CSU and FDP MPs succesfully forced through a reduction of the minimum penalty to one year's imprisonment. It could thus be imposed in the form of a suspended sentence. In contrast to this leniency, a new measure was introduced. A minimum penalty of ten years with a maximum sentence of life imprisonment could be imposed if *"ABC weapons have been employed, but only if they have been employed against human beings and the perpetrator was aware of this fact at the time of his activity"*.[20] Evidently, it will be virtually impossible to meet the conditions of this provision. The clause only serves a cosmetic purpose. These draconian penalties simply serve as distraction from the mild penalties for the more likely violations.

On the other hand, the notion of *"reckless promotion"* in the original proposals has been maintained. The compromise also extends the scope of the Weapons of War Control Act to cover criminal activities committed abroad. This should facilitate legal action against the proliferation of weapons of mass destruction, since many aspects of the process take place outside the borders of the Federal Republic. The passage would allow prosecution of individual German citizens, such as technicians and construction workers involved in the physical labour of building a weapon-producing plant, operating abroad. Nevertheless, the German industry's involvement in such activities will invariably entail activities on German territory. This new provision thus suggests strongly that so far adequate control of sensitive exports was virtually impossible for lack of the appropriate legal instruments. In practice, however, prosecution of activities abroad

[18] *Der Bundesminister der Justiz, Gutachtliche Stellungnahme zu den Änderungsvorschlägen zur KWKG-Novelle, II A 2 - 7002/1 - 33 0312/89, n.d.*

[19] *Frankfurter Rundschau,* 14th February 1990.

[20] Articles 19 (2a) and 20 (2) Weapons of War Control Act; BT.Drs. 11/7221, 25th May 1990.

will prove extremely difficult under any circumstances. Indeed, it is highly unlikely that the states involved will be prepared to cooperate with the German authorities. As such, hard evidence will be very difficult to collect. German investigative teams will also be confronted with a more general problem for many countries potentially involved in such transactions have not signed extradition or legal assistance treaties with the Federal Republic. Criminal prosecution under Federal law of crimes committed abroad will therefore be extremely difficult.

Finally, the proposal contained a new provision exempting acts carried out in the context of *"scientific cooperation"*. This, of course, would have opened new loopholes.

This bill, which according to the Federal Government in January 1989, was to become law *"as soon as possible"*, was not passed by the Bundestag until 1st June 1990. It carried the support of the government parties. This unusually long legislative process of one and a half years prompted several prominent U.S. Senators from both the Republican and Democratic Parties to write to the President of the Bundestag, Rita Süssmuth, in mid-May 1990. They urged a quick vote on the bill, probably a unique occurrence in the history of FRG-USA relations.[21]

The opposition parties criticised the far-reaching changes to the original draft legislation, presented in May 1989 when memory of the Imhausen/Rabta case was still fresh. They spoke of a "watering down". Government spokespersons, on the other hand, defended the legislation. Economics Minister Haussmann (FDP) even claimed that it contained *"internationally exemplary regulations"*. It was also announced that the bill was to become law on 1st July 1990.[22]

This did not happen, however. The process requires the approval of both legislative chambers. At that time, the SPD-governed länder still held the majority in the Bundesrat. The social-democrats blocked the passage of sections of the bill[23] in an attempt to have the minimum penalty of two years' imprisonment reintroduced. Because of the possibility of a suspended sentence, they stressed that a minimum penalty of one year did not concur with the aim at deterring potential offenders. They also demanded that the clause on *"scientific cooperation"* be eliminated. Finally, they wanted to erase the provision on a life sentence for perpetrators who are aware of deployment of ABC-weapons at the time of their involvement in the respective programmes. They argued that this would be extremely difficult to prove in practice.

The Conference Committee *("Vermittlungsausschuß")* was therefore called upon to mediate between the first and the second chamber of the German parliament. On 12 September 1990 the proposals of the SPD-governed länder were largely accepted.[24] On 19 September 1990, the new legislation passed the German Bundestag with the votes of the CDU/CSU, the FDP and also the opposition party SPD. The legislative process was thus finally completed. The amendments

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[21] *Tagesspiegel (Berlin)*, 23rd May 1990

[22] *Tagesspiegel*, 2nd June 1990.

[23] However, the Bundesrat did assent to: *"Fünftes Gesetz zur Änderung des Außenwirtschaftsgesetzes"* and *"Sechstes Gesetz zur Änderung des Außenwirtschaftsgesetzes" (BGBl. Teil I, 27. Juli 1990, pp. 1457).*

[24] *BT.Drs. 11/7848.*

entered into force on 11 November 1990,[25] nearly two years after the FRG government first announced that the foreign trade legislation was to be revised.

Conclusions

The recent amendments to the foreign trade laws of the FRG represent a history of delays and dilution of the original draft legislation. The entire process must be viewed as a response by the conservative-liberal coalition government to the international accusations about the Imhausen/Rabta case. Also, they wanted to preserve the very liberal export policy. The initially expressed willingness of the Federal government to adopt measures to prevent nuclear, biological and chemical weapons proliferation was not translated into action. It gradually became apparent that the industry's interests would prevail over possible export restrictions. This was particularly evident from the position of the CDU/CSU and FDP members of the Bundestag's Economics Committee.

The main associations of the German industry did announce their *"understanding"* of the need to strengthen foreign trade legislation and offered to cooperate with the government. It nevertheless emerged that they subjected the government to increasing pressure to drop the amendments in their original form.[26] The behaviour of German industrialists in this regard may be characterised as ambivalent. On the one hand, it is not in their interest that Germany's foreign policy reputation should suffer because of a few "black sheep". Indeed, this could lead to restrictions on the freedom of foreign trade and thus to economic losses. Therefore, they constantly stress their support for all efforts to prevent the proliferation of chemical weapons. However, when specific export controls and penalty measures are under discussion, they attempt to torpedo their introduction. They justify their view by claiming that they can only support measures that are *"appropriate and practice-oriented"*. Put differently, new export controls must not impose additional burdens on industry and result in further restrictions. *"Practice-oriented"* may also mean no strengthening of the lax approach to controls adopted so far.

With approximately 18 million export consignments every year, total control will not be possible. Even if all existing regulations were rigorously strengthened, too many loopholes would remain. Nevertheless, their number could be drastically reduced. Self control mechanisms applied by the German industry could be an effective supportive measure. However, they would have to be integrated in an efficient system of registration and data collection. One result of such an approach may be a reduction in the number of transactions to be controlled.

[25] *Gesetz zur Verbesserung der Überwachung des Außenwirtschaftsverkehrs und zum Verbot von Atomwaffen, biologischen und chemischen Waffen (BGBl. Teil I, 10. November 1990, p. 2428ff.).*

[26] *Die Zeit*, 23rd February 1990

The measures on registration and data collection[27] promise a clear improvement in the flow of information and thus in the possibilities of access and investigation available to the authorities responsible for export control and criminal prosecutions. However, this will be of little use if the licensing policy of the Ministry of Economics remains the same. As long as the main task of the Ministry of Economics is seen as the promotion of industry and exports, the unavoidable conflict with the functions of export control will continue unresolved. A shift of the export control functions from the Ministry of Economics to the Foreign Ministry or indeed to a new, autonomous export control authority could contribute to solving this problem.

It would be unrealistic, however, to suppose that the proliferation of chemical weapons could be prevented simply through strengthening the means of technical control. Despite the improved access to information and the extension of control procedures, possibilities of evading the new regulations will remain. Nevertheless, measures do exist that could render exports for ABC production programmes more difficult or even discourage potential offenders altogether. Where monitoring and control are no longer effective, deterrence must be based on the increased likelihood of discovery and higher penalties. It is important to notice that new control and monitoring measures increase the probability of discovery and thus also the deterrent effect.

However, to render the cost-benefit analysis of illegal transactions unattractive, only stiff sanctions can make up a true deterrent. The opposition parties alone must be credited with this achievement. Indeed, at that time, the SPD-governed länder constituted a majority in the Bundesrat. The government's amended proposals would have allowed suspended sentences for breaking the Foreign Trade Act. This would have reduced the deterrent effect to a large extent. As long as an industrialist only has to reckon with a fine, constraints will remain minimal. It is precisely in those circumstances in which it is difficult to gather conclusive evidence, that the need for a credible and therefore effective deterrent is the greatest. The governmental decision to reduce the minimum penalty to one year must therefore be criticised.

The difficulty of gathering evidence and prosecuting German citizens for their illegal activities abroad has already been pointed out. A further obstacle to criminal prosecution results from the dual-use characteristics of a large part of the goods and technical know-how in question. During the seventies and eighties, an increasing number of Third World countries began with establishing their own weapons production base. Because of their industrialisation, many now possess a chemical weapons production capability. However, most countries interested in a chemical warfare capability lack the precursors, equipment and technical know-how. It is often impossible to distinguish between civilian and military applications of those goods. Chemical compounds or equipment for the production of fertilizers or pharmaceutical products can

[27] These measures include improving the information basis, improving the reliability controls on licence applicants, intensifying foreign trade controls in enterprises, strengthening customs controls on exports, the introduction of an early-warning system in cooperation with the export sector of the economy, and an increase in the personnel of the customs and licensing authorities. Among other provisions, the personnel of the Federal Economics Office was increased from 70 in 1989 to 170 at the end of 1990 (by the end of 1991, the personnel is to be increased to approx. 235). The customs authorities are establishing their own system to process all data they receive; this has been named "KOBRA" (*Kontrolle bei der Ausfuhr* = control at export), and in particular it covers export declarations so as to ascertain any peculiarities in the declarations on exported goods.

frequently be used for chemical weapons production. In February 1989, the Federal government admitted that the then existing export controls had *"proved inadequate"* to prevent chemical weapons proliferation.[28] The new measures contained in the act of November 1990 are still inadequate to verify the real purpose of dual-use goods being exported.

One way to avoid the misuse of goods with an ABC-weapons potential is to prohibit their export to Third World countries entirely. However, this approach is unacceptable. It would hinder the development of indigenous chemical industries in Third World countries and these would perceive it as a discriminatory measure by the industrialised world. The decision of the Federal Cabinet on 14 November 1990 to include *"country lists"* in the new legislation[29] is an attempt to solve this problem. Undoubtedly, it would make sense to deny certain countries access to certain chemicals and CBW weapons-related technologies and equipment. The resulting situation would, however, be somewhat problematic. Indeed, individual source countries would be deciding which states should receive which dual-use products and which should be denied them.

To summarise, except for a few specific improvements in the system of registration and data collection, the amendments to the foreign trade law remain largely cosmetic. They do not suggest the existence of a political will to alter the prevailing export legislation or export philosophy of the Federal Republic in any significant way. Goods and know-how can still be shipped abroad without licence if they have not been unequivocally classified as "military". As long as industrialists do not bear the responsibility for certifying the final destination of their supposedly civilian merchandise, German goods and technical know-how will continue to be used in the production of weapons of mass destruction.

The Federal government was evidently only concerned with deflecting U.S. accusations and with pacifying German public opinion which had become alerted to the issue through the Imhausen/Rabta case. It was clearly not intended to impose new regulations that would have subsumed export policy to the wider considerations of peace and security policy. The entire process may thus be summed up in a few words: just a face-saving action!

Epilogue

Renewed criticism of the Federal Republic's export policy during the second Gulf war has led to new amendments to the legislation. This indicates that even the Federal government now admits that last year's so-called improvements to the export laws were inadequate. We cannot enter this discussion at present because of time constraints.[30] However, it is noteworthy that the

[28] This was stated by the Minister of the Interior, Schäuble, in the German Bundestag, *Bundestags-Protokoll, 126. Sitzung, 17. Februar 1989.*

[29] *12. Verordnung zur Änderung der Außenwirtschafts-Verordnung* (entered into force in December 1990), *"Länderliste H"* includes 53 countries, most of them being Third World nations.

[30] The issue will be dealt with in detail at the Third Annual Conference on CBW on *The 2nd Gulf War and the CBW Threat: The Impact on Threat Perception, Disarmament and Proliferation*, to be held in Brussels on 29-30

Bundestag approved amendments with only minor changes on 22 March which had only been announced by the new Liberal Minister of Economics Möllemann on 6 February 1991. This is indeed a remarkably short period.

November 1991.

Proceedings of the 2nd Annual Conference on Chemical Warfare

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Opening Address

I am very pleased that I may open this conference. I am even more pleased that so many people are attending. It testifies to your responsibility in the whole question of chemical warfare. I am also very glad that this conference can be held at our university. The Free University of Brussels is a young university. However, it has the spirit and the sense to express its anger over what is happening to what we call *the possibilities for human development*.

At the end of this century, we are living in a world full of contradictions. Yesterday, we received the French oceanographer Jacques Cousteau in preparation for a special chair in his honour on the existence and survival of our planet. In his address, he pointed to the good things we can all do to preserve our world. However, he also stressed - and this is the contradiction we face - that certain countries, people, political decision makers are working against the development of the humanity and of our planet.

Over the last couple of years, we have been particularly shocked by the massive use of chemical weapons in the Gulf War and against Kurdish civilians. In 1986 the Belgian Government rocked on its foundations after it had approved the U.S. NATO Force Goal to start production of binary chemical munitions. It also emerged that Belgian and European firms were actively involved in the acquisition of a chemical capability by several countries in the Middle East.

Today, we are clearly at a crossroads. In the near future we may see the conclusion of a global ban on these hideous weapons. Or we may not ... Negotiations have been going on for more than two decades. However, it is one area in which the improved relations between East and West do not provide a guarantee for success. Indeed, a growing rift over the linkage between nuclear and chemical weapons between North and South risks to further complicate the talks.

And time is running out ... fast. In view of the fast proliferation process, many countries may consider acquiring a chemical deterrent as a better security safeguard in the short term. Institutional resistance in the military organisations of both superpowers against the treaty may also be rising, complicating negotiating positions. Advancing the idea of a 2% security stock,

instead of a complete dismantling of all chemical munitions, is just one example of how the seeds for a future arms race are stored.

In time-honoured Belgian tradition, I could have opened this conference on chemical warfare by using the words: *"On 22 April 1915, at Langemark near the town of Ypres, etc."* Indeed, chemical warfare still is part of our living memory. However, over those seven decades, that emotional revulsion proved a too small an incentive to stimulate peace research in that area in Belgium. It is therefore my pleasure as Rector to announce before this distinguished audience that later this year the Free University of Brussels and the Centre for Polemology under Prof. Niezing will launch a full-fledged research programme in support of achieving a global ban on chemical warfare. Indeed, it is highly necessary to develop research in this field, not only from a chemical or pathological point of view, but mostly from a policy perspective.

At the beginning of this year, it was revealed in the Belgian press that the Government is preparing a bill to increase public control over arms transfers and a total ban on the export of chemical and biological weapons. This conference "Chemical Weapons Proliferation: Policy Issues Pending an International Treaty" is therefore very timely. Although we firmly believe that the conclusion of a global Convention is the ultimate goal, we are equally convinced that in the meantime Belgium - and other countries - cannot sit by idly while gas is spreading over the Third World. Only last month, it was revealed that European firms were once again involved in providing technology, know-how and raw materials to a country in the Gulf. Put differently, one and a half years after the cease-fire in the Gulf War, that arms race is continuing. Diplomatic steps within the informal Australian Group, especially created to coordinate efforts to prevent chemical weapons proliferation, prevented a recurrence of the public outcry over the Imhausen/Rabta affair last year. We believe that it is also our responsibility to prevent further spread of the chemical threat. It is possibly one of the very few areas in which Belgium can take concrete measures.

Therefore, I believe this conference is worthwhile. It is already the second one. There will be a third one, a fourth one, and so on. However, I do hope there will not be too many anymore, that this difficult problem of chemical weapons will be solved soon. However, there still is the political reality. Responsibilities are in our hands. Therefore, I am convinced that this conference is worthwhile, because your reflections on the problem of chemical weapons proliferation will have an impact on the different environments in which you are working. At our university, we have some young researchers working on the issue. This generation carries the future of mankind and I hope they will succeed perhaps even better than our generation in solving our global problems. Thank you very much.

Johan Niezing

Chemical Weapons: Facing the Problem

Chemical arms have their own social history. It is a history of public revulsion, of political and military shortsightedness, of diplomatic impotence, of intellectual irresponsibility, of immoral profiteering and - indeed - of polluting the biosphere. In short, this history can be understood as a perfect demonstration of human imperfection; of the incapacity to behave according to the norms and standards the human species developed during its existence, and of the corresponding weaknesses of the international political system. Chemical weapons can be considered as a sign of darkness, as a caution against too much optimism about the human condition and the strength of international law.

However, this darkness has its structure, and as peace researchers, we are entitled and even obliged to deal with it. The history of chemical armament shows in many ways the irrationalities, pitfalls and myths mostly connected with other types of arms and arms races. This history started a long time ago, at the beginning of this century. In spite of some international understanding not to use asphyxiating gases (The Hague Declaration) and to respect the *rules* of *humane warfare* (The Hague Convention), both sides used chemical weapons during the First World War. Gas had become a weapon of mass destruction, the first one in history. However, another qualitative aspect is to be pointed out. Seymour Hersh, after summing up the course of events, concluded: *"The history of the use of gas during the [First World] war is one of steady increases of lethality"*[1]. In spite of both qualitative developments, some myths about the *humane* character of the weapon - and how *humane* they were, the Ethiopians were to experience in 1936 - and about them being a *higher form of killing* were born. The military-scientific establishments used them to secure financial support for research and to build up arsenals[2]. The 1925 Geneva Protocol reflects this ambivalence and imperfection: neither research nor stockpiling were prohibited. As it became interpreted, only the first use of toxic weapons against fellow-signatories was forbidden[3]. Again, one notices some analogies with the *modern* arms race debate. Far from curbing the chemical arms race, the inadequacy and incompleteness of the agreement allowed and even stimulated further research in this field. The Convention simultaneously functioned as a

[1] S. Hersh, 1969, p. 4.

[2] J.P. Zanders, March 1990.

[3] N. Sims, June 1981.

panacea against public revulsion and as a source of legitimation for research and development. On the eve of the Second World War, a gas warfare was envisioned. For instance, in 1939, many civil defence organisations distributed gas masks among (parts of) the population. German scientists had developed even deadlier chemical weapons: tabun, sarin and soman. Lethality was estimated to have been increased by at least a factor 10. According to Friedrich Jung, World War I mustard gas was five times more toxic than prussic acid, and sarin about ten times deadlier than mustard gas. Soman, developed by the Nobel price winner Richard Kuhn, was again much more toxic than sarin[4]. After the Second World War, about 13.500 tons of these highly lethal gases were found in the western occupation zones of Germany. Part of it was dumped in the North and East See. Their polluting effects will peak within ten years from now, as any fisherman from the isle of Bornholm may tell you.

The only gas used during the Second World War was Zyklon B, a relatively simple means of destruction, produced - again - by I.G. Farben and sold to the German SS. Sobibor, Maidanek, Treblinka were parts of an immense weapon system - a system that killed millions of innocent people, a system of genocide, of extermination, a system applied in a war nazi-Germany fought against the Jewish and Gypsy population of Europe. Nevertheless, we are accustomed to say that World War II did not turn out to be a gas war. This is of course right as far as one defines war as matter of states fighting each other with military means. The very fact, however, that the belligerents in a major war did not resort to chemical weapons notwithstanding all military preparations, led to many speculations about their possible *deterrence function*. Once again, the Second World War was abused as a source of legitimation for contemporary policy-makers.

Thus, in the history of chemical warfare a shift of legitimation occurred. *Deterrence* replaced *humaneness*. The course of technology, however, remained unchanged. An increased lethality and ever more sophisticated delivery systems followed. In 1957, Dr. Schrader - who had discovered tabun in the thirties in nazi-Germany - developed new super-poisons. Compared with soman, these V-agents implied once again an increase of lethality with a factor ten. Swedish and English (ICI) research teams continued on the basis of his findings. The USA eventually selected one of these highly toxic substances, known as VX, as the basic *fuel* for its chemical arsenals. Today, the USA possesses 10.000 tons (or more) of this weapon of extreme lethality[5].

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The problem we are faced with - the structure of this dark spot of human civilization - has everything to do with the structure of the international system. Its two main actors each adopted chemical weapons as an addition to their deterrence capabilities, to their offensive defence. Western estimates of Soviet stockpiles vary from 50.000 up to 400.000 tons. The USSR has integrated chemical warfare down to the lowest levels of their European forces. The regular chemical warfare exercises, the anti-dote against soman as part of every Soviet soldier's standard equipment, may be considered as logical consequences of this integration. The Soviet strategy of *offensive defense* against Western attacks called for the use of some volatile, quickly

[4] F. Jung, 1987, p. 260.

[5] F. Jung, 1987, p. 260.

dissolving combat-gas, rather than for tactical nuclear weapons. The USA from their side have developed, among many other, the binary shell, to be used in Europe as part of the FOFA hardware. As we know, Airland Battle scenarios were highly offensive types of deterrence. Thus, both actors have adopted chemical weapons *as a component of the most offensive part of their deterrence posture*.

Within the international system, they have monopolized the issue of chemical armament, and - even more important - the definition of and solution to that problem. However, chemical weapons are not meant to deter. They are designed, produced, bought and sold to be *used* as so many Chinese, Vietnamese, Yemenites, Iranians, and other peoples in the Southern hemisphere (among them the survivors of Halabja) may testify. Chemical weapons are relatively easy to use, to buy, to hide. Their proliferation is increasing, menacing an ever growing part of the world, making whole civilisations targets of extermination.

Both superpowers have dominated the debates. As such, they are responsible for the contemporary state of the problem. Their relationship influenced, time and time again, the Geneva talks. The *all or nothing* themes of the Soviet Union and the corresponding jokers within the many publicly announced US proposals, in the past and even in the present, reflect their mutual rivalry - no more, no less. Together, both actors paralysed the Geneva talks for some decades. Meanwhile, new chemical components, delivery systems, strategic doctrines, etc. were being developed.

As usual, arms control negotiations take place within the boundaries dictated by armament processes, not the reverse. The stagnation of the Geneva talks - or, more precisely: the way in which these negotiations stagnated - is indicative for the strategic thinking of both parties. These strategic thoughts, in turn, are expressions of rather autonomous technological processes and of power relations within each party. This stagnation offered few dangers to both parties. Being linked to other parts of the deterrence system, chemical weapons were never meant to be used. Moreover, the risks of an accidental and/or incidental chemical war were if not practically zero, then in any case much lower than those of unintentional nuclear warfare.

However, at the same time, chemical weapons started proliferating, a situation which could develop rather rapidly due to the stagnation of the debate. Chemical weapons have been "used" at several occasions over the past decades, entailing all horrifying consequences for humanity at large. Today, the situation is clearly running out of control, and both superpowers feel threatened by the course of events. They are seriously considering further reaching steps in the field of chemical disarmament than ever before. Sometimes, however, they still seem inclined to monopolize the issues. This is, for example, clear from a declaration issued by the US delegation at the Government-Industry Conference against Chemical Weapons, held in Canberra between 18 and 22 September 1989[6]:

> "The international community must take vigorous action to halt the dangerous proliferation and *illegal use* of these weapons".

[6] USIS Fact Sheet, 13 September 1989.

Chemical weapons are essentially a South-South problem. However, it arose from North-South linkages, and has been fueled by the incapacity of East and West to settle their disputes in a more responsive way. Chemical weapons are European of origin, and for a greater part, their history is European as well. We, as European peace researchers are not entitled to focus our attention primarily on inner-Southern disputes. However, we are bound to study the North-South linkages, and the way these may develop regardless of all solemn declarations by both main actors on the international scene.

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Julian P. Perry Robinson

Chemical Weapons Proliferation: Security Risks

Chemical warfare (CW) is a horrible and alarming subject. Just the thought of it tends to stir people's emotions. Emotive subjects are difficult to consider rationally. Even governments may, for this reason, adopt irrational policies on chemical weapons. So it is important that we all think clearly about them.

My subject is chemical-weapons proliferation and its risks for security. I shall begin by defining the term "chemical weapon". Then I shall work towards a definition of proliferation, trying to capture in my definition the essence of our current worries - the reasons why we are now (not 20 years ago, say) making an issue of "chemical-weapons proliferation". Next, I shall speak of how there are characteristics of chemical warfare which inevitably inhibit the proliferation, but others which may promote it. These promoters determine the risks for security. The inhibitors afford the foundation for counterproliferation measures. I shall close with some brief comments about the state of our present knowledge about how far proliferation has actually gone.

Which weapons are chemical?

In one sense all weapons are chemical. High explosives, propellants, flame agents, incendiary and smoke-generating compositions, and all the other substances that may constitute the payload of a weapon are chemicals, even the fissile materials and substances such as lithium deuteride which go into nuclear weapons. So a line of demarcation must be drawn. One thought is to put it around just those chemicals which are toxic or poisonous. That is what is done in the 1925 Geneva Protocol, which is the international treaty that outlaws use of chemical weapons.

Actually, all chemicals are toxic in sufficient quantity. And some conventional weapons have toxic side effects. My country, for example, was accused of waging chemical warfare in southern Africa 90 years ago, during what we call the "Second Boer War". That was because of the

noxious fumes generated by the new "high" explosives then coming into use, in that case Lyddite, which was a formulation of picric acid. The Americans, too, experienced similar accusations during their Vietnam War, when cyanide was found to be detectable in the combustion products of certain flame weapons.

So, one would have to add to that definition the awkward qualification that the chemicals are intended for use in weapons whose primary target-effects depend on toxicity. Such a demarcation would exclude the flame agent triethylaluminium, for example, while embracing mustard gas, binary-munition chemicals, nerve gases and the rest of them: "chemical-warfare agents" on one side of the line, other chemicals on the other, a basis for differentiating "chemical-warfare weapons" from "chemical weapons". That particular distinction can be quite an important one. In the military lexicons of different countries, "chemical weapon" can mean different things, often considerably broader in scope than that which I have just defined as a "chemical-warfare weapon". In the Soviet Union, for example, smoke munitions are categorized as "chemical weapons".

The demarcation, it should be noted, would define weapons that spread irritant agents, such as the tear gases, or chemical herbicides as chemical-warfare weapons, for it is through the property of toxicity that these chemicals can function as weapons - no less than the nerve gases can, or psychochemicals such as BZ, or all the other poison gases.

The seriousness of chemical-weapons proliferation

Let me now move from the academic world of definitions to a more concrete one. That the spread of chemical-warfare weapons is a serious problem has been obvious at least since the middle years of the war between Iraq and Iran, the Gulf War. The key message then from the despicable Iraqi use of mustard gas was that chemical warfare lived: it was not just a bad memory from the Great War: a horror, now obsolete, from our grandparents' generation. Nor was it a figment of propagandists' imagination, as chemical-warfare reports from other conflicts had been. Its effects could be seen on our television screens and would go on being seen, sporadically, for four years, climaxing (though not stopping) at Halabja in March 1988. And some people have since said that chemical warfare was why criminal[1] Iraq was not defeated - that, militarily, poison gas had substantial value. True or false, this perception has spread, thereby further eroding confidence in the regime of restraint built up around the 1925 Geneva Protocol. Within a region as beset by insecurities as is the Middle East, must we not expect a synergy between the spread of such perceptions and the spread of the weapons? The Director of Central Intelligence in the United States testified before the Congress last year that Syria and Iran, as well as outlaw Iraq, now have the weapons, with Libya working hard at it as well. And presumably such possessors of chemical-warfare weapons as there are in the Middle East are not necessarily confined only

[1] I say *criminal* here for the reason that the Baghdad regime's use of mustard gas in the Gulf War was conclusively verified by the Secretary-General of the United Nations. Iraq was thus shown to be in breach of international law, including the 1925 Geneva Protocol.

to the countries Judge Webster was talking about, ones unfriendly to America. More than 20 years ago Egypt used chemical-warfare weapons (possibly old British ones) during its intervention in the Yemen civil war. Maybe it still has stocks. Nor can Israeli possession be discounted. And reports of spreading chemical-warfare capability certainly extend outside the Middle East, as I shall relate.

I would speak now of another specific episode from the recent past: the chemical disaster in the city of Bhopal, India, in December 1984. That was due to a container of methyl isocyanate, which is a toxic industrial intermediate, bursting open to vaporize its contents over the city under meteorological and other conditions that must have come near to maximizing peoples' exposure. The area over which at least half of the inhabitants were affected seems to have extended 60 or 70 square kilometres downwind, with much mortality - thousands of people - in the upwind 10-15 square kilometres of it. Toxicologically speaking, the 30 or so tonnes of methyl isocyanate are equivalent to less than a tonne of a nerve gas such as sarin (GB): a quantity easily contained in the warheads of just two *Scud* missiles, maybe only one.

I will return later to the matter of missile delivery for poison gas. I mention it now simply to emphasize the immediacy and the gravity of the chemical-proliferation problem. Which having done, I now enter a plea: that the problem be approached in a rather more critical and open-minded fashion than, in public, has yet been the case.

The need for critical attention

In an uncritical climate, inflationary factors can easily take hold of a problem, distorting our view of its component issues, its implications and its urgencies. The proliferation problem has surely not escaped these inflators. Several can, in principle, be envisaged. Certain interests remain vested in chemical-warfare armament, for example. They have had much experience over the years in defending, even advancing, a cause that is hardly popular, and in beating back the view of chemical-warfare weapons as fading remnants of history, soon to go the way of horse cavalry and the Pigeon Service. We certainly heard these interests expressing themselves back in 1986, in amongst the voices advocating deployment of the new American "binary chemical munitions" to Europe. Propagating the notion that chemical-warfare weapons can suppress chemical warfare is the traditional way of asserting value for them. But another way is to propagate belief that chemical-warfare weapons are rapidly proliferating, and that their proliferation is real cause for concern. It is indeed cause for concern; but when we hear people expressing it and then arguing that stocks of the weapons must be maintained in order to be able to threaten Libya, say, with retaliation in kind, we may wonder at their motives.

Another consequence of the uncritical climate is just coming to a head. More and more governments these past few years have been making public declarations of basic information about their policy on chemical-warfare weapons, such as whether they possess them or not. Two states have formally declared possession (the United States and the Soviet Union) and at least 70 have declared nonpossession. But the latter include several countries which have been publicly

portrayed as chemical proliferators. The confidence-building process which the series of declarations is intended to promote has not been helped. What could have been happening, maybe, is that different people have meant different things, wittingly or unwittingly, when speaking of chemical weapons. How that might be so is something which I think we ought to explore quite a bit further.

How many possessors?

Take, first, that basic question of whether a particular state is or is not to be treated as a possessor of CW weapons. *"To the best of our information, there are 22 nations that have chemical weapons in their inventories, controlled by their military and ready for use."*[2] So said the new Assistant Secretary of State for Politico-Military Affairs of the United States, when speaking in Australia last year as leader of the US delegation on the opening day of the Government-Industry Conference Against Chemical Weapons, in Canberra. His words seemed clear, reflecting, it was to be supposed, the resources and competences of US foreign-intelligence machinery. It is true that he did not identify the 22 countries, but one felt that this was to preserve diplomatic proprieties, or perhaps to protect intelligence sources and methods.

Yet the following day, his deputy was to be heard[3] - as he himself was two days after that[4] - taking questions from the press about the 22 nations suspected of either having chemical weapons or being capable of possessing them. *Suspected*? *Capable*? The matter was evidently not clear-cut after all. In fact the US portrayal now seemed no clearer than the muddy language which the British Foreign Office had been using for the previous two years and more: *"It is believed that between 15 and 20 countries either possess or are actively seeking to acquire chemical weapons"* was the formulation given to the House of Commons last year[5]. Was that what *capable* should be taken to mean, then? - *actively seeking to acquire*. There are other things it could mean, such as having an industry that was able, in principle, to provide the weapons, with or without a positive desire or governmental decision that it should. Or did the difference between the American 22 and the British 15-20 betoken some other meaning or, alternatively, different degrees of confidence in the numbers?

And how much confidence anyway did either of the assessments warrant: could the possessor/capable status of those unidentified countries be regarded as confirmed? Or probable? Or merely possible - no more than guesswork not incompatible with whatever hard data, if any, happened to be available? Who can say?

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[2] Richard A. Clarke, address at session B of Workshop I of the Government-Industry Conference Against Chemical Weapons, Canberra, 19 September 1989, transcript as circulated as document GICCW/INFO/20.

[3] Ambassador Max Friedersdorf, at a press briefing in Canberra, 20 September 1989, as in the transcript subsequently distributed by the US Delegation to the GICCW; and see GICCW/INFO/10.

[4] Richard A. Clarke, speaking at the final GICCW press conference, 22 September 1989.

[5] William Waldegrave, written answer to a parliamentary question, as in *Hansard* (Commons), Vol. 145, n° 30 col. 196, 18 January 1989.

Possession, or just development?

There are several further layers of ambiguity. *Actively seeking to acquire,* when set against *possessing,* as in that British formulation, suggests the development phase of a weapons programme. Was it only that, and not than the subsequent phase of quantity-production as well, which the intelligence analysts had been tracking, and which had driven those numbers? Apparently it was, for last February, the Director of US Central Intelligence spoke to the US Senate as follows: *"Chemical weapons proliferation is part of the disturbing trend of weapons development in Third World countries. Currently we believe that as many as 20 countries may be developing chemical weapons. And we expect this trend to continue, despite ongoing multilateral efforts to stop their proliferation."*[6]

To subsume development with possession, which is what it thus seems the US State Department did in Canberra last year, is to imply that foreign programmes for developing chemical-warfare weapons pose a degree of threat comparable to actual procurement or stockpiling. If it is the medium- or long-term future which is of primary concern, then that is no doubt reasonable. But if the concern is with the present or the immediate future, the two things may need to be treated differently. About 20 nations have chemical-weapons capability, the Director of the US Arms Control and Disarmament Agency told the Senate last year, but, apart from the USA and the USSR, *"no more than a handful, five or six,"* actually possess a stockpile of the weapons[7].

Capability: more or less than possession?

A programme for developing chemical-warfare weapons is not necessarily easy to differentiate from a programme for developing antichemical protection. Even assuming that offence and defence can be distinguished at the research level, weapons development would not necessarily mean a commitment to producing the weapons once developed, though the existence of the programme would certainly facilitate such a decision and might even, depending on the circumstances, imply that it had been taken.

For the analyst trying to assess the threat posed by a development programme, there would be a quantitative side to the question as well. Developmental quantities of chemical-warfare weapons might be capable of killing many people. But how large would the stocks have to be before acquiring real military significance? Again that would depend on the circumstances, meaning that (in contrast to the "MSQ" of the nuclear nonproliferation regime) there is no general rule. One may observe, however, that the US stockpile of chemical-warfare weapons in West Germany has often been described by Pentagon spokesmen as a token supply, one which,

[6] Webster, 1989.

[7] William Burns, testifying before the Senate Foreign Relations Committee on 24 January 1989, as reported by R Jeffrey Smith, *Washington Post*, 25 January 1989, p A9, 'Lawmakers plan chemical weapons curb', and 13 December 1989, p A23, 'Agency gets last word on poison gas'.

although in "excellent" and fully usable condition, only barely if at all has military significance or deterrent value. That stockpile, we have been reliably informed, contains 435 tons of GB and VX nerve gases[8].

Deadly though nerve gas is, it does not become a weapon until it has been filled into munitions which can be used with available weapon systems, or until it has been otherwise adapted for controllable delivery against targets. In fact those stocks in West Germany are all held in projectiles for 155-mm and 8-in howitzers, around 100,000 projectiles. Yet possession even of that stockpile would constitute no capability for nerve-gas warfare unless there were logistical channels linking the stockpile to artillery units in the field, unless those units had been trained in the special skills of firing nerve gas, and unless all of that was functionally connected into the overall command and control structure. So a continuum can be envisaged, stretching from the nerve gas itself, or, even earlier, from the beginning of a laboratory effort aimed at learning how nerve gas can best be made, and on from there through dissemination studies, field trials, doctrinal development and suchlike, to, ultimately, an Army Staff fully attuned to the combat possibilities of nerve gas, able to order up supplies and command their use. For a country which is advancing along that continuum, at which point would external observers feel justified in reporting that the country was now chemical-warfare-capable? The publicists of "proliferation" rarely speak of such matters.

And what is a weapon?

Not always have the countries counted as possessors in public governmental statements remained unidentified. In the US Congress last year, the Director of Naval Intelligence gave the following evidence: *"In addition to Iraq, quite a few Third World states are developing or have achieved [chemical weapon] capabilities: Iran, PRC, North Korea, Taiwan, Burma, India, Pakistan, Syria, Israel, Egypt, Ethiopia, and Libya."*[9] Add in the Soviet Union and the United States, and that comes to 15 nations. But the People's Republic of China, North Korea, Burma, India, Pakistan, Egypt and Ethiopia are among those that have recently made declarations of nonpossession. The Burmese, Indian and Pakistani statements disavowed even the intention of possessing the weapons, meaning that non-development was being declared as well as non-possession.

Do these contradictions reflect deficiencies in the truthfulness of those governments or, alternatively, in the quality of the US Navy's intelligence? Or do they instead reflect a deeper analytical problem: that of determining whether an observed quantity of chemical-warfare agent with or without associated delivery and dissemination devices is properly to be regarded as a

[8] See, for example, R Jeffrey Smith, *Washington Post*, 15 October 1989, p A26, 'US plans early removal of nerve-gas shells'.

[9] Rear-Admiral Thomas Brooks, prepared statement before the House Armed Services Committee, 22 February 1989, pp 38-9.

"chemical weapon" - and not as, say, a research tool for assessing chemical-warfare threats or for developing antichemical protection, or as an obsolete remnant of some earlier period of history, no longer in any significant sense integrated into the possessor-country's force structure, and therefore hardly describable as a "weapon"?

In other words, may it not be that what some of those nonpossession-declarers really meant was that because they have no actual capability-in-being for conducting offensive chemical warfare - capability in the sense of the more distant end of that continuum - the various chemical-warfare agents and even chemical-warfare munitions which happen to exist on their territory are not usable as weapons, and for that reason are not in fact weapons at all?

Analyzing for intent

Chemical-proliferation analysts within the professional intelligence communities are doubtless capable of understanding perfectly all the distinctions just outlined. Whether the recipients of their analyses and those to whom the recipients later talk, including commentators in the news media, have such comprehension is another matter. More fundamental, however, is whether the data from which the analysts work are detailed enough or fine enough to accept the distinctions.

This is a key question. It impinges at different levels of analysis. For example, given the fact that commercial chemicals can often serve a multitude of purposes, including chemical-warfare purposes, with what confidence is the analyst able to determine the *intent* that underlies, say, a particular shipment of chemicals from country A to country B? The worldwide trade in chemicals is enormous and growing, now that the centre of gravity of production of basic and many commodity chemicals is moving away from the old industrialized countries. So the background against which the analyst would be observing the shipment is one rich in North-to-South transfers of civil chemical technology - transfers which are inevitably increasing the capability of the recipient countries to make chemical-warfare weapons *whether they wish to do so or not*.

A definition of CW proliferation

Here, surely, we are at the real centre of the problem. That background means that the distinction between possessors and non-possessors is bound to be becoming less and less sharp. What has to be recognised is that, although capabilities for waging chemical warfare are spreading to more and more countries, and although a part of the spread is indeed due to the conscious desire of renegade states such as Iraq actually to wield that capability, the greater part is simply an unfortunate side-effect of a process that is otherwise beneficial and anyway impossible to stop: the diffusion of competence in chemistry and chemical technology from the rich to the poor parts of the world. The concern about "chemical proliferation" lies, basically, in the fact that the diffusion is taking place within what seems, not least from the Gulf War, to be

an environment of diminishing restraint. Put that the other way about and we have a good definition of what we are in fact worrying about: *a loosening of inhibitions about using chemical-warfare weapons within an environment of easier access to them.* Chemical proliferation as a tendency, in other words, not necessarily a process.

Constraints on proliferation

Tendency or trend it may be, but it is surely a strongly constrained one for all that. If one is trying to block it - to promote national counterproliferation measures (as in the Australia Group) or create an international counterproliferation regime (as in Geneva) - the constraints that already exist have to be a good foundation on which to build. They are to be found on both the demand and the supply side of the acquisition-process for the weapons.

Take, first, the supply side. Technology diffusion may have eased access, and will no doubt go on doing so as know-how and capacity for manufacturing organic chemicals spread further among the industrializing countries. But it is nonsense to suppose that any pesticide factory is swiftly convertible to poison-gas production, still less any fertilizer or pharmaceutical factory. Most likely, as when Britain began to manufacture mustard gas in 1918, the first victims of the product of such a conversion would be the production workers, unless highly skilled consultant engineers and other experienced personnel had been brought in, as well as specialized equipment and (to begin with) chemicals.

More instructive are the constraints on demand. Consider the record of conflicts in which CW weapons have and have not been used for military purposes. It is sampled in Table 1, where a list is given of all those *authenticated* episodes of poison-gas warfare since the Great War known to the present author. It is striking that the conflicts listed do not include World War II nor any of the other wars in which technologically advanced belligerents faced one another. The feature of technological deficiency or technological disparity is also common to most of the 30-odd other conflicts in which poison-gas warfare has been alleged, without verification. The pattern becomes more pronounced still if the list of conflicts is extended to those where forms of CW weaponry other than poison gas found employment[10].

The limitations of CW weapons

A class of weapon that has apparently remained unused in all but seven of the last 200 or so wars is a class of weapon that lacks general military utility. It is a class of weapon, in other words, for which military demand is evidently slight - "highly specialized" is another way of

[10] Such as the chemical herbicides used by Britain in Malaya for "food control" during the early 1950s, by France in North Africa during the late 1950s, by the United States in Indo-China during 1961-70, and by Portugal in its insurgent African colonies from 1968 to the mid-1970s.

putting it. It is easy to see why chemical-warfare weapons have limitations. Psychological and cultural factors engendered by the unique mode of action of the weapons - poisoning - translate into legal and political constraints on use. Technical constraints reside in the peculiarity that most chemical-warfare weapons work, not through direct action on their targets (as a bullet does), but indirectly, by polluting the environment of the target. Military constraints, too, stem from this feature because it demands special operational skills, the provision of which must inevitably impose opportunity costs upon overall military capability, and because the indirectness of attack means poor predictability of outcome, inimical, therefore, to tight forward planning and the concerting of force in the field.

Table 1. Authenticated episodes of poison-gas warfare since World War I

Period	User	CW weapons used
1919	British forces intervening in the Russian Civil War	Mustard-gas &c
1925	Spanish forces in Morocco	Mustard-gas aircraft bombs
1934	Soviet forces intervening against Muslim insurgents in Sinkiang	Mustard-gas aircraft bombs
1935-40	Italian forces in Ethiopia	Mustard-gas aircraft spraytanks and bombs
1937-45	Japanese forces in China	Mustard & lewisite aircraft bombs &c
1966-67	Egyptian forces intervening in the [North] Yemeni Civil War	Phosgene & mustard aircraft bombs
1983-88	Iraqi forces in the Gulf War	Mustard & tabun aircraft bombs &c

Source: Sussex/Harvard Information Bank on CBW Armament and Arms Limitation.

It is that environmental mediation, furthermore, which means that chemical warfare is relatively easy to protect against: a filter interposed between the air a person has to breathe and his or her nose and mouth; overgarments to shield the skin from any rain of liquid CW agent that might otherwise fall on it. These are technologically demanding requirements if the wearers of the protection are to remain efficient in their work while protected; but not nearly as demanding as comparable protection against blast, heat or high-energy fragments.

Table 2. Nerve-gas, high-explosive and fragmentation projectiles compared

Volleys of 155-mm battalion fire for 30 percent casualties over a platoon sized target (150 m radius) in open terrain 10 km away

Type of projectile	Antichemical protection of target personnel	Target personnel on the attack	Target personnel in defence
Air-bust HE	[irrelevant]	4	51
Op frag submunition	[irrelevant]	1	4
Sarin (GB) nerve-gas	Unprotected	1	1
do.	Carrying masks, but initially unmasked	2	66
do.	Masked throughout but not in protective clothing	74	74
do.	Masks and protective clothing throughout	30% casualties not attainable	30% casualties not attainable

Source: US Army data, in Sussex-Harvard Information Bank on CBW.

It is assumed that, at the start of the first volley (18 rounds per volley), half of the target population is prone and the other half upright when on the attack, or sheltered in foxholes when in defence; thereafter all attackers are prone and all defenders are in foxholes. It is also assumed that people on the attack would be breathing 4-5 times faster, in terms of minute volume, than people on the defensive, and that they would take twice as long - 20-30 seconds - to don their gas-masks once the projectiles had started to fall. For the nerve-gas shell, the number of volleys required would vary over at least an order of magnitude according to the weather; the figures here are mid-range ones, for a cool, dry, heavily overcast day with a gentle breeze.

Is not antichemical protection the key area of that technological deficiency which underlies Table 1? The ability of individual antigas kit to destroy the cost-effectiveness of CW weapons is illustrated in Table 2. Suppose that Iranian forces had been as well trained and equipped for antigas defence as is, say, the Belgian army, or that so many of the producer countries had not blocked export of protective equipments to Iran. Would outlaw Iraq then have used poison gas anything like as extensively as it did? Proceeding further with this theory (and that of course is all it is), might one not say that demand for chemical-warfare weapons is likely to be limited, very largely, to scenarios in which the potential targets of chemical-warfare attack either lack protection or are inherently unprotectable? Always with the qualification, of course, that there would be no sense in resorting to poison gas if easier weapons could not do the job just as well.

Missile delivery of CW agent

Which brings me back to guided missiles. Here is a means of delivery which could come close to maximizing the chances of catching a target population unprotected. Such weapons have indeed been produced and stockpiled, perhaps even deployed. Examples include warheads for Soviet FROGs and *Scud*s bulk-filled (or at least bulk-fillable) with agent VX, a persistent nerve gas. They also include GB bomblet warheads for American *Honest John*s, chemical weapons that were abruptly declared surplus to US requirements in 1973. Instructive, too, are the weapons that have **not** existed. In America, nerve-gas warhead concepts have been taken some way into development for several current and recent missile systems, including Pershing, Lance, the Lance follow-on and the Ground Launched Cruise Missile. At one time it looked as though the last of these, the GLCM, might proceed to full-scale development, but it was killed by the White House in the early 1980s on the grounds that a million-dollar missile was not a sensible - i.e. cost-effective - way to deliver a few hundred pounds of nerve gas. That was also a conclusion which had been reached for the V weapons in Hitler's Germany: high-explosive warheads made more sense, the German calculations are said to have shown.

But does not the Bhopal disaster cast doubt on such calculations? Yes - but only if one forgets the extreme weather-dependence and therefore low predictability of the area-coverage of the clouds of vapour or aerosol laid down by the weapons. The point is illustrated by another toxic accident. In May 1928 a quantity of phosgene - toxicologically much the same as the Bhopal isocyanate - was set loose from a ruptured storage tank over the city of Hamburg in Germany. Eleven people died. The prevailing meteorological conditions must have saved thousands of lives. Weapons of mass destruction nerve-gas missiles might be; but they would be hugely uncertain ones.

Let me make one other comment of a technical nature about chemical-warfare missiles. The targets most spoken of for these weapons are not civilian populations *per se*, but rather tactical air bases or other rear-area fixed installations whose activities condition forward operations. A myth has been growing up that a single *Scud* nerve-gas warhead can put a whole air base out of action by contaminating its runway. The origin of this myth seems to be a US Defense Department publication in 1987 which, among its illustrations, includes an aerial view of an air base with contamination isopleths calculated for a Scud nerve-gas warhead superimposed on its runway[11]. The implication of this picture for the unwary viewer is that the entire air base operating area, all 2 square kilometres of it, has been lethally contaminated by that one nerve-gas missile. What in fact is being represented is the area over which people will suffer nerve-gas symptoms, including the very mildest detectable ones, if they are not wearing gas masks. That of course is something very different. The area over which surfaces might become dangerously contaminated to the touch (which is how an air base would chiefly be threatened by such attack), that area is maybe one-fiftieth, or 2 percent, at most of the area shown[12].

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[11] United States Department of Defense, *Soviet Military Power 1987*, Washington, DC: US Government Printing Office, March 1987, p 90.

[12] This is evident from data given in IISS, *The Military Balance 1988-1989*, at p. 248.

Other scenarios favouring CW weapons

It would obviously take a great many nerve-gas missiles of the *Scud* variety to put an air base out of action. So, despite what many commentators have suggested, that would not be a scenario which especially favours chemical-warfare weapons. Let me now mention two categories of scenario in which the weapons might indeed be favoured, perhaps to the point of promoting chemical proliferation.

First, history indicates that it is along the North-South dimension that chemical-warfare weapons have displayed their greatest utility. But it is nowadays the case that rather plausible scenarios - not many, but some - can envisaged in which, along that North-South dimension, the signs are reversed: scenarios in which, despite technological superiority, the armed forces of an interventionary power are peculiarly vulnerable to chemical-warfare attack. For example, the "projection of power" into remote regions inevitably stretches lines of communication; some of the technology which might then come to be relied upon heavily is technology that may not have been designed for a toxic environment[13]. Here one may recall that the quantity of mustard gas which disabled the *SS Bisteria* in December 1943, a few hours out of Bari harbour, was probably no more than a kilogram. There is new potential, in other words, for a property often ascribed to chemical-warfare weapons, that of force-multiplication. The concept is of chemical-warfare armament, not so much as "the poor man's atomic bomb", but more as new-age slingshot for David facing Goliath.

Second, among the characteristics which differentiate chemical-warfare weapons from other types, there are ones which may make them particularly suitable armament for irregular "terrorist" force - or for regular forces engaging in those types of terrorism which have in the past underlain, for example, the carpet-bombing of cities. One only need note here the insidiousness of those CW weapons that exploit delayed-effect toxic agents, the area-effectiveness of those that operate by environmental pollution, and the propensity of poisons for frightening people to an extent disproportionate to the actual degree of hazard which they present. And lying beyond chemical-warfare weapons, capable of using much of their technology, is biological weaponry.

The security risks of CW proliferation

It is in these two categories of scenario that, for the West, the major security risks of chemical proliferation may be thought to reside. Chemical-warfare weapons as defence against "power projection", as armament of terrorists, as harbinger of germ warfare: one can see reasons for rich industrialized countries perceiving danger to themselves in chemical-warfare armament, despite the waning of East-West tension. And one can appreciate why the danger is said to be growing, now that a fashion for chemical-warfare armament is thought to be sweeping the developing

[13] For elaboration of this rather delicate matter, see Robinson and Polmar, 1989.

world in the aftermath of the Gulf War. Nor is it a threat which menaces only those countries, whether in actuality or in substanceless fear. Hence, presumably, the grave concern expressed by the 149 governments that endorsed the Final Declaration of the Conference of Paris in January 1989, a declaration that warned against the "growing danger posed to international peace and security by the risk of the use of chemical weapons as long as such weapons remain and are spread".

What is to be done? The only long-lasting remedy lies in a global treaty outlawing chemical-warfare weapons. Possession of the weapons and trade in them and their components is today entirely legal as far as international law is concerned. Libya, for example, is as free as the United States to manufacture chemical-warfare weapons if it wants to. Export controls imposed by individual countries may delay Libya's acquisition of the weapons, forcing it to manufacture the denied imports indigenously, or to buy them from countries which have no such controls. For as long as there is no global prohibition, the most that a patchwork of export controls can do is to increase the costs of chemical-warfare weapons and to provide improved intelligence of their proliferation. Under today's conditions of North-to-South diffusion of chemical technology, haphazard trade barriers may count for little more than pebbles on the sea-shore. But under a global treaty regime, the chances of preserving a real barricade around the sensitive technologies - a sea-wall against their spread - would be very much greater. The treaty would thus confer very real security benefit.

The actual state of CW proliferation around the world: what do we know?

I have to say that the available literature and other source materials on the subject that I have seen are far too unreliable to support specific and firm statements about which countries are and are not "chemical-warfare capable". This weakness is not unknown, I gather, even within the secret domain.

Apart from a very few isolated voices from within the nongovernmental research community[14], it was the US Defense Intelligence Agency which set that public record going about six years ago: *"Most of the threat has been with the Soviets, but we now have evidence that indicates other countries want chemical weapons."* In a pattern which is now traditional, the details, such as whether/how the wants might be being satisfied and who was thought to have them, were deleted from the testimony as published[15]. But investigative reporting of chemical proliferation commenced in the news media shortly afterwards[16], stimulated by leaked official papers and

[14] For example: SIPRI, 1973; Robinson, 1974; Finan, 1975; Robinson, 1981; Vachon, 1984; and Roberts *et al*, 1984.

[15] Dominic Gasbarri and Sylvia Copeland, statements before the Subcommittee on Strategic and Theatre Nuclear Forces, Senate Armed Services Committee, 26 April 1984, as printed in SASC FY85 7:3627-9.

[16] Above all: Halloran, 1984; Anderson, 1984; Ember, 1985, 1986; Oberdorfer, 1985; Toth, 1986; Harris & Woolwich, 1986; Smolowe, 1988; Fialka, 1988; Wright, 1988; and Thatcher, 1988.

unattributable official briefings, and both sustained by and sustaining a motley of academic and political commentators[17]. The U.S. Congress continued to be briefed by the Reagan and then the Bush administration[18], but the testimony which it published continued to be heavily "sanitized". The resultant body of literature - conspicuous gaps, largely undocumented, much of it clearly tendentious and speculative, rarely critical, often contradictory, always unverifiable, and beset in any case by the ambiguities I spoke of earlier - is quite useless as a dependable source of factual information about the spread of chemical-warfare weapons, however accurate parts of it may in fact be.

That said, I return to my starting point and end there: chemical proliferation is a problem of international security which needs to be taken very seriously indeed.

[17] For example: Roberts, 1984, 1987; Robinson, 1985, 1986, 1987, 1988; Douglass & Livingstone, 1987; Levran, 1987; Carus, 1988, 1989; Harris, 1989, 1989/90; Gold, 1989; Ezz, 1989; Jacchia, 1989; Jones & Müller, 1989; Cordesman, 1989; McGeorge, 1989; Tesko, 1989; McCain, 1989; and Miller, 1989.

[18] See, especially, Webster, 1989.

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Peter Herby

Beyond Partial Measures

Non-Proliferation and the Geneva Chemical Disarmament Negotiations

I am very pleased to be invited to participate in this conference which focuses on a class of mass-destruction weapons whose elimination in the near future has become a real possibility. The timing of this conference is particularly fortunate, in that current opportunities for chemical disarmament could easily be lost as increasing attention is being paid to European and strategic nuclear armaments in anticipation of treaties reducing such weapons later this year.

And yet it could be argued that globally decisions concerning the prohibition of chemical weapons will have an equal or greater effect on the kind of weapons to be stockpiled and used in the future. This is particularly the case in the two-thirds of the world which is "developing", in which nearly all of the 170 wars since 1945 have been fought.

I am neither a scientist nor a military expert. What I bring here are some personal insights gathered during seven years of observing, interpreting and attempting to encourage the Geneva chemical disarmament negotiations on behalf of Quakers, a religious pacifist movement dedicated to building global institutions of peace.

Although Quakers believe that all war is wrong and most refuse personally to join in war-making, we also appreciate the necessity of taking the modest steps which human fears and political realities impose upon efforts to move towards disarmament. Our efforts to support and encourage negotiations towards global institutions of peace, including work in Geneva since the 1920s, is an expression of these beliefs.

We also share the widespread abhorrence of chemical weapons which are most effectively used against civilian populations, as the entire world witnessed two years ago today in Halabja. One of the dreadful aspects of chemical warfare is that inevitably military forces faced with a chemical threat are better protected than civilians. Chemical weapons quickly become a tool of terror against an opponent's population.

It is difficult to speak of non-proliferation of chemical weapons in the context of Geneva negotiations for a convention banning chemical weapons. Most of the forty geographically and politically representative states which make up the negotiating body - the *Conference on Disarmament* or CD - do not regard non-proliferation as a goal which should be addressed outside of the context of a global chemical weapons ban.

The sensitivity of this issue was highlighted during preparations for the September 1989 *Government-Industry Conference Against Chemical Weapons* held in Canberra, which many feared would attempt to shift the focus onto non-proliferation measures. One month prior to the Canberra meeting, twenty-one neutral and non-aligned CD member states issued a joint statement indicating that the threat of chemical weapons:

> "... cannot be removed by non-proliferation measures but only by the total elimination of chemical weapons. The Government-Industry Conference against Chemical Weapons [...] must not seek to establish any alternative or parallel approach to the chemical weapons negotiations in the CD. Apprehensions of the Group of 21 about the relevance, objectives and structure of the Canberra Conference need to be clearly understood and addressed so that its outcome does not run counter to the current negotiations in Geneva. The Group of 21 is firmly opposed to any restrictive measures which may hamper the development of chemical industry, the transfer of technology and international cooperation for peaceful purposes in this field."[1]

Fortunately this warning was heeded. By all accounts the Canberra meeting produced a useful dialogue between governments and industry on their respective roles in promoting the early conclusion and implementation of a global chemical weapons Convention.

Opposition to non-proliferation measures as a form of chemical weapons control centres on the following points:

- A belief that such measures are inherently discriminatory and require a two-tier division of states into "responsible" and "irresponsible" groups.
- Fear, that if effective non-proliferation measures could be established the major possessor states would lose interest in a total ban. (This is a concern shared not only by developing but also by some industrialized non-chemical weapons-possessing states.)
- A belief that non-proliferation measures will be used, intentionally or unintentionally, to hinder the development of civilian chemical industries in the developing world.
- A rejection of measures which involve the major chemical weapons possessors in denying to smaller states the same so called "deterrence" capability which the possessors claim to need for themselves.

Furthermore - and this is a nearly universally shared view - whatever merits there may be in non-proliferation measures as a temporary expedient, most states have concluded that they will not deter chemical weapons proliferation in the long-term. This was echoed by representatives of the global chemical industry which stated last September in Canberra:

[1] CD/PV.527, 17 August 1989.

> "... the only solution to the problem of chemical warfare is a global, comprehensive and effectively verifiable Chemical Weapons Convention."

The dual military-civilian utility of many chemicals and their widespread availability would render even a comprehensive non-proliferation regime - if such a regime were politically feasible - ineffective. Efforts to control the export of relatively more identifiable nuclear and conventional weapons materials have clearly not prevented the spread of weapons and capabilities in these fields.

Non-proliferation measures will, at best, delay the acquisition of chemical weapons capabilities by causing states to purchase or produce less sophisticated chemical substances to be processed domestically into agents suitable for warfare.

Elisa Harris, a specialist in chemical weapons matters at the Brookings Institution, recently stated:

> "At best, export controls will make it more difficult and costly for countries to acquire chemical weapons. Export controls will not prevent countries that already possess chemical industries from developing at least some chemical warfare agents. Nor is it possible to control all of the chemicals that could be useful to produce chemical warfare agents [...]."

Harris quotes a U.S. official close to these questions as acknowledging that export controls

> "can achieve valuable objectives, such as the disruption of a given state's plans to produce chemical weapons quickly for immediate use in battle and the imposition of higher economic costs on such a state. But no export control policy can erect an insurmountable barrier against acquisition or at-home production of chemical weapons."

In addition, there is a danger that non-proliferation efforts will send the wrong message: *that chemical warfare agents are a useful and effective part of military arsenals*. Though widely accepted, this thesis has not been clearly demonstrated, the Gulf War notwithstanding. And there is sufficient evidence to indicate that chemical weapons have little military value. Ironically, non-proliferation efforts may assist in spreading the desire to possess chemical weapons.

Short-term success in the non-proliferation track may engender long-term failure, if not coupled *soon* with a globally enforceable regime of prohibition. Beyond a certain point, energies devoted to further elaboration of non-proliferation measures might better be spent on ensuring that political decisions are taken to conclude chemical weapons negotiations in the very near future.

Nonetheless, one cannot exclude the value and necessity of responsible action and constraint, pending the conclusion of a global chemical weapons Convention. The acquisition, and possible use of chemical weapons, by additional states can only make the task of concluding the negotiations and gaining universal adherence more difficult.

Although, in the absence of a legal ban, one state has as much right as another to seek chemical weapons, other states have not only a right but a moral obligation to refuse to be party to chemical weapons acquisitions efforts. In 1986 many NATO states rejected the stationing of U.S. binary weapons on their soil in peacetime as well as during war. Consistency would require that they ensure that their industries are not participating in the production of chemical weapons to be based on the soil of other states.

Having enumerated the complexities above, one might fairly ask: *"Is it realistic to move beyond partial measures to an even more ambitious regime which attempts to prevent the possession* ***and*** *spread of chemical weapons* ***and*** *provide the necessary assurances of compliance?"*

Though the chemical weapons convention now being negotiated in Geneva will not provide a 100 % *guarantee* of the non-existence of chemical weapons on the territory of all signatories, it goes so far beyond any potential non-proliferation scheme as to be incomparable. One might more appropriately call the emerging chemical weapons convention *an effective non-proliferation regime* and current non-proliferation measures *efforts to buy time*.

The *rolling text* under negotiation in Geneva provides a largely completed framework for the future chemical weapons Convention. The major provisions which bear on proliferation have already been developed and include the following:

1. A prohibition on the *use* of chemical weapons, as enshrined in the 1925 Geneva Protocol, in addition to new undertakings not to
   "develop, produce, otherwise acquire, stockpile or retain chemical weapons, *or transfer, directly or indirectly, chemical weapons to anyone*."
   Furthermore, it will be illegal for a state to assist or encourage anyone else engaged in activities prohibited by the convention.

2. States will be prohibited from engaging in military preparations or training for the use of chemical weapons. (However, wording of this provision is not agreed.)

3. States will be required to destroy all chemical weapons and chemical weapons production facilities which fall under their "jurisdiction or control".

Most importantly, and unlike current unilateral non-proliferation measures, states will have the right to inspect on short notice (24-48 hours) any site on the territory of any state party at which it believes a violation of any provision of the convention may be taking place. Additional routine, and possibly ad hoc, measures for intrusive monitoring of civilian chemical production are also planned.

The draft convention includes in its definition of chemical weapons all toxic chemicals and their chemical precursors, except those which have a demonstrated civilian purpose and are produced in quantities consistent with such purposes. "Munitions and devices" specifically designed for chemical weapons use would also be defined as chemical weapons and thus banned.

In addition, the draft convention specifically lists chemical agents and precursors according to their potential as chemical warfare agents. Certain agents will be prohibited entirely, others will be subject to continuous monitoring and control, and others will be subject to routine or ad hoc monitoring. Suspect materials or activities will be subject to short-notice inspection upon request by any state party.

To summarize, a chemical weapons convention would focus not only on the *transfer* of chemical agents but also on the *production and storage* of possible chemical warfare agents and *preparations* for chemical warfare use. It would also apply to *chemical munitions*. The chances of a state which sought to develop a significant chemical warfare capability escaping detection of its chemical agents, munitions *and* military training would be very low under the intrusive monitoring provisions of the convention.

The chemical weapons convention would require states to bring their national legislation and enforcement mechanisms into line with their commitments under the convention. For some states this would provide grounds for taking measures which domestic political considerations have hitherto prevented.

Similar incentives for stringent and intrusive domestic export control measures do not exist under a purely non-proliferation oriented regime. Such a regime is not legally binding upon states. In addition, unscrupulous merchants will invoke the *If-we-don't-they-will* argument by which some commercial interests and sympathetic politicians turn a "blind eye" to illegal and grey-market transactions to avoid the loss of such business to others. A universal convention will largely eliminate the commercial advantage to be gained through such exports by placing equal restraints and monitoring on chemical industries worldwide.

A chemical weapons convention will dramatically improve confidence in the intentions of states regarding their chemical activities. Ambiguous situations will be investigated and clarified openly. Politically motivated allegations will be kept to a minimum. Both of these factors will serve to reduce the suspicions and fears which give rise to the *perception* that having chemical weapons in one's arsenal might be useful. This sort of confidence cannot be achieved outside the global, comprehensive and cooperative framework of a convention.

It has been suggested recently that positive incentives for joining a chemical weapons convention might include an assurance that, if a state becomes party to the convention, it would *not* be subject to chemical export controls enforced by other state parties. Such assurances could be a significant incentive to developing states, many of which fear the convention will hinder the development of domestic chemical industries.

A chemical weapons ban, by significantly reinforcing the legal and moral norms against chemical warfare, will increase the probability of effective international action against states which use chemical weapons. The lack of such action in response to recent chemical weapons use has undoubtedly undermined the Geneva Protocol and increased the attractiveness of the chemical weapons option for some states.

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The opportunity to complete a chemical weapons convention in the very near future is as great as it has ever been. So is the urgency of doing so. Nearly all sides in the Geneva negotiations believe that work on the convention could be completed in 1991. The framework is there. The remaining problems are fundamentally political.

These are:
- the prohibition of *all* chemical weapons use as of entry force of the convention;
- the modalities for challenge inspections;
- composition of the Executive Council of the new international chemical weapons monitoring organisation;
- and several "north-south" issues such as:
    a. assistance to those threatened by chemical weapons;
    b. sanctions against violators;
    c. economic development of civilian industries; and
    d. the link with nuclear capabilities in the Middle East.

In addition, a fundamental decision will have to be made by the United States as to whether it requires, within the framework of the chemical weapons *disarmament* convention, a "security stock" of 2 % of its chemical weapons until such time as all "chemical weapons capable states" have joined the convention. If it does require such stocks, then other states in more volatile regions of the world are likely to decide similarly; conclusion of the convention will become increasingly difficult and proliferation increasingly likely.

A decision by the U.S. to truly abandon chemical weapons from the entry-into-force of a future convention and to make the political compromises necessary to achieve a global convention will be a clear signal that the second major chemical weapons possessor state has made a choice between chemical disarmament and long-term reliance on chemical weapons. Such a choice has become a prerequisite for beginning the final stage of negotiations.

Non-proliferation efforts are essential, but will not hold back the tide for long. Despite the many issues preoccupying politicians in Europe and north America during this crucial year, it is essential that they also make the choices necessary to harvest the results of their twenty year investment in negotiations for chemical disarmament. The remaining detailed work can be done in Geneva. Political decisions cannot be made there.

The choice is not between 100 % guarantees under a perfect convention and the uncertainties of the convention under negotiation. It is between the convention available in the coming year or so, and the continued legalized proliferation of chemical warfare capabilities matched by increasingly frustrating, possibly destabilizing and eventually ineffective efforts to stop such proliferation.

Discussion

Morning Session

P. Van den IJssel

My question to professor Perry Robinson concerns the combined possession of missiles and chemical weapons or at least the suspected possession of chemical weapons by some countries. Do you think that we were wrong or that we were right to be afraid of this, and that we should have more information?

J.P. Perry Robinson

It is an interesting question why this combination of chemical warheads and missiles has suddenly come to attract a lot of attention. We should remember that it is by no means a new possibility. People have been studying the missile delivery of chemical weapons for a long time. For example, the Russian weapons, such as the persistent nerve gas warheads available for the SCUD and the FROG battlefield missiles. For example, the chemical warheads available for the American Honest John missile, which were deployed but abruptly withdrawn from service in 1973.

I could also mention weapons which actually existed. One knows most about the American programmes because the Americans are the most open about these things. Virtually every missile system which has existed in the U.S. has had a chemical warhead designed for it. This was the case for the ground-launched cruise missile with a chemical warhead, which has been studied. But the reason why that did not make it through is, that it was felt that a multi-million dollar delivery system was not a cost-effective way to deliver a few hundred pounds of nerve gas to a target. That basic fact of what you can achieve with the relatively limited delivery capacity of a missile is an important factor in the relative non-emphasis on missiles.

One more reason why I suspect missile delivery has attracted so much attention goes back to one of the other points I made in my presentation, having to do with the vulnerability of targets against slow delivery systems such as aircraft. Forms of defence against such threats are comparatively easy if compared with the defense against a ballistic missile arriving at three times the speed of sound. What I am saying is, if your objective is straight terror then the example of Bhopal that I gave in my talk, suggests that missile delivery might do it. If your objective, on the other hand, is the degradation of battle field targets, then the chances of missiles being cost-effective in that purpose are very low. Going back to the terrorization scenario, the Bhopal disaster suggests that nerve gas missiles could indeed be a weapon of

mass destruction but we have to remember that one of the features of chemical weapons is the extreme dependence on environmental conditions.

J. Mayerhofer

I believe that it is very important that we have learned that in Angola the Cubans have applied illumination bombs as chemical weapons. Normally, these bombs were dropped by parachute to illuminate the battlefield. On impact, the surface of the earth was burned and hydro-cyanic acid was released, which caused heavy intoxication among soldiers and civilians. My question to Mr. Robinson is, was there or was there not a such illumination bomb used in this way? Is it, used in this way, a chemical bomb or a illumination bomb?

J.P. Perry Robinson

I think Dr. Mayerhofer has raised a very important consideration here. These illumination bombs or whatever you call them, have a similar effect as the use of Napalm-B in Vietnam. The high explosives which British forces introduced in South Africa at the end of the century also had a side effect of toxicity. But it seems to me that one needs to be very clear about what one is in fact seeking to prohibit when one is engaging in negotiations such as those going on in Geneva. I think from what Peter Herby was saying, that we ought to broaden the scope of these negotiations in order to include weapons whose primary effect is not toxicity but a secondary effect.

J. Pervine

I would like to make three remarks. Somebody spoke of Halabja and the Iran-Iraq war. I would like to state precisely that Iraq used chemical weapons against Kurdish civilians in the interior of Iraq and not against the Iranian army inside Iran. Before this event, chemical arms were indeed used against the Iranian army. In general, when one speaks of the Halabja case on an international level, one mentions it as being just one phase of the Iran-Iraq war. The international institutions, headed by the United Nations, did not want to point a finger to Iraq, because according to the Convention of Geneva, one cannot accuse an aggressor if chemical weapons are used in an internal war.

A second remark: if the United Nations did not recognise that Iraqi aggression, it could not send its experts to Halabja.

There is also an third remark to be made on the shortcomings of the international community. One year later, Mr. Mitterand organised an international conference on chemical weapons, and, of course, he invited the enemies, Iran and Iraq. But he did not invite representatives of the Iraqi Kurds. They were invited to attend the conference as observers. However, they were not even allowed to enter the conference hall.

P. Herby

It is clear that there are enormous gaps in the international regime, in its ability as well as in its willingness to respond to this sort of internal use of chemical weapons. It is also clear that the Geneva protocol only prohibits warfare use. In the case of chemical weapons, it is like the question of internally displaced people in various countries: there is no international mechanism to respond, and there are as many internally displaced people as there are refugees in the world. The international mechanisms are obviously inadequate to deal with that.

On the Paris conference, I believe that Kurdish journalists were allowed to attend as journalists and I think that is - in terms of access - as much as any other non-governmental entity other than the U.N. There was a great deal of sensitivity around the Paris conference of whether or not they could gain a formal high level commitment from Iraq not to violate the Geneva protocol in the future, and I think this, in some ways, outweighed many other considerations in the mind of the French government in their organization of that conference.
Finally there is the question of providing protective equipment and even medical supplies to victims of chemical attacks. But there is a certain concern on the part of some governments, that such protective equipment will not be used by the population for whom it is intended, but by the military forces of the country through which it is passing. But I would certainly agree with the humanitarian needs and issues and primacy of dealing with the victims of war.
There exists a very clear inadequacy in the current international system. But it comes back to the question of sovereignty and what sort of restraints or limitations we are able to put on states in the future.

I. Graham

The International Federation of Chemical Energy and General Workers represents some 6 million workers in 69 countries in chemical and related industries. On the chemical weapons issue we have worked together with the International Confederation of Free Trade Unions, so all together we speak for a little over 19 million workers around the world. In our contribution to the Canberra Conference and in the Geneva negotiations we have emphasized the industrial aspects of the chemical weapons question and we do this for two reasons. First of all, there is the traditional commitment of the Trade Union Movement to work for peace, security and disarmament. Second, there are a number of technical aspects of the chemical weapons question which, we feel, directly touches upon our membership. For those reasons I wanted to put two questions to professor Perry Robinson.
I noted in his address this morning that in the event of a Convention on chemical weapons production, the first people to be hit would be the production personnel in pharmaceutical and pesticides factories. I would very much like to expand a little on that. Second, I also noted in professor Perry Robinson's address the general implication, that it is not all that easy to convert pesticides, fertilizers etc. production schemes. This has implications for the verification procedures and for the industrial participation to verification procedures. Can you comment on this?
And third, a related question. If industry and countries are actually to respect this convention, it would appear to us that something is needed in the way of sanctions. This was a question which was touched upon but not addressed in any detail. So, I would like to ask to both speakers whether they consider that sanctions would be applicable and if so what sanctions?

J.P. Perry Robinson

I would certainly like to respond to the first two of these important questions. Before doing so, I would like to say how extremely reassuring it is to know that the Trade Union Movement is taking detailed interest in this subject and is pressing forward as vigorously as these two Unions have been doing. The two specific questions concern my remarks about the reconvertibility of plants and my suggestion that the first victims of a converted plant might be the workers themselves. I was alluding to the British historical experience where it first

attempted to make mustard gas in 1918. The state of the British chemical industry at that time, was of course not as developed as it is now, but on the world scene it was not a undeveloped chemical industry either. Yet in 1919, within the first three months of production, there were more than a 100 % casualties among the plant workers. This is to illustrate the problems of mass producing chemicals which are, by their very nature, aggressive chemicals, requiring specialized expertise in the designed construction of these facilities. I would suggest that a civilian chemical plant would require access to that sort of expertise before it could be converted. I was not saying that the conversion was impossible since there were very demanding requirements to make it feasible. On your second question: of course, I was reacting against the received wisdom. The received wisdom is, once you have a fertilizer plant or a pesticide factory, you have a nerve gas factory and this has indeed, as you say, entered in the received wisdom. There are many public spokesmen around, people in whom responsibility has been vested by their electorate, who make the most extravagant political statements on this subject. Speaking as a chemist, I assume that lot of these people do it basically out of ignorance of some central characteristics of chemistry.

P. Herby

It should be clear that sanctions are one of the most sensitive and controversial aspects of the convention that is still to be resolved. There are several reasons for that. One of these is the whole political framework in which sanctions would be invoked and sensitivity is involved. For instance, even countries like Sweden are very reluctant to commit themselves in advance to impose sanctions automatically in a future conflict, of which they do not know the shape, and which might compromise their neutrality. Countries are extremely reluctant to provide concrete commitments that would be enacted automatically.

It is quiet clear that there needs to be effective action to back up the chemical weapons convention, but there are concerns that prevent such effective action. Countries want to know in what way the violation will be determined, and who is going to make the judgement. Is this going to be the state, which has made the accusation or request for the inspection, that has to decide and determine that the violations has taken place? Or would this be the inspecting team of the international secretariat? Or would this be a conclusion of the executive council of the new international organization, which to some extend will be a political body, where alliances will be a factor as well as north-south politics. These issues are in the negotiators' and the governments' minds, when they think of what they are committing themselves to, if they would accept some sort of mandatory sanctions.

There are also questions about the seriousness of the violation. If the violation is a matter of the country that has failed to report certain transfers of chemical materials or has committed an informational violation, that is one kind of violation. If it was a production of a larger quantity of particular agents than is allowed under the convention, that is another kind of violation.

J. Badelt

In addition to that pilot treaty on chemical weapons, one may attempt to set up an anti-proliferation scheme within the industrialized countries. I have a question for Peter Herby: how would you assess the possibility that this could happen and do you think that such a non-proliferation machine could work?

P. Herby

I think that there are certain conflicting signals coming from the US administration about whether to finish these negotiations soon and end up with a total ban or not. This is primarily reflected in the efforts to maintain a 2 % stockpile under the convention if all other chemically capable countries do not join in, which, in fact, could mean that offers of such an agreement will never be signed by countries negotiating it, because of the obvious discriminatory nature of the convention. Almost any country signing the treaty would maintain its right not only to keep such a stockpile, but in some cases to built such a stockpile under the convention. This would in fact destroy the negotiations. But if for whatever reason the negotiations on the global convention cannot be concluded, I think a bilateral agreement between the U.S and the U.S.S.R. is likely and would replace the global convention because they have their own reasons to go down to a much lower level than they are now. On the other hand, I think that the U.S. administration is divided on the kind of arrangement you mentioned - a reduction of U.S.-U.S.S.R. stockpiles combined with non proliferation measures. I think most people who are really concerned about proliferation know that in fact it will be not successful for the kind of reasons that I mentioned this morning.

L. Mechelynck

A question to Prof. Perry Robinson. Last year in Boston, the point was discussed that once you have produced toxic chemicals in a plant - even if it is disabled for months or years afterwards - traces remain so that is easy to verify if they have ever been made in these plants. One cannot reconvert it back to normal use that easily.

J.P. Perry Robinson

That is another aspect of the convertibility question we were talking about earlier. It is an extremely questionable claim saying that one could convert military plants to civil plants, end their gas production and then convert them back again without anybody being aware of it. Even a relatively small degree of access will create such high risks for anybody attempting to do this in the hope of not being detected.

Jean Pascal Zanders

Belgium as a Transiting Country in the Imhausen-Rabta Affair

Introduction

Belgium has been notorious for its role in the arms trade, both as an exporting and as a transiting country. A statement by former Foreign Minister Tindemans before a parliamentary committee in 1987 typified the lax export control policy. According to official statistics, only licenses for exporting two hunting guns to Iran had been issued since the beginning of the Gulf war in 1980. In spite of offical denials, it had by that time become clear that many international arms shipments for Iran and Iraq, including those of the Iran-Contra dealings, had passed through Belgian harbours or airports. In May 1987, a Parliamentary Investigative Committee was set up to examine Belgium's export controls and policy. On 28 February 1989, it published its extensive report[1]. Part of it dealt with the exportation of strategic chemicals.

During the eighties, Belgium was named three times for aiding third parties to obtain a chemical warfare capability. In 1990 and 1991 alone, two new cases surfaced. On 28 February 1986, it was uncovered that the Belgian subsidiary of Phillips Petroleum Co. had delivered 500 tons of thiodiglycol - a key compound for manufacturing mustard gas - to Iraq in 1983 and an additional 5 tons to Spain two years later[2]. In 1983, the plant was licensed to produce and commercialize petro-sulphur compounds, such as mercaptans and thiodiglycol. Representatives of the company were shown documents by the Dutch firm serving as intermediary in the transaction indicating Baghdad as the final destination. The firm nevertheless thought it was unfairly accused of wilful intent[3], especially as chemical attacks had not yet been reported at the time of the undertaking. Belgium had no export controls on chemical compounds, and thiodiglycol was not listed as particularly dangerous by either Belgium or the European Comunity[4]. Therefore, Iraq's stated agro-chemical purposes appeared entirely legitimate[5]. The

[1] *Parlementair Onderzoek*, 28 February 1989, 579p.

[2] R. Collier & F. De Smet, 28 February 1986.

[3] P. Van Mossevelde, 1 March 1986.

[4] Statement to the Belgian Parliament by M. Smet, State Secretary for the Environment, 28 February 1986. She did not refer to the export restrictions on thiodiglycol the Belgian government had imposed one and a half years earlier.

view has not been disputed by the Parliamentary investigative committee on arms sales[6]. Phillips Petroleum Co. halted all further deliveries in 1984 as soon as it knew Iraq was employing mustard gas, even though no export controls were yet in force[7]. In 1987, the production license for thiodiglycol was withdrawn. Besides, in 1986, the Belgian government too was ill prepared to enforce its regulations. For instance, the production license was issued to Phillips Petroleum on the basis of compliance with environmental standards. Therefore, the first oral parliamentary question on the issue on 28 February 1986 was answered by the State Secretary for the Environment, who had to admit that coordination problems existed regarding export rules[8]. Indeed, production licenses fall under the authority of the Flemish regional authorities, whereas chemical exports are overseen by national ministries. However, not all can be reduced to the process of reforming the Belgian state. Shortly after the disclosures, then European MP Willy Kuijpers inquired after the Belgian export controls on precursors. Mark Eyskens, at that time Minister for Economic Affairs (and currently Foreign Affairs) replied in a letter we were shown in 1989, that T.D.G. was an abbreviation for *tertiary diglycol*. He added that since that compound did not figure on the export control warning list, no export license was required.

On 18 April 1988, in the wake of the chemical bombardment of the Kurdish town of Halabja, the Turkish daily *Hurryet* claimed that equipment for Iraq's chemical warfare effort had been sent from Switzerland over Antwerp to Turkey. There, the goods were given a false label and transported by road to Iraq. No names of Belgian shipping agents were given and nothing else has been heard from the case since. However, the materials and equipment[9] were not subject to Belgian export or transit restrictions at that time.

However, the equivocacy surrounding the compound is also illustrated by an advertisement the Chicago based chemical division of Morton Thiokol Inc. ran in the March 2, 1987 issue *Chemical Marketing Reporter* lauding the versatility of thiodiglycol. This occurred almost three years after the Australian Group had adopted its warning list.

[5] Mr Verding, Vice-President of Phillips Petroleum, declared to the Parliamentary Committee investigating Belgium's role in arms sales to Iran and Iraq, that orders for between 500 and 3000 tons of sulphur-compounds are not uncommon in the agro-chemical sector (Parlementair onderzoek [...], 28 February 1989, p.366). Other chemists, for instance Stanford Fertig, head of the pesticide research at the US Department of Agriculture's research centre, doubted that thiodiglycol is at all used in agriculture and that sales for other purposes involve no more than a few tens of tons at a time (J.J. Fialka, 16 September 1988).

[6] Parlementair onderzoek [...], 28 February 1989, pp. 365-367; 559.

[7] After the first denials, *De Morgen*, which made the original disclosure on 28 February, nevertheless stood by its original claim that the company had shipped an additional 5 tons to Spain in 1985, which it believed to have also been diverted to Iraq. The required export license was only regularized six months after the shipment (R. Collier & F. De Smet, 1 March 1986). To the Parliamentary Committee, Mr Verding declared that the second shipment was ordered by the Spanish firm Cades which used the compound for dyes. He insisted that the Belgian customs had been informed of the nature of the chemical at the time of the shipment and that as soon as the company had learnt that in the meantime an export license was required, it had taken steps to have the transaction regularized (Parlementair onderzoek [...], 28 February 1989, p. 336). Both Phillips Petroleum and Cades claimed that the shipment was destroyed, because the compound did not match the Spanish firm's specifications.

[8] M. Smet, 28 February 1986.

[9] Stannic oxalate (for smoke weapons); Isonitrile (= isocyanide); Freon; Polyol; Methyl-di-isocyanate (used for pesticides and close to the gas released in the Bhopal-accident); as well as nitrogen and organic phosphorous compounds.

These products were published as part of further investigation by the Swiss *Friedenszeitung*. The article, however, does not specify which passed through the port of Antwerp [(-), May 1988].

The most infamous affair concerns the Imhausen - Rabta connection, for which two Belgian shipping agents were arrested in January 1989. A similar undertaking was blocked in October 1990, when Turkey turned back a Polish freighter carrying approximately 101 metric tons of natrium cyanide. The goods were to be unloaded in Mersin. According to the freight documents, Iran was to be the final destination. Turkish officials, however, uncovered that not Iran, but Iraq was the intended recipient. The chemicals had been bought by an apparently unknown Brussels based firm Atexco - which was not mentioned in the transport documents - from Rotexchemie. That Hamburg based company claimed to have sold natrium cyanide for 30 to 40 years. The barrels containing the chemical were loaded onto the ship in Antwerp[10]. However, doubts remain whether Iraq was indeed the final recipient and whether Turkish officials were not overeager. Belgian investigations have revealed that Atexco belongs to an Iranian trader in carpets and dyes. He has been legally registered since 1978 and that he is believed to have acted in good faith[11]. The incident prompted the Belgian government to place all chemicals on the warning list of the Australian Group under export regulations.

Early in 1991, Belgian diplomatic sources disclosed[12] that between the end of 1987 and the beginning of 1988 a Belgian company from the Kortrijk region played a major role in the construction of chemical warfare plants in Iraq. An American chemical firm sent containers with disassembled chemical weapons production plants under a false description to Antwerp. The complete advanced laboratories only lacked the clean rooms. Although the containers were under transit, they were transferred from Antwerp to Kortrijk. There, the clean rooms were fitted and the complete laboratories tested. It is assumed that the containers were returned to Antwerp afterwards, from where, still under transit, they continued to their final destination via the Turkish port of Izmir. According to a second hypothesis, Belgian transport firms drove the containers by road to Iraq.

We will concentrate on Rabta affair. The criteria for evaluating Belgian policy measures to curb the spread of chemical weapons are twofold. First, the present government included a passage on chemical disarmament in its policy statement of May 1988. The question thus is, how does it view the chances for a comprehensive ban on these weapons and what conclusions does it draw with respect to proliferation? Second, following the Rabta crisis, what new policy measures did the government implement and do these measures address the proliferation mechanisms in an adequate way?

The Governmental policy statement

The present government has declared itself an advocate of a comprehensive and global ban on chemical weapons. It has committed itself to adhere to an international agreement such as the one being negotiated at present. It nevertheless formulated three conditions:

1. a clear definition of chemical weapons must be included;

[10] (-)[1]; (-)[2]; (-)[3], 2 October 1990.

[11] Private communications, October 1990.

[12] AW., 21 January 1991.

2. it must contain a ban on developing, producing and stockpiling chemical weapons; and
3. it must provide for a balanced and controlled reduction of existing stocks.[13]

We criticized the passage[14] because the wording does not require the government to take any new or supplementary domestic or foreign policy initiatives. Does the Belgian government not presume that the issue is sufficiently addressed at the Geneva Disarmament Conference? It seems to be convinced that the chemical problem will dissolve itself once an international treaty has been signed, provided that the three conditions it has laid down are met. Of course, one may wonder what the point of this argument is, especially in view of statements advancing 1991 as a possible date for concluding the treaty[15]. The Belgian government, however, does not seem to share that kind of optimism. In a reply to a parliamentary question in February 1990, Foreign Minister Eyskens wrote[16]:

> "Although the negotiations continue, it is very difficult to foresee when these could lead to a treaty which can be submitted to the States for signing, although one can hope this will come true in the next years."

Two fundamental outstanding issues he enumerates, are verification difficulties and the security of parties to the treaty in case of an armed conflict with a non-party, threatening to use chemical weapons. In lay terms, the latter point means reserving the right to retaliate in kind.

Therefore, in view of that lack of optimism, we must turn to alternative measures the Belgian government is prepared to take to prevent a widening of the chemical threat.

Imhausen - Antwerp - Rabta: An overview

Imhausen-Rabta is a well-documented instance of what we could call a *second generation proliferation* case. An elaborate world-wide network was set up to disguise the real purpose of the transactions and to circumvent export controls. The Phillips Petroleum episode typifies the *first generation*, in which there exists a straightforward link between producer and buyer. At that time, no or limited export controls were in force. *Third generation proliferation* would involve the trade in ready-made chemical munitions. The first two generations cover chemical weapons proliferation as it is presently being discussed. It consists of a flow of precursor chemicals, high technology and expertise from North to South, from industrial to industrializing states. Third World countries are thus commonly viewed as recipients, potentially interested in domestic production of chemical warfare agents. Seldom, they are considered as a proliferation source of ready made chemical munitions in their own right. Nevertheless, fears of third generation

[13] Governmental Declaration, 2 May 1988, Chapter IV, Paragraph B.

[14] J.P. Zanders, March 1989, pp. 37-39.

[15] P. Herby, 16 March 1990.

[16] Bulletin van Vragen en Antwoorden, Kamer, 1989-1990, nr. 98, 20 February 1990, p. 7629.

proliferation underlie many of the allegations and accusations against Libya. The potential transfer of chemical arms to terrorists is one of the most cited concerns regarding the Rabta plant.

The Imhausen case probably illustrates how little the West European authorities were prepared to counter the spread of chemical weapons if a particular company purposely wished to evade export controls[17]. Until December 1988, the Federal Republic and Belgium had enacted similar export regulations. Restrictions on the international trade of certain potential precursors for chemical weapons were promulgated by special orders in pursuance of general acts on foreign trade. Since 1984, Germany also requires a license for exporting technology and equipment with potential applications in a chemical weapons plant. Moreover, by implementing the 1954 Brussels Treaty, US, British and French experts each year certify that West Germany does not engage in chemical weapons production, thereby excluding any possible exportation of ready-made munitions. In general, the large chemical companies seem to apply the recommendations by the Australian Group.

The risk for wilful violations is much higher with smaller companies. At the time of the Rabta controversy, German trade legislation contained a large gap, as exports procedures were largely simplified if a German firm owned subsidiaries abroad or if a foreign company had a branch in the Federal Republic. This was very apparent in the construction Imhausen Chemie had set up. Pen-Tsao-Materia-Medica-Center Ltd. occupied offices both in Hong Kong and in Hamburg. It was set up by Imhausen on 1 April 1987. In the Chinese port, Pen-Tsao shared office space with Dee Trading Co. Ltd., which possessed a 23% stake in Imhausen, making it the largest shareholder.

The factory at Rabta was built with the expertise and technology from companies all over the world. The Japanese Steel Works (Nihon Seijo) supplied lathes and air guns for an equipment factory and Toshiba an electrical power station in the belief the Libyans were constructing a desalination plant. VEB Stahlbau Plauen (GDR) furnished steel constructions. A computer was obtained from the Florida based Harris Company. Thyssen and Karl Kolb, two West German firms investigated for their part in Iraq's chemical warfare programme, also participated. Imhausen Chemie, however, played the pivotal role for installing the actual production system. It placed important orders with other firms, that apparently were unaware of the final destination. Salzgitter Industriebau GmbH - a state-owned enterprise - initially denied having drawn up the plans for Rabta, but admitted to having delivered pipes and electrical equipment for a pharmaceutical production unit between 1984 and 1987. Imhausen had ordered the equipment for a subsidiary in Hong Kong. Later it emerged both companies had held several meetings, discussing the constructions in Libya. Teves GmbH, a subsidiary of the American multinational I.T.T. which had supplied cooling equipment, also claimed Hong Kong was the final destination. So did many other firms involved.

In fact, Imhausen had set up a double project in Hong Kong and Rabta, both called Pharma 150. The German company actually built a factory on the Yeun Long Industrial Estate in Hong

[17] This summary of events is compiled on the basis of press reports in Belgian, West German and American newspapers and magazines published during January and February 1989.

Kong, although it only served as a cover for other activities. An important indication that the Rabta plant may indeed be a chemical weapons production site followed from the declaration by the Frankfurt based company John Zink that it had exported an incinerator for superfluous gases ordered by Ishan Barbouti International Engineering to Hong Kong. Ishan Barbouti, who appeared to have close ties with Colonel Qadhafi, owned branches in most industrial countries, which often were nothing but letter box addresses. Between 1985 and 1987, Barbouti placed large orders with several German building companies, whose representatives were convinced these were intended for metal works. The materials were shipped to Rabta over Rotterdam. Some companies were not aware of the destination. Imhausen received its orders for Rabta from Barbouti. It is important to note that at the time the contracts were signed between Imhausen and I.B.I. Engineering in 1986, both companies were struggling to survive.

In February 1986, the Antwerp based trading company Cross Link is believed to have shipped both building materials and chemicals to Tripoli for Imhausen Chemie and I.B.I. International. However, before leaving Hamburg, the ship *Wilhelm Schulte* had given Hong Kong as her final destination. The owner of Cross Link, Jozef Gedopt, who was arrested on 11 January 1989, allegedly falsified the freight documents at Barbouti's request. The chemical compounds were actually loaded onto the *Wilhelm Schulte* in Antwerp. Gedopt is believed to have already been involved in consignments to Rabta in 1985. He also shipped goods through Zeebrugge, Rotterdam and Le Havre. Cross Link, and several of its small subsidiaries, had commercial contracts with three of the five German firms named by the USA. As Gedopt could not obtain the required export licenses, he collaborated with August Vleminckx, who organized the shipments via Sanexomar, without that company knowing it. Vleminckx was also temporarily arrested. Both Belgians were apprehended for fraud and forgery, but cannot be persecuted for their role in the shipments.

Interestingly, Crosslink too had financial difficulties. Therefore, further analysis and exchange of information between analysts in different countries should help to determine the precise impact of financial problems on a company's decision making process to engage in illegal transactions. The results may be of high relevance to policy makers wishing to prevent second generation chemical weapons proliferation. Indeed, if there were a high correlation between financial difficulties and a will to participate in unlawful trade, then laws - to be effective - must be so strict and penalties so stiff that they are capable of deterring the most desperate of manufacturers or traders. However, the most efficient compromise will have be reached with the interests of those firms pursuing perfectly legitimate business.

Belgian export procedures for strategic commodities

Belgian export controls on strategic chemicals fall under orders implementing the Act concerning the import, export and transit of commodities of 11 September 1962. It has been supplemented by the Act of 19 July 1968. These laws also regulate arms sales. Following the agreements within the Australian Group, the Ministry for Economic Affairs listed five key precursors for chemical weapons in the Ministerial Order of 20 June 1984 "changing the Ministerial Order of 23 November 1978 submitting the export of certain commodities to a

license". A second similar Ministerial Order was promulgated on 5 January 1987[18], adding an extra three chemicals to the list. These were replaced by a new Order regulating the export of nine chemicals and a second one regulating their transit over Belgian territory[19]. After the Rabta affair and in the immediate aftermath of the Atexco incident in October 1990, a new set of Ministerial Orders imposing export controls on all chemical compounds listed by the Australian Group were issued. As they have no immediate bearing on the analysis of the Imhausen-Rabta mechanisms, we will discuss them in the section on the recent measures taken by the Belgian government.

According to a manual used by shipping companies, *strategic products* are broadly defined by the political, economic and military value assigned to them by the international community[20]. Related special technologies are covered by the term. *Technologies* are described further as "data other than those usually provided to the general public and which contain information concerning the design, production, testing or use (installation, exploitation, maintenance, repairs, and revision) of goods, systems and methods"[21].

The 11 September 1962 Act stipulates four general principles the government must consider when granting an export license[22]:

- the protection of Belgium's economic interests;
- safeguarding internal and external security;
- complying with international treaties and engagements, as well as decisions and recommendations by international or supranational organisations; and
- observance of general legal and humanitarian principles.

The latter condition, however, is difficult to apply as humanitarian principles are not defined clearly by international law. The Act of 19 July 1968 permits the authorities to submit any commodity to a licensing system. Nevertheless, compared with the 1962 Act the government has limited its competence for granting licenses. One analyst commented[23]:

> "The Belgian government did not want to provide itself with a legal tool permitting it to expand its power over arms export controls, that is at any time subject to a general law on international trade. The government's most important motivation, as stated explicitly during the parliamentary debates, was based on the will not to hinder the freedom of trade.

[18] Belgisch Staatsblad/Le Moniteur Belge, 13 July 1984 and 15 January 1987 respectively.

[19] Belgisch Staatsblad/Le Moniteur Belge, 20 December 1989. This Ministerial Order was amended by a new one in April 1990, because new identification codes had been internationally accepted (Belgisch Staatsblad/Le Moniteur Belge, 12 April 1990).

[20] *Import-Export, Hoofdstuk 8.1.4: Strategische produkten,* 12 December 1988, pp. 23-28.

[21] The concept, however, is not defined in present Belgian trade legislation.

[22] A note dated 19 March 1981 from the Minister for Foreign Relations indicated some other principles with direct reference to the arms trade. As these do not change the content of the law, they have little bearing on the present discussion. For an enumeration, see B. Adam, November 1988, pp. 14-15.

[23] B. Adam, November 1988, p.13.

> "This attitude is the result of a perfect symbiosis between the political world and the industrial milieu. Considerations are economic rather than moral."

To obtain a license for exporting or transiting strategic commodities, a firm must apply to the Central Service for Contingents and Licenses *(Centrale Dienst voor Contingenten en Vergunningen)* of the Ministry for Economic Affairs. This service consults the General Political Directorate *(Algemene Directie van de Politiek)* within the Ministry for Foreign Affairs for political advice. The application is subsequently submitted to an interministerial committee composed of representatives of the Ministers for Foreign Relations, Foreign Trade, Economic Affairs, Defence, of Home Affairs and of Justice. The political decisions are taken following the principles included in the Acts of 11 September 1962 and 19 July 1968.

The Central Service for Contingents and Licenses follows a different procedure when the recipient is a government of a NATO ally or when it only involves small quantities to other countries. For all other countries or for shipments to private enterprises, the application is transmitted to the General Political Directorate.

For his political advice, the Foreign Minister consults a list defining seven country categories:

1. NATO members and countries with an equal status:
   Australia, Austria, Finland, Ireland, Japan, New Zealand, Sweden and Switzerland.
2. Communist countries:
   Afghanistan, Albania, Bulgaria, China, Czechoslovakia, German Democratic Republic, Hungary, Kampuchea, Laos, Mongolia, North Korea, Poland, Rumania, Viêt-Nam and the USSR.
3. Countries under complete embargo:
   The Bantustans, Namibia (South West Africa), South Africa and Taiwan.
4. Countries under temporary embargo:
   Chili, Cuba, El Salvador, Ethiopia, Nicaragua, Paraguay, Sri Lanka, South Yemen and Syria.
5. Countries under the measure "suspension of licenses":
   Iran, Iraq, Libya and Surinam.
6. Sensitive countries:
   most of the Third World states.
7. All other countries:
   neutral countries.

The list is secret and only issued to the Central Service for Contingents and Licenses and the customs. The latest circular letter known dated 16 February 1987 bears reference number DL 3/15755. It reflects the situation from December 1986 onwards[24]. Purveyors, on the other hand, only possess a simplified list made up of three categories[25]:

[24] Parlementair Onderzoek, 28 February 1989, pp. 77 + 79.

[25] *Import-Export*, 12 December 1988, p. 24. The publication is currently being updated.

1. COCOM members:
   Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Italy, Japan, Luxembourg, The Netherlands, Norway, Portugal, Turkey, United Kingdom, United States.
2. Austria, Finland, Hong-Kong, Ireland, Sweden, Switzerland, Yugoslavia.
3. All other countries not listed under 1 and 2.

The disparity between both lists is striking, more so as the apparently exhaustive category "COCOM members" does not include NATO allies, such as France, Iceland and Spain, whereas Japan is listed. The second grouping, which partially corresponds to the list of countries with a status equal to that of NATO members, rather surprisingly contains Hong Kong and Yugoslavia[26]. Hong Kong in particular played an important role in the Imhausen-Rabta affair.

If the addressee is a private enterprise in a NATO country or a country with an equal status, advice is given by the competent service of the General Political Directorate only. Applications for licenses for countries under complete embargo are immediately rejected by the Central Service for Contingents and Licenses. Exports to states listed under temporary embargo or under "suspension of licenses" are in principle refused by the interministerial committee. The COCOM guidelines govern exports to communist countries. All other categories follow standard routine procedures. In case the interministerial committee does not arrive at a unanimous conclusion, the application is transferred to the Minister Committee for Foreign Relations.

The most important documents needed to apply for a license are: the international import certificate *(internationaal invoergetuigschrift)*, the end-use certificate *(eindbestemmingscertificaat)* and the certificate of delivery on location *(verbintenis van niet-wederuitvoer)*. The international import certificate is a document accepted by NATO, for use by private firms established in NATO members or in countries with an equal status. The government of the importing country bears the political responsibility of the transaction and declares that any possible reexportation will not occur without its permission. The certificate of delivery on location, i.e. of non-reexportation, is required in all cases. This is a purely Belgian document for domestic use. The Belgian purveyor must sign it, compelling him to prove the goods have indeed arrived at the indicated destination. The end-use certificate, which also contains a clause on non-reexportation, is delivered by the government of the importing country, thus confirming it is the recipient. The Belgian diplomatic mission in the country concerned verifies the authenticity of the order and the competence of the person whose signature appears on the document. The end-use certificate is required for all transactions with governments of countries on a par with NATO members and all other non-NATO countries. Except for those situations in which an international import certificate is required, a copy of the contract may also be required. In reality, verification cannot be that thorough, especially as embassies and administrations lack sufficient personnel to check every delivery or because transactions usually take place in separate phases. Belgium usually trusts the political representatives of countries it officially recognizes, until suspicions of irregularities arise[27].

[26] Yugoslavia, of course, is an OECD member.

[27] *De uitvoer en de doorvoer van wapens, munitie en militair materiaal*, 1988, p. 8.

As regards the passage of goods through Belgium, a distinction is made between the transit of military equipment for NATO allies over Belgian territory on the one hand and the commercial transactions involving the transit of strategic commodities for military use through Belgium on the other[28]. The general context of the former form of passage is regulated by the Act of 11 April 1962 allowing NATO troops and their equipment onto Belgian territory. It has no bearing on the present discussion[29]. The latter, however, was crucial to the Imhausen-Rabta affair. At that time, contrary to the traditional arms sales, Belgium required no authorization for transiting strategic chemicals. As such, it constituted a weak link in the chemicals export control network[30]. Indeed, the original destination of chemical compounds from other NATO members or from countries with an equal status was easy to change in Belgium. A valid entry on transit documents, for example, was "Destination sea", a formula often used for crude oil or other commodities, expected to change ownership during the voyage.

The Belgian customs cannot check all shipments. The daily mass of exported or transited commodities is enormous. Some consignments bear false labels. The customs lack sufficient and specialized personnel to verify the genuineness of the entries on the documents. For chemicals, the need to make false declarations did not even arise. The same compound is often produced or commercialized under one of its many synonyms, that do not appear on the Australian Group's list[31]. The letter by the former Minister for Economic Affairs stating that T.D.G. is *tertiary diglycol* which does not appear on the export control list was illustrative for these complications.

The Central Service for Contingents and Licenses also suffers from being understaffed. Checks that shipments have indeed arrived at their declared destination are at best carried out at random. Normally, the exporter will present the signed customs forms of the importing country. However, in some Third World countries the required papers are virtually impossible to obtain. Moreover, as testified by the Director-General of the Central Service for Contingents and Licenses, submission of those documents by the expeditor is an administrative provision and not a legal requirement. Non-compliance cannot lead to prosecution[32]; the service can only file the case.

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[28] Testimony by Mrs Roland, Director-General of the Central Service for Contingents and Licenses. *Parlementair Onderzoek*, 28 February 1989, p.75. Additional exceptions are arms exports to the BENELUX partners and to Belgian troops based abroad.

[29] That law, however, was at issue during the parliamentary debates on the US binary NATO force goal in 1986. For a detailed discussion, see J.P. Zanders, March 1989.

[30] If the allegation against the Kortrijk firm, that it has placed the clean rooms in American made laboratories while the containers were supposedly in transit on their route to Iraq, were proved to be true, then this case would be one of the most striking illustrations of the hithertho weak regulations. It also underscores the lack of a definition for the concept *technology* in Belgian trade legislation.

[31] The Ministerial Order of 20 June 1984 listing the first five chemicals, mentions a Belgian statistical number, but not, for example, the internationally accepted Chemical Abstracts Service registry number. This has been rectified by the new ministerial orders of 29 November 1989 by introducing the "Combined Nomenclature" code for the listed compounds.

[32] Testimony by Mrs Roland, Director General of the Central Service for Contingents and Licenses. *Parlementair Onderzoek*, 28 February 1989, p. 86.

According to the Act of 11 September 1962, the Economic General Inspection *(Economische Algemene Inspectie)* is responsible for prosecuting import, export and transit violations. This implies checking the destination and the nature of the commodities with the information on the required documents. However, the service must turn to an examining magistrate or public prosecutor for e.g. seizures. In the event it takes criminal action against a firm, it proceeds judicially on behalf of the Procurator-General and not the Ministry for Economic Affairs, as it collaborates with the judicial authorities. However, the functionaries as such cannot act as an officer of the judicial police. In reality, the Economic General Inspection does not really occupy itself with controls on Belgian territory. The Parliamentary Investigative Committee noted that *"since its creation this Inspection service of the Ministry for Economic Affairs has hardly carried out any tasks with respect to controlling the arms trade"*[33]. Customs officers, on the other hand, perform on-site inspections. However, they lack sufficient means to execute these effectively. No more than 2% of all shipments is physically verified[34]. They are unable act against embargo infringements as such, because these do not constitute penal offenses in Belgium, unless another violation such as forgery has been committed.

The complex administrative structure and the lack of trained personnel and resources seriously limit the chances of catching a violator. Even if prosecuted, the possible sentences are unlikely to deter him. For instance, according to the present law, the Central Service for Contingents and Licenses must handle any regular application without considering any previous court convictions of the applicant. As a consequence, persons condemned for illegal arms trafficking or fraud at the customs cannot be refused a license[35]. The service's only sanction consists of nullifying the export license, provided the administration can prove conclusively that the expeditor has knowingly provided wrong or incomplete information. However, by the time the service learns of such fraud, the commodities have usually left the country. As a result, the purveyor can at most be persecuted for having exported commodities without an export licence.

This, however, is in breach of the General Act on Customs and Excises and not an economic criminal offence. The consequences are twofold. First, the only body that according to the Act of 11 September 1962 and the Ministerial Order of 23 October 1962 can undertake legal steps is the General Economic Inspection. Above, we outlined that service's operational limitations. Second, sanctions must be taken by the Administration of Customs and Excises[36]:

1. in case of export or transit without a license or with a license obtained falsely or deceitfully:
   - confiscation and distraint on goods;
   - in case of illegal goods, a fine equal to twice their value;
   - a prison sentence between four months and a year, which may be doubled in case of recurrence.
2. in case the licenses have been used contrary to the conditions of use and validity:

[33] Parlementair onderzoek, 28 February 1989, p.560.

[34] *Parlementair onderzoek*, 28 February 1989, p.561.

[35] *De uitvoer en de doorvoer van wapens, munitie en militair materiaal*, 1988, p.22.

[36] *De uitvoer en de doorvoer van wapens, munitie en militair materiaal*, 1988, pp. 24-25; 56.

- distraint on goods;
- a fine equal to the value of the goods.

3. in case of forgery, the Public Prosecutor is notified.

By contrast, had the violations been judged economic offenses, penalties would have included stiff fines and prison sentences up to five years, as well as professional sanctions such as temporary or definitive bans on exercising the profession or trade for which the offender has been condemned.

In case an exporter has given false information concerning the transaction, the *Nationale Delcrederedienst/Office Nationale du Ducroire*, a commodity export credit guarantee service, refuses to award damages in case the transaction turns out badly. Nevertheless, there exists a trend to insure risk-bearing orders with private companies, more so as these are prepared to cover those shipments that have been refused by the *Delcrederedienst*. The sanction is therefore often not applicable.

The Parliamentary Investigative Committee, which had been installed on 12 May 1987 and concluded its report on 28 February 1989, focused its inquest for the largest part on Belgium's role as direct arms supplier or transiting country for shipments to the belligerents in the Gulf War. In this context, a representative of Phillips Petroleum was interrogated on the sale of thiodiglycol to Iraq in 1983. The case study is of limited value, especially as no export controls were in force at that time. Mr. Verding's claim that at that time the company was unaware of Baghdad's chemical warfare intentions remained virtually unchallenged. A governmental working group studying the parliamentary report, confirmed without any comment that the transaction was not illegal as the export of thiodiglycol had only been submitted to a license on 20 June 1984[37]. However, early in 1989, as the participation of Belgian shippers in the Imhausen-Rabta affair emerged, the Parliamentary Investigative Committee included three main policy recommendations in its final report to prevent future Belgian involvement in the spread of chemical weapons[38]. First, it urged the government to submit additional chemicals from the Australian Group's warning list to an export licence. At present, this list is only circulated to the chemical industry. Second, infringements of embargoes imposed by the Belgian authorities must be made punishable by law. Under current legislation a shipper cannot be persecuted unless he has committed an additional violation of common law, such as deceit. Finally, the Commission also stressed the need to control the export or transit of technology that could promote chemical weapons proliferation. As will be discussed in the last section, the government is considering these recommendations for inclusion in future legislation.

At the initiative of the Minister for Economic Affairs, a governmental working group was set up to study the Parliamentary Investigative Committee's report. It met four times between 23 March and 8 June 1989. Although it noted in its final report[39] that most of the cases scrutinized involved the transit of arms shipments over Belgian territory, it accepted that new executive

[37] *Rapport du groupe de travail [...]*, 8 June 1989, p.2.

[38] J.P. Zanders, 7 February 1989.

[39] Rapport du groupe de travail [...], 8 June 1989.

controls over arms sales were necessary. The working group nevertheless believed that the prevailing acts of 11 September 1962 and 19 July 1968 provided a sufficient legal base to control international trade in general. Their scope is comparable to that of similar laws in other countries. Therefore, it recommended that the government should enforce new controls over arms shipments and strategic chemicals by means of ministerial orders rather than a new law. With respect to the spread of chemical weapons in particular, the report advocated a total prohibition on producing, exporting and transiting chemical - and biological - weapons as general policy principle. On a more concrete level, the number of chemicals on the export control list should be increased and subdivided into three categories according to their military relevance. Finally, controls should be imposed on the export and transit of technology. The representatives of the various ministries appreciated the different nature of controlling the spread of conventional arms and of chemical weapons. They also recognised the previous efforts by the Belgian authorities to prevent chemical warfare and valued their participation in discussions within the BENELUX, the European Communities and the Australian Group.

Heeding the recommendations, the Minister for Economic Affairs Claes issued two new Ministerial Orders on 29 November 1989, which entered into force upon their publication in *Het Belgisch Staatsblad* on 20 December. The first order subjects the export of certain commodities to licensing requirements. It replaces both previous Ministerial Orders of 1984 and 1987. Its main novelty is the introduction of *Combined Nomenclature* (CN) codes, by which the goods are identified. Before, they were catalogued by their statistical number and number of tariffs of import duties. The CN codes, in contrast, go beyond tariffs and duties. They allow customs officials to identify the merchandise irrespective of commercial names, synonyms or foreign numerical codes and thus to determine whether these are subjected to specific licensing requirements. The Belgian CN code, known within the European Communities as *SADBEL*, consists of twelve digits[40]. The first six are in common use by all GATT members. The next three digits are for EC[41] and Benelux purposes, and the final three exclusively for Belgian use. All companies, whether based in Belgium or abroad, must supply these codes for all goods crossing the Belgian borders.

These Ministerial Orders were replaced by new ones on 12 April 1990 because of new internationally accepted CN codes. They included the nine chemical compounds currently in the Australian Group's core export control list:[42]

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[40] SADBEL also includes a control letter and an additional code of four digits, which are of little relevance to the present discussion.

[41] The first eight digits are found in EC regulations.

[42] Under the previous Ministerial Orders, these compounds were listed as follows:
Ex 28121010 phosphoryl chloride; phosphorus trichloride; Ex 28121090 thionyl chloride; Ex 29209090 trimethyl phosphite; dimethyl hydrogen phosphite; Ex 29309090 thiodiglycol; Ex 29310000 methylphosphonyl difluoride; methylphosphonyl dichloride; dimethyl methylphosphonate.

As the Ex-prefixes show, these compounds belonged to larger groups. The importance the international community now attaches to the chemicals in the Australian Group's core list is reflected by the unique CN code they have received.

2812 1011	phosphoryl chloride
2812 1015	phosphorus trichloride
Ex 2812 1015	thionyl chloride
2920 9020	dimethyl hydrogen phosphite
2920 9030	trimethyl phosphite
2930 9020	thiodiglycol
2931 0010	dimethyl methylphosphonate
2931 0020	methylphosphonyl difluoride
2931 0030	methylphosphonyl dichloride

In view of the trade agreements within the framework of the Belgian-Luxembourg Economic Union and the Benelux, no licenses are required for their export to Luxembourg or The Netherlands. As regards these chemicals, no other exceptions or additional provisions have been specified.

The second Ministerial Order subjects the transit of certain commodities to a licensing system. The regulations apply to all goods listed in the first Ministerial Order. Moreover, Article 1 also explicitly names the nine strategic chemicals together with their CN code. In certain precisely defined cases, no Belgian transit license is required for goods:

- coming from or having Luxembourg as final destination;
- having The Netherlands as final destination;
- coming from The Netherlands provided they are in free trade there;
- not being transshipped or transferred to another means of transport;
- coming from Australia, Belgium, Canada, Denmark, Federal Republic of Germany, France, Greece, Italy, Japan, Luxembourg, The Netherlands, Norway, Portugal, Spain, Turkey, the United Kingdom and the USA, if accompanied by a valid transit authorization by the authorities of one of these countries; and which have as destination: Albania, Bulgaria, Cuba, Czechoslovakia, German Democratic Republic, Hungary, Kampuchea, Laos, North Korea, People's Republic of China, People's Republic of Mongolia, Poland, Rumania, USSR and Viêt-Nam.

In all other cases the principles and procedures laid down in the Acts of 1962 and 1968 are applied.

Current developments

Early in October 1990, the Belgian government was embarrassed by the transshipment of 101 tons natrium cyanide in the port of Antwerp. The chemicals had originated from the Federal Republic and were officially destined for Iran. Although the compound was not subject to any special Belgian transit licensing requirements, it figured on the Warning List of the Australian Group. The Minister for Economic Affairs ordered the acceleration of the preparation of new

Ministerial Orders. On 16 October 1990 the first were published in *Het Belgisch Staatsblad/Le Moniteur Belge,* submitting seven extra products to export and transit licenses. The next day, two more Ministerial Orders were promulgated regulating the remaining thirty-four chemicals from the Warning List. Belgium has thus imposed export and transit controls on all chemicals categorised by the Australian Group.

Although these Ministerial Orders address the largest deficiencies of the first export controls, the measures still lack any deterrence value for companies bent on breaking the law. Therefore, the Belgian Government intends to go beyond the recommendation made by the working group. A governmental committee consisting of ten ministers and top functionaries has been drafting a new bill that will exclusively regulate the sale of ordnance. The text, whose contents were leaked to the press, *"must include"* a complete ban on *"the export and transit of chemical weapons"* in *"the strictest sense of the term"*. A scientific committee will be established to advise the Government on the production and trade in chemical and biological weapons (Art. 2 of the bill). It will collect data on products which could be used for aims *"forbidden by the Geneva Protocol"*.[43] The Government will impose an absolute ban on the im- and export, as well as on the transit, of these products and will also outlaw the production of chemical and biological weapons[44]. This bill should thus prevent what we have defined as third generation chemical weapons proliferation, i.e. the trade in ready to use chemical and biological munitions. It will supplement the prevailing acts of 1962 and 1968 and should become law in time for the unified European market in 1993. In June 1990, the Government submitted the proposals to the State Council. At the time of writing, this body was still reviewing their legality.

Persons who trade in such products will be submitted to a stringent control regime. Licences and patents will only be granted after a thorough investigation. Permission for export or transit will be refused for *"services and goods"* as soon as there exists *"an unlawful risk"* that these could be used for chemical warfare.[45] After 1992, transit within the E.C. boundaries will be completely free. Therefore, checks will depend entirely on data provided by the firms. This explains the necessity to punish false information more severely. As before, shippers withholding or giving incorrect details will be liable to criminal prosecution. In addition to the sanctions by the Administration of Customs and Excises, companies could $have their licenses suspended for a certain period, depending on the seriousness of the crime. Moreover, violations of export or transit controls will also become punishable.

New executive orders supplementing the law of 1962 will deal with the trade in precursors. The suspension of export licenses for a certain duration as well as stiff penalties will be imposed on violations of export and transit controls. Especially for companies in financial difficulties, the realisation that a suspension of trading activities for several months would undoubtedly lead to their collapse, should deter them from engaging in illegal activities. The principle of extraterritoriality will be included in the executive orders as well as in the bill on arms trade. It

[43] PVDD, 29 December 1989 and 3 January 1990.

[44] Unless otherwise specified, this section is based on interviews with members of the administration and cabinet of the Ministry for Economic Affairs in December 1990 and were conducted with the permission of the Minister.

[45] PVDD, 29 December 1989 and 3 January 1990.

is nevertheless realized that Belgian subjects and companies operating abroad can only be prosecuted with the cooperation of the foreign government. However, the Belgian authorities will only grant a license if a liable person resides within its borders. The review of the general Act of 11 September 1962 will also include a legal definition of the concept "technology", which should enable a closer control of the trade in products for double use.

The present government thus appears to take the issue of chemical weapons seriously. Contrary to the working group's advise, the government opts for a bill regulating the arms trade, which will be submitted to parliament for approval. This points to a wish for a broad political consensus on the issue and for a firm legal base. Completely new is the inclusion of provisions on biological weapons. This will be the first time Belgium promulgates legislation as required by the 1972 Biological and Toxin Treaty. The authorities do not believe that the Belgian involvement in the spread of precursors is so widespread that it would necessitate a new law. The general Act concerning the import, export and transit of commodities of 11 September 1962, in addition to some new Royal Decrees, constitutes a sufficient legal instrument. Nevertheless, the authorities do not rule out the possibility of a future new law should a sharp increase of violations occur.

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Bernard Adam

European Community Policy Initiatives for the Prevention of Chemical Weapons Proliferation

Introduction

The present analysis deals with current European Community export regulations for chemicals which may be used for producing chemical weapons. In particular, we will try to answer the following questions: Have the twelve member states adopted any common policy? Can they reach a renewed or virtual consensus to ameliorate present controls?

We must treat these questions within a double context of future developments:

1° In 1993 the single European market will abolish customs controls between member states. Export controls will only be enforceable at the external EC borders or at the manufacturing sites when goods are being prepared for shipping. In each case, both national and European regulations should be reconsidered. This is not limited to chemicals, but covers all commodities of which the authorities may wish to know the export destination.
It concerns arms exports in particular, although the Community has not yet received the authority to deal with the issue. In fact, member states still regard weapons shipments as belonging to their national sovereignty.

2° A multilateral treaty banning all chemical weapons will probably be concluded within the next couple of years. Some believe such an agreement might even be concluded in 1992. It will include provisions for its implementation on either national or Community level. Therefore, each party to the treaty will have to create a National Authority, which shall have at least two tasks:

(i) gathering information on quantities of certain chemicals produced or exported and transmitting these data to the international technical secretariat to be created under the provisions of the treaty;

(ii) assisting challenge inspections by international controllers.

A third task will probably include actual verification of the data transmitted by the industry and of treaty compliance on a national or Community level.

From this double context, it follows that Community officials must urgently examine and anticipate developments within the next two or three years. After analyzing the present situation, we can only express our scepticism.

Finally, we also experienced a serious problem in finding reliable sources. Very little information about Community policies is publicly available. This explains our rather poor bibliography. To a large extent, we relied on oral sources and, moreover, most contacts did not wish to be quoted. In spite of this obvious political malaise, we will try to outline the state of affairs, although we are fully aware that many questions remain.

The present common European regulations

1. A first try in 1984

In 1984, after Iran's first accusations of Iraqi use of chemical weapons, an international investigative team visited the battle area at the request of the U.N. General Secretary. The final report confirmed that mustard gas and tabun had indeed been employed, causing 41 Iranian casualties. However, it did not settle the fundamental question: who had used these weapons?

Against this background, the twelve foreign ministers meeting in the European Council of Ministers examined a first proposal to impose Community export controls on compounds with potential use for chemical weapons manufacturing. They, however, rejected the recommendation by the European Commission. Some member states - in particular France, Denmark and Greece - maintained that the matter did not belong to the competence of the E.C.

Nevertheless, an ad hoc group was created within the European Political Cooperation. This body deals with the harmonization of foreign affairs policies of the twelve member states. As such, this may include matters not (yet) covered by the Treaty of Rome. Early in 1984, the ad hoc group reached a political settlement. The member states agreed not to export five chemicals to Iran or Iraq: phosphoryl oxychloride, dimethyl methylphosphonate, thiodiglycol, methylphosphonyl dichloride, methylphosphonyl difluoride. At that time, these compounds were considered the most dangerous key precursors. Each of the twelve member states subsequently imposed national export regulations for at least five products[1]. Most adopted an export licensing system, whereby export companies must apply for an authorization to - depending on the country - either the Minister for Economic Affairs, for Foreign Affairs or for Trade.

[1] *Bulletin des questions et réponses, Sénat n °8, pp. 490-491,* written question n°3 by M. Pataer to the (Belgian) Minister for Foreign Trade, 30 October 1986.

2. The regulations of 20 February 1989

a. The political context

At the end of 1988, the United States confirmed that the Libyan plant near Rabta was a chemical weapons production facility. The German company Imhausen was soon suspected of being the prime constructor.

In Europe, and in the Federal Republic of Germany in particular, emotions were running high. On 31 January 1989, West German Foreign Minister H.D. Genscher wrote to Chairman Delors, as well as to the President of the Council of Ministers, demanding to resuscitate the 1984 Commission proposals. A quick succession of events was to occur. Within one week, the Commission's services wrote a draft European regulation, and submitted it to the Commission on 10 February. Four days later, the European Ministers for Foreign Affairs accepted the recommendation at the Madrid meeting of the European Political Cooperation. On 20 February, the Council of European Ministers formally adopted the text, which was published in the *Official Journal of the European Community* on 22 February (See Appendix 2)[2].

The speed with which this piece of regulation was drafted, debated and adopted can of course be explained by the political context of the Rabta affair, in which the United States and the media played an important role. It demonstrates that given a political consensus it is perfectly possible to make quick decisions.

b. Contents

The text of Council Regulation n° 428/89 is extremely short. There are no more than 2 significant articles, the third one simply stating that it becomes law upon publication.

The first article specifies that the export of 8 chemicals - the 1984 list plus three additional ones: phosphorus trichloride, trimethyl phosphite and dimethyl phosphite - requires prior authorization. The second article contains the two export restrictions if (i) *"there is reason to believe that products under consideration will be used for the development and production of chemical weapons"* or if (ii) *"there is a risk of their being delivered directly or indirectly to belligerent countries or to areas of serious international tension"*.

It should be clear, however, that this Community regulation provides but for a general frame of reference comprising two elements:

1° Each member state is to promulgate its own national export regulations and authorization procedures. As such, there exists no comprehensive Community regulation, but a delineation of general principles.

[2] *Nouvelles Atlantiques*, 22 February 1989.

2° Each member state may adopt stricter export controls. This was explicitly included in the minutes of the 20 February 1989 meeting of the Council of Ministers as some member states wanted to indicate that the community regulation is a minimalist stance[3].

c. Discussion of the motives

From a legal point of view, these statements of motives contained in the "Whereas ..." clauses are important, as they clarify the foundations of this regulation. Compared with 1984, the new regulation contains an essential new element that may be used to broaden the scope of Community competence. Article 30, Section 5 of the "Single Market Act" stresses the need for consistency of the external policies of the European Community with the policies agreed within European Political Cooperation. That Section is quoted in the "Whereas's". We may thus presume that, in adopting this text, the member states de facto view the matter as belonging to the new competencies of the Community. At least, this is the Commission's interpretation. Some member states still seem to contest it. This thus requires an analysis and legal clarification in the near future.

Moreover, this regulation is based on Article 113 of the Rome Treaty, which indicates that (see Appendix 4):

1° The common trade policies are based on uniform principles, in particular with regard to (...) export policies (...).
2° To put this trade policy into operation, the Commission will submit proposals to the Council.
3° While exercising its competencies under this article, the Council will vote with a qualified majority.

This legal statement is important. If the Commission's interpretation referring to the Single Market Act, is accepted and in accordance with Article 113, much lighter modification procedures will be needed in the future. The regulation of 20 February 1989 had to be adopted unanimously within the European Political Cooperation. However, acting on proposals by the Commission, the Council of Ministers could approve amendments to this regulation with a qualified majority. The Commission may propose an increase of the number of products. The minimalist text of 20 February 1989 could serve as a basis for a stricter regulation.

During the preliminary discussions in February 1989, however, two countries had expressed their reservations. Great Britain hesitated on the general context of the proposals, while Belgium had reservations about Article 113.

d. Which modifications?

The Commission's offices seem to prepare a new text, which may include three elements:

[3] *Nouvelles Atlantiques*, 22 February 1989.

1° An extension of the list of 8 products.
2° The problem of transiting these products through non-EEC-countries.
3° The problem of exporting technology and know-how that may be applied for manufacturing chemical weapons.

It appeared that a text was almost ready early in 1990. In any case, the Commission could rapidly prepare such a document if a minimal consensus was reached. However, it does not seem likely that a political injunction is to be achieved in the next couple of months. The text will remain "on the table" without a precise agenda.

3. The regulation of 16 June 1988

Another regulation on exporting and importing certain chemicals that are dangerous to both man and environment, exists. Although it does not bear on key precursors for chemical weapons, it contains a list of products with potential military applications.

This regulation intends to establish a common European notification and information system regarding the movement of some chemical products. The data collected by the national authorities - an ad hoc office is established in the twelve countries - are centralised by the Commission, which in turn informs all member states as well as the international register for possible toxic chemical elements (RISCPT). The information is also published in the Official Journal of the European Community. This has nothing to do with prior authorization, but with some "glasnost" concerning the transfer of chemicals.

It is important to note that the Council, acting on proposals made by the Commission, may modify the list with a qualified majority.

The text could also be used to have a better view on the exports of chemical products with military utility. Such transparency is one of the aims of the Geneva talks for a multilateral convention.

Position of the twelve member states

It is not very easy to determine all the members' positions, since they change depending on new events. Some of the current trends are summarised below:

- After the Rabta affair, West Germany has taken a very voluntarist position. On one hand, the Germans want maximal national controls. However, on the other, they would like a generalised control system at the Community level. The latter position follows from pressure exerted by the powerful West German chemical industry, as it fears disloyal competition from countries with laxer regulations.
- Ireland holds a maximalist point of view.
- The Netherlands and Italy also seem to support the maximalist aims of the Federal Republic.

- On the other hand, France and Great Britain are reticent about the extension of the actual regulation. They prefer an acceleration of the Geneva talks on a multilateral convention banning chemical weapons. This reticence seems to be dictated by military and strategic, rather than by industrial interests.
- Belgium seems reluctant to modify the existing regulation. This is probably due to industrial pressure.

Regulations in the twelve member countries

At the end of 1987 a comparative schedule on the regulations in the most important EEC and EFTA countries was drawn up in industrial circles. At that time, all EEC countries had submitted the 8 products from the core list to export licenses. There were some exceptions, however. Portugal still stuck to the 5 products of 1984. Ireland had included the entire warning list. The Netherlands had added 16 products to the 8 key precursors, Great Britain 7 and Italy 6.

In 1990, according to information obtained in industrial and European Community circles in Brussels, three countries still limited export controls to the nine products of the Australian Group's core list: Belgium[4], France and Portugal. The other countries required authorization for between 15 and 20 compounds. The Federal Republic of Germany, however, had adopted a very restrictive regulation, as it submitted 42 chemicals to licensing requirements.

Some observers remain sceptical. Even in the case of apparently very strict regulations, such as in the Federal Republic, one has to examine whether the rules are upheld, and, indeed, whether they can be upheld. First, in the Federal Republic, for example, only one of the 42 products is submitted to the specific procedure of controlling exports of weapons of war, requiring many ministerial approvals. The export of the 41 other chemicals is controlled by the Ministry of Trade only. However, recent examples involving arms transfers, have proven that this type control is by and large theoretical. Second, is it possible to enforce a theoretically strict control regime in an Europe where each country has its own regulations? This raises once more the problem of harmonizing the regulations amongst the EC member states.

The Australia Group

The Commission and the Twelve are members of the Australia Group. They seem to believe that the most efficient means of controlling chemical weapons proliferation is to be achieved

[4] Two ministerial orders of 29 November 1989 impose licensing requirements for the export and for the transit of certain products, including the nine compounds of the core list. Le Moniteur Belge/Belgisch Staatsblad, 20 December 1989.

within this group. Certain EEC members maintain that, as long there is no chemical weapons convention, discussions within that group are better than regulating within the EEC.

The Australia Group commenced its activities in 1985. At the outset, it was an informal group composed OECD members. Now, it counts 21 members: the EEC member states, the European Commission as such, the USA, Canada, Japan, Norway, Switzerland, New Zealand, Australia and Austria. The group's name follows from the fact that Australia chairs the biannual meetings in its Paris Embassy.

The Group has a double aim:

1. exchanging generally confidential information to prevent the chemical weapons proliferation. This is a preventive action to sensitize governments and industrial groups.
2. reaching an agreement on a list of dangerous products. Early in January 1991, this list was subdivided in a 'core list' containing nine chemicals and a 'warning list' of 41 products. Talks have also started on the problem of transferring technology and equipment.

Each country is, however, free to implement its own regulations, but will nevertheless inform the other participants. It is perfectly clear that the Community regulation of 20 February 1989 reflects the views within the Australia Group.

There are also contacts with the Leipzig Group, consisting of East European countries and the USSR, which pursues similar goals.

There exists a certain ambiguity regarding the participants' motives. On the one hand, the activities of the group are extremely useful, in particular for convincing the 'minimalist' countries to implement better export regulations. However, on the other hand, some countries utilise the group as an alibi to avoid stricter commitments in other organisations such as the European Community.

The position of the industrial groups

The chemical industrial groups are directly concerned and they certainly exert very efficient pressure on the governments of the industrialised countries to avoid too strict regulations.

The position of the European Council of Chemical Industry Federations, representing all EEC chemical companies in Brussels, can be summarized as follows:

- A multilateral treaty must be concluded as soon as possible in Geneva.
- Too strict regulations must be avoided as these would hinder commercial activities.
- Pending the treaty banning chemical weapons, the European Community may adopt only minimal regulations. The matter belongs to the European Political Cooperation and not to the European Commission. They do not wish an extension of the current list of eight products.

With regard to the European regulation, the position of the European Council of Chemical Industry Federations is somewhat ambiguous. On the one hand, it deplores the disparity of the national regulations, which distorts competition amongst the companies. On the other, it tries to slow down the process of establishing common regulations, knowing that the evolution will inevitably lead towards stricter controls. It is clear that the European Council as well as the national federations preferably exert more pressure on the national governments, some of which slow down the harmonization process, rather than on the Commission which favours the opposite. However, such harmonization is the only logical method for restoring effective competition between the different companies of the member states. In any case, this must be completed before the single market of 1993.

The interests involved are enormous. It is therefore evident that industrialists in the chemical sector will defend their particular interests. Nevertheless, one convincing argument that is also gaining ground in industrial circles is the necessity to reinforce inspection of all companies to avoid allegations of dubious exports. In general, flourishing companies are in favour of such inspections to avoid a tarnishing of their image. When comparing cases of arms trafficking in recent years, one notices that often companies in trouble or dubious intermediaries have accepted and organised illegal sales.

Finally, the concerned European unions of the chemical sector (ICFTU and ICEF) stress the governments' responsibility for abolishing chemical weapons. They must take steps to prevent proliferation. Moreover, they regard the production of toxic chemicals to be particularly harmful to the workers' health.

Position of the European Parliament

The European Parliament declared itself twice on chemical weapons in 1989.

On 19 January 1989, at the time of the Rabta affair, the European Parliament adopted a resolution on the proliferation of chemical weapons. The European MPs quoted Mr Fernandez Ordonez, the Spanish Foreign Secretary, then chairing the Council of Ministers, who had spoken for the Twelve member states at the Paris Conference. He had expressed the will of the Twelve to encourage measures to prevent chemical weapons proliferation and thus to invite member states to adopt self-restricting measures against the export of key precursors pending a global ban on chemical weapons.

In this resolution, the European Parliament "invites the Twelve to adopt measures of self-restriction, as requested by M. Fernandez Ordonez, to halt all collaboration of European companies and/or citizens in the construction and/or exploitation of chemical weapons factories". The European Parliament "addresses itself in particular to the Federal Republic of Germany, Belgium, France and The Netherlands, of which some companies and/or citizens were involved in the construction of the alleged chemical weapons plant in Libya".

On 14 March 1989, the European Parliament voted a resolution on arms exports by European countries, introduced by M.P. Glynn Ford. It included a passage on chemical weapons proliferation. The European Parliament "invites the Council, the Commission and the Member States to place an embargo on the sale of technology and raw materials intended for the production of biological and chemical weapons in those countries that actually use or manufacture such weapons." Moreover, the European Parliament "urges the Commission and the Council to widen the controls provided for by the regulations of 20 February 1989 (...)".[5]

Conclusions

1. The problems we had to gather our - mostly oral - sources from political and industrial officials clearly indicates the degree of the political malaise about controlling chemicals with potential use for manufacturing chemical weapons. This malaise is particularly clear in the European Commission in Brussels, but also in some member states such as Belgium and France.

2. There apparently exists a lot of pressure not to modify the regulation of 20 February 1989. This pressure originates essentially in industrial circles. However, one cannot fail to notice contradictory attitudes. On one hand, they rightly complain about the distortion of competition, due to the disparities in regulations in each of the member states. On the other, they pressure the European Commission not to harmonize regulations, because they realise that modifications inevitably lead to stricter controls.

3. However, the single market in 1993 will nevertheless require such harmonization. Legally, the Commission may propose an improvement of the regulations of 20 February 1989, using the procedure in Article 113 allowing adoption by a qualified majority instead of unanimity as required within the European Political Cooperation. However, in case France, the United Kingdom and a smaller country, such as Belgium or Portugal do not agree, the necessary quorum for a qualified majority will not be obtained (See Appendix 5). It thus seems that only new developments will lead to a sufficient consensus for improving European export regulations.

4. Some countries such as France or Great Britain slow down the process of improving European regulations, maintaining that all efforts should be focused on the Geneva disarmament talks. Most of the other member states do not perceive a contradiction between the two approaches and believe that pending an international treaty, controlling the proliferation of dangerous chemical agents is urgent.

5. In anticipation of the Geneva agreement, the Community could adopt some measures similar to those in the USA, Japan and Australia. In particular, procedures to make

[5] Own translations from French.

transactions more transparent should be introduced, such as the establishment and maintenance of a database on exports of some chemical compounds. As the Convention will require the installation of technical secretariats and national or international inspectors, the Community and the Twelve could already organise such an infrastructure to control, amongst other tasks, the proliferation of dangerous chemicals. This may be linked to procedures provided in the Community regulation of 16 June 1988, concerning chemical potentially dangerous to man and the environment.

6. The problem of controlling certain chemicals is similar to the one of controlling of arms transfers. Nevertheless, a first step has been taken regarding chemical agents, as a regulation, albeit not perfect, has been enacted. For arms transfers no Community regulation exists as yet. Indeed, it still remains a national matter.[6]

7. The issue of potential chemical weapons proliferation is also linked to environmental protection.[7] The wilful or accidental dumping of chemicals demonstrates the extent to which chemical industries are manufacturing dangerous and toxic products on an ever increasing scale. This constitutes a new global menace. It is high time for the chemical sector to invest in research for new compounds that are non-toxic for both man and the environment. This would allow cessation of production of some products.

8. Finally, discussions to achieve a consensus between the industry and governments are indeed a high priority, as the Canberra Conference in September 1989 has demonstrated.[8] However, it is also clear that private interests seldom coincide with public interests. In the world of economics, industrialists have the right to defend their interests. However, the political decision makers have a different function. They have to live up to their responsibilities.

[6] Cfr. Bernard Adam et al.: *"L'Europe des armes, trafics et exportations vers le tiers monde"*, GRIP, Brussels 1989.

[7] Cfr. François Ramade: *"Des pesticides aux armes chimiques"*, La Recherche, March 1990, Paris.

[8] Cfr. Kyle B. Olson: "The U.S. Chemical Industry Can Live with a Chemical Weapons Convention", Arms Control Today, November 1989 and Julian Perry Robinson: "Review: The Canberra Conference", Chemical Weapons Convention Bulletin, Federation of American Scientists Fund, November 1989.

Appendix 1: Positions of the E.C. member states in 1984.

(Extracts[9] from motives for the draft report on "the risks presented by chemical and biological weapons for the security of Europe"; rapporteur: Mrs Dorothée PIERMONT, Political Committee, Sub-Committee "Security and Disarmament", European Parliament, 7 October 1986, Document PE97.991/B/RÉV.)

During its session of 14 and 15 May 1984, the Council of Ministers for Foreign Affairs has published the following communique: "In accordance with a conclusive agreement within the framework of the Political Cooperation regarding the necessity to control the export of certain chemicals which could be directly or indirectly transferred to belligerent countries, the Council, following a proposal by the Commission and by virtue of Article 113 of the Treaty,

- notes that all member states have already taken or will take in the near future necessary national control measures and decides that the measures will be coordinated and that the member states will consult amongst each other and with the Commission, in accordance with Article 224 of the Treaty, in view of assuring the regular functioning of the Common Market;
- instructs COREPER[10] to prepare a thorough analysis of the legal and technical questions as well as issues of competence as regards the Treaty."

In his speech to the United Nations General Assembly on 25 September 1984, the Irish Minister for Foreign Affairs declared on behalf of the Ten:

> "We attach particular importance to the successful conclusion of negotiations taking place at the Conference on a convention to prohibit chemical weapons. Member States of the European Community have contributed actively to this work. In this connection we welcome positive developments which have taken place this year: the United States has tabled a draft convention to outlaw these weapons and the Soviet Union has accepted the principle of on-site inspection of destruction of stocks of chemical weapons. Although important differences remain to be resolved, the Ten hope that it will be possible to move towards the conclusion at an early date of a convention to eliminate chemical weapons."

With reference to the Gulf War, he stated:

> "Of particular concern was the report in March of this year by an expert team dispatched by the Secretary-General which ascertained that chemical weapons had been used in areas inspected in Iran. The Ten condemn without qualification any use of chemical weapons and earnestly hope that they will not be used again in this or any other conflict."

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[9] Unofficial English translation from French, except for the quotes from Minister Peter Barry which were taken from "Statement by Mr. Peter Barry, T.D., Minister for Foreign Affairs of Ireland and President-in-Office of the Foreign Ministers of the European Community, to the United Nations General Assembly on 25 September 1984" as provided by the Irish Ministry for Foreign Affairs.

[10] COREPER: Commission of Permanent Representatives.

Appendix 2: E.C. export regulations of 20 February 1989.

COUNCIL REGULATION (EEC) N° 428/89
of 20 February 1989
concerning the export of certain chemical products.

Official Journal of the European Communities
22 February 1990, n° L 50/1 - 50/2

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Whereas, at the international conference on chemical weapons which took place in Paris from 7 to 11 January 1989, the Member States of the European Economic Community strongly condemned the use of chemical weapons and underlined their commitment to the early conclusion of a global, comprehensive and verifiable convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction;

Whereas discussions in the context of European Political Cooperation led notably on 14 February 1989 to a consensus that it is necessary to take urgent measures to control the export of certain chemical products which could be used for the production of such weapons;

Whereas the European Parliament adopted on 19 january 1989 a resolution on the proliferation of chemical weapons;

Whereas Article 30 (5) of the Single European Act laid down that the external policies of the European Community and the policies agreed in European Political Cooperation must be consistent;

Whereas the interests of the Member States and of the Community require that the export of certain chemical products which could be used for the production of chemical weapons be regulated by means of urgent, effective measures; whereas the Member States therefore decided to adopt a Council regulation pursuant to the Treaty establishing the European Economic Community, and, in light of the circumstances surrounding its adoption, to keep under review the scope of further action;

Whereas the list of chemical products annexed to this Regulation was agreed in the context of European Political Cooperation; whereas the content of the list may be re-examined in that forum;

Whereas, in view of their nature and urgency, these measures are of paramount public importance and should accordingly be applied with immediate effect;

Having regard to the Treaty establishing the European Economic Community, and in particular Article 113 thereof,

Having regard to the proposal from the Commission,

HAS ADOPTED THIS REGULATION:

Article 1

Exports of the products listed in the Annex hereto shall be subject to the issue by the competent authorities in the Member States of a prior export authorization, or to equivalent measures.

Article 2

If there is reason to believe that products under consideration will be used for the development or production of chemical weapons or that there is a risk of their being delivered directly or indirectly to belligerent countries or to areas of serious international tension, no authorization shall be issued or exportation shall be prohibited by equivalent measures.

Article 3

This Regulation shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 20 February 1989.

For the Council
The President
F. FERNANDEZ ORDONEZ

ANNEX

List of chemical products

1. Thiodiglycol
2. Phosphorus oxychloride
3. Dimethyl methyl phosphonate
4. Methyl phosphonyl difluoride
5. Methyl phosphonyl dichloride
6. Dimethyl phosphite
7. Phosphorus trichloride
8. Trimethyl phosphite

Appendix 3: E.C. export regulations of 16 June 1988.

COUNCIL REGULATION (EEC) N° 1734/88
of 16 June 1988
concerning the export from and import into the Community
of certain dangerous chemicals.

Official Journal of the European Communities
22 June 1988, n° L 155/2 - L 155/6

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 130 S thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas certain provisions of Community legislation, and in particular Directives 76/769/EEC, and 79/117/EEC, restrict the marketing and use of certain dangerous substances and preparations and prohibit the placing on the market and use of plant protection products containing certain active substances in the Member States of the Community; whereas these provisions do not apply to those products when they are intended for export to third countries;

Whereas international trade in certain chemicals which are banned or severely restricted in countries of export has caused international concern on grounds of protection of man and the environment;

Whereas measures are necessary for the protection of man and the environment, both in the Community and in third countries;

Whereas schemes for notification and information concerning international trade in such substances have been set up within the framework of international organizations, namely the Organization for Economic Cooperation and Development (OECD), the United Nations Environment Programme (UNEP) and the Food and Agriculture Organization (FAO);

Whereas the Community and its Member States have actively participated in the work of these and of other international organizations relating to banned and severely restricted substances; whereas it is appropriate that the Community acts upon the results of this work through uniform Community procedures;

Whereas the export of chemicals to which this Regulation applies should be made subjects to a common notification procedure which would permit the Community to notify third countries with regard to such exports;

Whereas it is necessary to ensure that the rules applicable within the Community for the packaging and labelling of banned or severely restricted chemicals should apply to such chemicals when destined for export;

Whereas it is necessary to inform all the Member States of notifications received from third countries with regard to import into the Community of substances banned or severely restricted under the legislation of those countries;

Whereas the common notification procedures should also provide a basis for an appropriate exchange of information within the Community, including information on the implementation of the international notification scheme;

Whereas to this end the Commission will report to the Council and to the European Parliament, before 1 January 1990 and thereafter every two years, in particular on any possible reaction from the country of destination; whereas on the basis of this report, and on a proposal from the Commission, the Council will consider, before 1 July 1990, the possibility of introducing into this Regulation the principle of prior informed choice;

Whereas the list of chemicals in Annex I should be subject to review at intervals and amendment as necessary; whereas any such amendment to Annex I should be made on the basis of proposals from the Commission and should be the subject of a decision by the Council by a qualified majority;

Whereas to facilitate the amendment of Annex II, a system should be set up providing for close collaboration between Member States and the Commission by means of the Committee for the adaptation of that Annex to technical progress;

Whereas the Commission, in the light of the operation of this Regulation, may propose to the Council appropriate amendments thereto,

HAS ADOPTED THIS REGULATION:

Article 1
Objectives

The purpose of this Regulation is to establish a common system of notification and information for imports from and exports to third countries of certain chemicals which are banned or severely restricted on account of their effects on human health and the environment.

Article 2
Definitions

For the purpose of this Regulation, the following definitions shall apply:

1. "chemical subject to notification":
   the chemicals listed in Annex I, whether on their own or in preparations for which there is a labelling obligation;
2. "export":
   (a) the permanent or temporary export of products meeting the conditions of Article 9 (2) of the Treaty;
   (b) the re-export of products not meeting the conditions referred to in (a) which are placed under a customs procedure other than transit procedures;
3. "reference number":

the number assigned by the Commission to each chemical when it is exported for the first time to a third country. The number remains unchanged for every subsequent export of the same chemical from the Community to the same third country.

Article 3
Designation of authorities

Each Member State shall designate the authority or authorities, hereinafter referred to as the "designated authority" or "designated authorities", competent for the notification and information procedures laid down by this Regulation. It shall inform the Commission of such designation.

Article 4
Exports to third countries

1. When a chemical subject to notification is exported for the first time from the Community to a third country, the designated authority of the State, from which it is exported, shall take the necessary measures to ensure that the appropriate authorities of the country of destination receive notification of the fact. Such notification, which shall as far possible take place prior to export, must comply with the requirement set out in Annex II.

The designated authority shall send a copy of such notification to the Commission, which shall forward it to the designated authorities of the other Member States and to the International Register of Potentially Toxic Chemicals (IRPTC).

The Commission shall assign a reference number to each notification received and communicate it immediately to the designated authorities of the Member States. It shall periodically publish a list of these reference numbers in the *Official Journal of the European Communities*, stating the chemical concerned, and the third country of destination.

2. The designated authority of the relevant Member State shall inform the Commission as soon as possible of any significant reaction from the country of destination. The Commission shall ensure that the other Member States are informed as soon as possible of that country's reaction.

3. Every subsequent export of the chemical concerned from the Community to the same third country shall be accompanied by a reference to the number of the notification published in the *Official Journal of the European Communities* pursuant to the provisions of the third subparagraph of paragraph 1.

4. Notification must be given afresh, whenever major changes are made to the rules concerning the substances in question.

5. As regards the transmission of information within the meaning of paragraph 1, the Member States and the Commission shall take account of the need to protect the confidentiality of data and ownership, both in the Member States and in the countries of destination.

Article 5
Packaging and labelling

Any of the chemicals listed in Annex I which are intended for export shall be subject to such measures on packaging and labelling established in pursuance of Directive 67/548/EEC[11], as last amended by Directive 88/302/EEC[12], or as appropriate of other Directives covering dangerous preparations[13], as are applicable in the Member State from which the goods are to be exported or in which they have been produced. This obligation shall be without any prejudice to any specific requirements of the importing country.

Article 6
Notification from third countries

1. Where the designated authority of a Member State receives a notification from the competent authority of a third country concerning the export to the Community of a chemical whose manufacture, use, handling, consumption, transport and/or sale is the subject to prohibition or substantial legal restriction under that country's legislation, it shall send forthwith to the Commission a copy of that notification together with all relevant information.

2. The Commission shall forward forthwith to the Member States any notification received either directly or indirectly, together with all available information.

3. The Commission shall periodically evaluate the information received by the Member States and, if necessary, submit appropriate proposals to the Council.

Article 7
Exchange of information and monitoring

1. Member States shall regularly forward to the Commission information on the operation of the notification system provided for in this Regulation.

2. The Commission shall regularly compile a report on the basis of the information provided by the Member States and forward it to the Council and the European Parliament. This report shall consist, *inter alia*, of information on participation in international notification systems, on the cover provided by such systems and on how they are complied with by third countries.

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[11] OJ No 196, 16.8.1967, p. 1/67.

[12] OJ No L 133, 30.5.1988, p.1.

[13] - Directive 73/173/EEC (OJ No L 189, 11.7.1973, p.1), as amended by Directive 80/781/EEC (OJ No L 229, 30.8.1980, p.57);
- Directive 77/728/EEC (OJ No l 303, 28.11.1977, p. 23), as amended by Directive 83/265/EEC (OJ No L 147, 6.6.1983, p. 11);
- Directive 78/631/EEC (OJ No L 206, 29.7.1978, p. 13), as amended by Directive 81/187/EEC (OJ No L 88, 2.4.1981, p. 29).

3. As regards the information supplied pursuant to paragraphs 1 and 2, the Member States and the Commission shall take account of the need to protect the confidentiality of data ownership.

Article 8

If a Member State applies, with respect to substances other than those in Annex 1, a national system using similar information procedures in respect of third countries to those laid down in this Regulation, it shall inform the Commission, specifying the substances concerned.

The Commission shall forward this information to the Member States.

Article 9
Updating of Annexes

1. The List of chemicals in Annex I shall be reviewed by the Commission at intervals particularly in the light of experience gained in implementing this Regulation, with special regard to information received pursuant to Article 8, and on the basis of developments in Community rules and of developments within the framework of the OECD, the UNEP and the FAO. It shall be amended as necessary by decisions taken by the Council by qualified majority on a proposal from the Commission.

2. The amendments required for adapting Annex II to scientific and technical progress shall be adopted in accordance with the procedure laid down in Article 21 of Council Directive 67/548/EEC.

Article 10

This Regulation shall enter into force 12 months after its publication in the *Official Journal of the European Communities.*

This Regulation shall be binding in its entity and directly applicable in all Member States.

Done at Luxembourg, 16 June 1988

For the Council

The President

K. TÖPFER

ANNEX I

List of chemicals banned or severely restricted to certain uses owing to their effects on human health and the environment

	Chemical	CAS-number	EINECS number
1.	Mercuric oxide	21908-53-2	2446547
2.	Mercurous chloride (calomel)	10112-91-1	2333075
3.	Other inorganic mercury compounds		
4.	Alkyl mercury compounds		
5.	Alkoxyalkyl and aryl mercury compounds		
6.	Aldrin	309-00-2	2062158
7.	Chlordane	57-74-9	2003490
8.	Dieldrin	60-57-1	2004845
9.	DDT	50-29-3	2000243
10.	Endrin	72-20-8	2007757
11.	HCH containing less than 99,0% of the gamma isomer	608-73-1	2101689
12.	Heptachlor	76-44-8	2009623
13.	Hexachlorobenzene	118-74-1	2042739
14.	Camphechlor (toxaphene)	8001-35-2	2322833
15.	Polychlorinated biphenyls (PCB), except mono- and dichlorinated biphenyls	1336-36-3	2156481
16.	Polychlorinated terphenyls (PCT)	61788-33-8	2629682
17.	Preparations with a PCB or PCT content higher than 0,01% by weight		
18.	Tris (2,3 dibromopropyl) phosphate	126-72-7	2047999
19.	Tris-aziridinyl-phosphinoxide	545-55-1	2088925
20.	Polybrominated biphenyls (PBB)		
21.	Crocidolite	12001-28-4	

CAS = Chemical Abstracts Service
EINECS = European Inventory of Existing Commercial Substances

ANNEX II

Information required pursuant to Article 4

1. Identity of the substance or preparation to be exported:

1.1 *Substances:*
- name in nomenclature of the International Union of Pure and Applied Chemistry,
- other names (usual name, trade name, abbreviation),
- CAS-number (if available),
- main impurities of the substance, when particularly relevant.

1.2 *Preparations:*
- trade name or designation of the preparation,
- for each substance listed in Annex I, percentage and details as specified under 1.1.

2. Information on precautions to be taken, including category of danger and risk, and safety advice.

3. The name, address, telephone and telex numbers of the designated authority from whom further information may be obtained.

4. Summary of regulatory restrictions and reasons for them.

5. Expected date of export.

6. Reference number, if known.

7. Country of export and country of destination.

Appendix 4: Article 113 of the Treaties of Rome.

1. After the transitional period has ended, the common commercial policy shall be based on uniform principles, particularly in regard to changes in tariff rates, the conclusion of tariff and trade agreements, the achievement of uniformity in measures of liberalization, export policy and measures to protect trade such as those to be taken in case of dumping or subsidies.

2. The Commission shall submit proposals to the Council for implementing the common commercial policy.

3. Where agreements with third countries need to be negotiated, the Commission shall make recommendations to the Council, which shall authorize the Commission to open the necessary negotiations.

   The Commission shall conduct these negotiations in consultation with a special committee appointed by the Council to assist the Commission in this task and within the framework of such directives as the Council may issue to it.

4. In exercising the powers conferred upon it by this Article, the Council shall act by a qualified majority.

Appendix 5: Distribution of votes for a qualified majority in the Council of Ministers in the E.C.

Country	Number of votes
Federal Republic of Germany	10
France	10
Italy	10
United Kingdom	10
Spain	8
Belgium	5
Greece	5
The Netherlands	5
Portugal	5
Denmark	3
Ireland	3
Luxemburg	2
Total	76
Qualified majority	54

Afternoon Session

P. Tabary

Being a trade union member, you will understand that I attach great importance to public opinion and the power that represents the workers involved. I also want to point out that it is important for the trade unions to look beyond Geneva and that the problem of control is absolutely essential. The treaty will be of value only if it involves efficient control. This should not only include experts. It depends on everyone involved, each one at his place. I think that among workers there has to be a consensus on the necessity of sticking to their role in a control regime, and this beyond national and international trade union adherence. They are the first link in the chemical production chain. I believe that in Geneva one has to take in account the role that workers can play in the post-Geneva era.

A. Dumoulin

I would simply like to add one element to what has been said. Indeed, there could be a limit to future controls of chemical industries, and this mainly because of military developments in the field of binary technology. Militarily speaking, the binary principle has improved both the security and the safety of chemical weapons. The binary principle consists of mixing two components of low toxicity to achieve a deadly product during the initial phases of firing artillery shells or dropping air bombs. This principle risks reducing the effectiveness of international control.

[Unidentified]

I am not a chemist, and my question is as follows: how is it possible that so few molecules are put onto the black list, given the fact that so many products can be used for chemical war. Are there no more extensive lists?

B. Adam

The list mentioned consists of chemical products that were discussed by the Australian Group. J.P. Zanders and myself referred to the number of compounds on the warning list: eight, nine and now even fifty. One has to be aware that in the future Geneva Convention, there will be three levels and three different lists with many more components. In principle, one speaks of families of components. I do not know the exact details. Maybe that Peter Herby knows them better, but it seems to me that there are fifty or more.

P. Herby

The list in the rolling text at the moment is somewhat different than the list of the Australian group. The list of the Australian group is designed particularly with the Iran-Iraq conflict in mind, and of course it has other concerns as well. I think Julian - as a chemist - can probably explain better than I, what the differences are between the three levels.

J. P. Perry Robinson

There are indeed a great many chemicals which can go into the production of chemical warfare agents. The particular chemicals on the Australian list were perhaps driven by Gulf War considerations, and therefore referred to a narrow sector of the chemical economy. As Peter says, the schedules in the ruling text in the draft chemical weapons convention were driven by different considerations. The principle adopted in the draft treaty is that you can define degrees of threat posed by particular chemicals and chemicals which pose a very high degree of threat to the purpose of the treaty. That is to say, the nerve gases themselves or mustard gas, or particular precursors which could only be used to make nerve gas. You put these into such a tight control schedule that, in effect, they are removed from the chemical industry.

The distinction between level two and level three degree of risk, coincides also with the extent to which these chemicals are actually used in the civil chemical industry. In fact, circumstances where such that the medium risk chemicals all have relatively low civil applications. Therefore, it is feasible to track those chemicals through the chemical economy and to exert some form of non-diversion verification upon them. The ones of low risks coincide with chemicals with widespread use in the economy. Therefore it is not terribly necessary and feasible to track them for verification purposes. It is not necessary to do so, because there are relatively low risk chemicals. This introduces a basic contradiction into the whole approach to chemical control in the treaty: if the production of a threatening chemical is increased sufficiently, it will automatically get into schedule three, and therefore will not be the subject to such rigorous control. There is a curious contradiction here, but that was the logic of schedule III list.

P. Herby

One point to add is that the lists will be alterable. They can evolve with time as new chemicals of relevance are discovered or become a threat to the purposes of the convention. There will be some procedure, although it has not been clearly worked out yet.

H. Claassen

The question I would like to ask Mr Adam concerns the feasibility of controlling private enterprises. This touches upon the same point that was mentioned by the trade unions colleague. Do you have the impression that one of these instances tends to tackle that problem? Because what has been done so far, is erecting a system of regulations which is not open for public discussion.

B. Adam

Yes, there is indeed a problem. At the level of the Community, it consists of a minimal regulation for the products involved as well as for the applied procedure, because each country

is free to adopt its own regulations. When I referred to a second type of regulation, which does not concern the key precursors for the production of chemical weapons, it is, because it appears to me that there exists a field in which political awareness evolves faster than the one of chemical products. I think that the European Commission is much more sensible than the twelve member states, because the Twelve work according to rather complex legal mechanisms. It is a problem that goes beyond the problems that are being dealt with today. It concerns the general problem of the power relations between the Commission and the twelve member states and in particular the relation with the Council of Ministers.

E. Remacle

Jean Pascal Zanders has drawn the attention to the particular role of Hong Kong. I wonder what will happen in 1997, when Hong Kong will be integrated into China. Following the introduction of the principle "one country - two economic systems", will there be a change of attitude towards Hong Kong in industrialized countries regarding exports, or will the existing attitude be maintained?

B. Adam

One can only hope that the multilateral Convention will be concluded, approved and applied. There are countries situated in extremely sensitive areas. Turkey, for example, is a member of NATO and therefore of the COCOM group. We should not forget that behind the problem of chemical weapons, there is also the problem of arms sales. When one discusses the issue with people of the European Commission and one asks what will happen with arms sales after the political harmonization, they reply that each country will retain its sovereignty. However, when the internal borders disappear, one has to consider the external borders as the borders of the Community. The customs have to check the legislation of each country and cannot make mistakes. I am extremely sceptic about this procedure. It is the kind of problems that will appear when there is no full harmonization at the European level.

J.P. Zanders

I would like to add one small element. I have referred to the official document used by the Belgian customs. It is supposed to be a confidential document that only customs use. However it was released for the parliamentary investigative committee on arms trade. The first category contains NATO members and countries with what they call an equal status. Most of these would be other members of COCOM or OECD. Further, we have the communist countries, countries under complete embargo and so on. By chance, I was given by an Antwerp export company the manual which they use to check their controls. It lists only 3 categories. The first one explicitly names members of COCOM. The second category simply gives an enumeration of seven countries, amongst which Hong Kong. Hong Kong does not feature in the first official list. One question nobody could answer so far - and I have contacted governmental officials - is, why Hong Kong features in manuals that shippers use. If it is the case that Hong Kong has a status comparable to NATO members - categories 1 and 2 correspond with the first category in the official list - this would mean that exporting certain products, as was the case with the Imhausen-Rabta affair, is perfectly legitimate. In Belgium, no questions had to be asked to export such products. Especially at the time of the Imhausen-Rabta affair, Belgium had no transiting regulations. Hong Kong thus seems to have a very dubious status. I think that

when Hong Kong comes under Chinese rule it will get onto the list with communist countries. So far, nobody has been able to clarify that situation. Is it because of the fact that is a part of the United Kingdom? I don't know.

P. Van den IJssel

I would like to ask Mr. Zanders a question. If I understood you correctly you mentioned in your address, there is a proposal for a new law by the Belgium government including three points. The last point was putting restrictions on the exchange of know-how and technology. I would like to ask you wether you think that such restrictions are feasible and if they are feasible, don't you think that such restrictions could come into conflict which what free societies stand for, namely the free exchange of information, free exchange of know-how and free exchange of education?

J.P. Zanders

What I talked about was technology and know-how which have specific applications for the production of chemical weapons, for example, equipment which has very anticorrosive characteristics. Of course, the export of such equipment by itself would not constitute sufficient indication that somebody else wants to use it in chemical weapons plants.

The idea I want to put forward is based on what already exists in Germany - whether it is applied is another question. In theory, as soon as you place export controls on certain commodities, technology or know-how, this goes against spirit of free trade. But I think - Bernard Adam put the point forcibly - that economic freedom is one thing and preserving the quality of life is quite another. That is something for politicians and people with public responsibility to address.

P. Van den IJssel

I fully agree that you should put substances on the export control. The main thing in my question was that you mentioned know-how and information. How can you distinct between relevant and non-relevant know-how? You could end up by forbidding foreign students to participate in the chemistry industry in Belgium.

J.P. Zanders

What I meant by know-how was that, for example, a certain company sends engineers specifically to help constructing a chemical weapons plant. I do not include those exchange programmes between countries that have legitimate purposes. In Belgium, there was the case of Pakistani nuclear engineers studying at our nuclear testing facility at Mol. They acquired a lot of know-how to produce nuclear weapons. That is what we have to be very careful about. I think restrictions would be in the area of not taking a certain proposal at face value, especially, if the country is sensitive, such as Pakistan, which is not a party to the Non-Proliferation Treaty.

B. Adam

I would like to add one point. It is true that politicians have to propose regulations. Moreover, I think that we should try to have efficient and applicable legislation based on a sufficient consensus. If an arms embargo is voted and at the same time nothing is done to prohibit the

sale of arms production licences, it is clear that such legislation is useless. This is exactly what happened with South Africa. The spirit in which a law is meant to function should be clear from its political principles.

I. Graham

It seems to me that this afternoon and in particular in what Bernard Adam has said, we are confusing the chemical weapons issue with the question of producing toxic chemicals in general. This point has been raised several times and several speakers have tended to assume that the civil chemical industry is going to produce more and more toxic waste and more and more toxic chemicals. That viewpoint should not feature in the conclusions. It is wrong for two reasons. First of all, the level of public and legislative pressure on the chemical industry is such that it will not be able to continue to produce more and more toxic waste. The chemical industry understands that. The second point is that the industry itself has an economic interest in reducing the amount of toxic waste it produces. The disposal of toxic waste has become extremely expensive. The chemical companies have therefore already taken very extensive measures to reduce toxic production. I hold no brief for the chemical manufacturers but the conclusion based on the assumption that there will be more and more toxic waste produced by the civil chemical industry is probably a faulty conclusion. I just wanted to point that out.

Joachim Badelt

Concluding Remarks

Proliferation of chemical weapons has menacing implications for the world community. About twenty states are now believed to hold chemical warfare weapons or to be capable of producing them. Dr. Julian Perry Robinson pointed to the problem of assessing the exact number of possessors. It arises from different concepts used to define possessors and their political purposes. The lack of reliable governmental information, or even disinformation, also add to the difficulty of estimating the exact number of possessor states. However, the number appears to be increasing. This explains the growing concern. As more governments are actively seeking to enhance their chemical warfare capabilities, the likelihood of their employment increases too.

CW weapons are weapons of mass destruction. However, is it a legitimate excuse for building up a chemical arsenal to deter the use of other means of mass destruction such as nuclear weapons? Yet, as long as some Third World governments believe in chemical deterrence against a nuclear threat, they will expand their chemical warfare arsenal. Some governments, and those of Arab countries in particular, have expressed their unwillingness to renounce chemical weapons, unless they are linked with nuclear disarmament. Such a stance endangers the disarmament negotiations on chemical weapons. Since the superpowers, as well as other nations, will never accept such a linkage, this view would create a major stumbling block for achieving a global and comprehensive treaty.

Another, most barbaric, reason for governments wishing to acquire chemical weapons is their effectiveness against unprotected people. In the past, chemical warfare agents have been used several times as weapons of terror against political, ethnic and racial opponents. And as the many dead and injured of Halabja testify, civilians are amongst the first victims of chemical attacks.

The Gulf War has convinced many Third World governments of the military value of chemical weapons. Moreover, the unwillingness of the world community to punish violations of international law and human rights undermined efforts to curb the spread of chemical weapons. Iraq paid a very low political or economic price indeed for its extensive use of chemical warfare agents. As regards proliferation, this may well prove to be a fatal error. Professor Niezing rightly pointed out that chemical weapons have become a Third World problem. However, he also stressed the responsibility of the industrial countries for promoting proliferation.

Industrialized countries, having supplied chemical warfare agents and equipment, bear a particular responsibility for preventing further chemical weapons proliferation. Yet, their policy remains ambivalent. On the one hand, they advocate a free market for chemicals and related equipment. On the other, they are concerned with their own national security interests, that could be endangered if too many states possess such weapons. This has been clearly illustrated by the presentations of Jean Pascal Zanders and Bernard Adam.

Western states have taken several initiatives to prevent or at least hinder the spread of chemical weapons. The members of the "Australian Group" have adopted export regulations for equipment and materials that could be used for producing chemical weapons. There are also efforts to control the flow of precursors for chemical warfare agents. However, recent history has shown that technical or legal measures alone will not halt chemical weapons proliferation. The Rabta/Imhausen case illustrated the ease with which restrictions, if any, can be circumvented.

The only effective course to prevent chemical weapons proliferation may therefore be political. Chemical arms control and disarmament efforts probably offer the best prospects. International efforts to strengthen the Geneva Protocol of 1925, such as the 1989 Paris Conference, may be a first step. However, as Peter Herby underlined, this would constitute *"an effective non-proliferation regime"*, while the current non-proliferation measures are only *"efforts to buy time"*. Therefore, the quest for a global and comprehensive chemical weapons convention should be intensified. After twenty years of negotiations, the world still awaits the conclusion of such a treaty.

A chemical weapons convention would permit international inspections of suspicious sites of the signatories. Although this would not provide a hundred percent safeguard against clandestine production, it could generate sufficient confidence for many states to join the convention. More incentives will nevertheless be necessary to ensure that all important states accede to the treaty. Potential chemical weapons possessors will have to be convinced that they are better off inside a global and comprehensive chemical weapons convention than outside. This requires further elaboration of the questions of economic and technical aid and of sanctions against violators by the negotiators.

Of course, the effectiveness of an arms control treaty depends on its enforceability. However, if a party actually uses chemical warfare agents or seeks to acquire such a capability, then the effectiveness of sanctions depends largely on the resolve of the international community to enforce them. Here, history shows a very poor record. Additionally, sanctions would never prevent but only punish the use of chemical weapons. Therefore, they are in themselves a necessary but not sufficient measure.

Measures must thus encourage states not to acquire chemical weapons, even before the completion of a comprehensive treaty, as well as induce states to join the convention once concluded. A good incentive for Third World countries to adhere to international law could consist of technical and economic aid by industrial countries to assist their domestic chemical industry. Countries not suspected of possessing chemical weapons would get easy access to chemicals, materials and specialized equipment for their industrial development. If suspicions

of clandestine production of chemical weapons were to arise, the government would have to allow international inspectors to examine the production plants. Precautions, however, must be taken to ensure non-discrimination of Third World countries.

Another important aspect is the necessity to point out to potential possessors that chemical weapons are of no value to them. Here, the United States pose a serious problem. As long as they proceed with their binary programme, it will be very difficult to convince Third World governments of the limited military or political value of chemical weapons. Countries like the United States, the Soviet Union or France must set a good example to them. Disarmament rhetoric on the one hand and chemical weapons production or stockpiling on the other will hardly persuade Third World states to forsake any acquisition intentions.

Proliferation must be treated as a long-term problem of cumulative risk, which calls for an urgent solution. The increasing spread of chemical arms endangers the global implementation of the projected treaty. Time is running out fast.

The problem of proliferation must be approached with some flexibility. Technical solutions alone will not suffice. Indeed, it is virtually impossible to cut off states from the flow of chemicals and equipment. Therefore, only a political approach can stem the proliferation. A transition from agreements on export control measures to non-proliferation policies as part of a global treaty will be indispensable. The *de facto* separation between both approaches must be abandoned in favour of a new integrated policy.

Dr. Julian Perry Robinson has stressed that the only long-lasting remedy against proliferation hangs on a global treaty outlawing chemical weapons. Therefore, this convention must be concluded as soon as possible. This, however, is contingent on sufficient political will. Independent researchers in this area could advise their government on appropriate efforts. Critical public attention has to grow. I thus hope that this conference has contributed to this broader awareness.

Allow me to conclude my remarks by expressing my deep appreciation for the *Centrum voor Polemologie* of the Free University of Brussels and the *Groupe de Recherche et d'Information sur la Paix* for setting up this conference. I think, we all wish to thank all those who made this conference possible and Jean Pascal Zanders and Bernard Adam in particular for their hospitality.

About the Contributors

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