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THE CWC GENERAL PURPOSE CRITERION: HOW TO IMPLEMENT?

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A central provision of the 1993 Chemical Weapons Convention (CWC) is the general purpose criterion (GPC) which prohibits:

Toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as types and quantities are consistent with such purposes.

Important responsibility for the implementation of this GPC is placed by Article VI on each state party which:

shall adopt the necessary measures to ensure that toxic chemicals and their precursors are only developed, produced, otherwise acquired, retained, transferred, or used within its territory or in any other place under its jurisdiction or control for purposes not prohibited under this Convention.

Thus far, for quite understandable reasons, the Organization for the Prohibition of Chemical Weapons (OPCW) and the states parties have focused correctly first on the destruction of chemical weapons and of chemical weapon production facilities and then on the verification of Scheduled chemical facilities. It is only in the past year that the OPCW has begun to address verification of the regime for other chemical production facilities — those producing more than 200 tonnes [metric tons=1,000 kg] of unscheduled discrete organic chemicals or more than 30 tonnes of an unscheduled discrete organic chemical containing the elements phosphorus, sulphur or fluorine (Part IX of the Verification Annex).

Although the importance of implementing the general purpose criterion has been recognised by analysts of the CWC and the OPCW, not enough attention has yet been given to how this might be achieved. As Julian Perry Robinson has pointed out:¹

the OPCW Technical Secretariat is sighted only towards those 29 chemicals and 14 families of chemicals that are listed in the CWC Annex on Chemicals

and:

It is the National Authorities therefore, not the OPCW Technical Secretariat, that are primarily responsible for

implementing the general purpose criterion which ... is absolutely vital to the future of the treaty

It is encouraging to note that the 1999 Annual Report² by the UK National Authority includes mention of the application of the general purpose criterion and concludes that "National authorities need to consider this situation further". In this paper, an analysis is made of some current international initiatives that are addressing chemicals that are of potential risk to public health or to the environment in order to explore how these initiatives might be harnessed to help implement the CWC general purpose criterion.

Toxic Chemicals

There are useful parallels between the increasing controls being introduced to protect public health and the environment on the one hand and the non-proliferation regimes for chemical weapons on the other. An earlier article³ examined the Prior Informed Consent (PIC) procedure for the export/import of banned and severely restricted toxic chemicals. This article takes a broader look at the international, regional and national initiatives that are addressing chemical safety and the potential risks to the environment and/or to the health of the general public or workers.

There are now several organizations which are involved in activities relating to chemical safety⁴ which can be broadly grouped into international, regional, national and trade associations (see Table 1).

<i>Invited Article by Graham Pearson</i>	1–7
<i>Progress in The Hague: 31st Quarterly Review</i>	7–12
<i>Progress in Geneva: 12th Quarterly Review</i>	13–23
<i>Proceedings in South Africa: 2nd Quarterly Review</i>	23–24
<i>News Chronology May–July 2000</i>	24–45
<i>Forthcoming Events</i>	45
<i>Recent Publications</i>	46–48

In addition to the individual organizations listed there are programmes and groupings which bring together some of these organizations (see Table 2).

Some have been engaged for some decades whilst others have been established following the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in June 1992 (the Earth Summit). The six priority programme areas identified under Agenda 21,⁵ Chapter 19 *Environmentally sound management of toxic chemicals, including prevention of illegal international traffic in toxic and dangerous products* are:

- A. Expanding and accelerating the international assessment of chemical risks;
- B. Harmonization of classification and labelling of chemicals
- C. Information exchange on chemicals and chemical risks;
- D. Establishment of risk reduction programmes;
- E. Strengthening of national capabilities and capacities for management of chemicals; and

F. Prevention of illegal international traffic in toxic and dangerous products.

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 to serve as a mechanism for coordinating the efforts of intergovernmental organizations in the field of chemical safety. It provides extensive listings of ongoing activities under each of the priority programme areas.

The world growth in trade in the 1960s and 1970s led to increasing attention being given to the potential risks to the environment and to public health from chemicals. The United Nations Environment Programme has over the years had a number of initiatives in relation to chemicals. The UNEP chemicals programme has as its goal the making of the world a safer place from toxic chemicals. This is done by helping governments to take necessary global action for the sound management of chemicals, by promoting the exchange of information on chemicals, and by helping to build the capacities of countries around the world to use chemicals safely.

Whilst most chemicals are benign in the concentration levels to which we are exposed to them, others present risks to human health or to the environment. Sustainable development requires the global capacity for the sound management of chemicals. National capacities exist within most developed countries, but to a more limited extent elsewhere. One aim in building global capacity is to extend the sound management of chemicals to all countries — that is, to take steps to ensure that all countries have the information necessary, expertise, and resources to manage chemicals safely under the conditions of production or use in that country. A second aim of global capacity is ensuring that the necessary global actions are taken to address risks that are not dealt with by national actions alone.

Expanding access to information and information tools is one of the primary ways in which UNEP helps countries to develop their capabilities in assessing and managing chemical risks. A wide range of information products have been issued by UNEP Chemicals, such as the International Register of Potentially Toxic Chemicals (IRPTC), often with partner organizations such as the International Programme on Chemical Safety (IPCS) and the Organization for Economic Co-operation and Development (OECD).

Table 1 Organizations particularly active in chemical safety	
Category	Organizations
International	UN Environment Programme (UNEP) Chemicals International Labour Organisation (ILO) Food and Agriculture Organization (FAO) World Health Organization (WHO) UN International Development Organization (UNIDO) UN Institute for Training and Research (UNITAR) Organization for Economic Cooperation & Development (OECD)
Regional	European Union (EU)
National	UK Health & Safety Executive (HSE) US Environmental Protection Agency (EPA)
Trade Associations	International Council of Chemical Associations (ICCA) American Chemical Council (ACC) (previously CMA) European Chemical Industry Council (CEFIC) Japan Chemical Industry Association (JCIA)
Table 2 Programmes and Groupings	
Programme/Grouping	Organizations involved
International Programme on Chemical Safety (IPCS) established in 1980 (WHO is the executing agency of IPCS)	ILO, UNEP, WHO
Inter-Organization Programme for the Sound Management of Chemicals (IOMC) established in 1995	UNEP, ILO, FAO, WHO, UNIDO, UNITAR, OECD
Intergovernmental Forum on Chemical Safety (IFCS) established in 1994 (WHO is the administering agency)	Mechanism for cooperation between governments and providing a forum where representatives of governments meet with IGOs and NGOs
Global Information Network on Chemicals (GINC) established in 1994 (UNEP/International Register of Potentially Toxic Chemicals (IRPTC) is the coordinator)	WHO, ILO, UNEP, OECD with the support of NIHS Japan (National Institute of Health Sciences)

European Union

The European Union (EU) had identified the potential risks of chemicals as a policy priority in the 1970s and the 1980s which saw the drawing up of EINECS (European INventory of Existing Commercial Substances) which lists and defines those chemical substances which were deemed to be on the European Union market between 1 January 1971 and 18 September 1981; EINECS is an inventory containing 100,195 substances. Any new chemicals subsequently brought onto the market are included in ELINCS (European List of New Chemical Substances); this currently comprises some 4000 notifications in total, representing about 2000 substances, which have been notified since 1981 corresponding to about 400 notifications each year. The Fourth Community Action Programme on the Environment

(1987–92) underlined the need for a legislative instrument which would provide a comprehensive structure for the evaluation of the risks posed by “existing chemicals”. The development of the legal instruments in the European Union took place in parallel with the development of new initiatives by the OECD which had led to the launching of an extensive programme in 1988 on existing chemicals, an area in which several EU member states were already active.

European Union Directives require the evaluation and control of the risks to the environment and/or public health of both existing and new chemicals. The European Chemicals Bureau located in Ispra, Italy provides technical support for the development of EU chemicals policy and its website⁶ provides information on both existing and new chemicals. The Existing Substances Regulation⁷ provides for the evaluation and control of risks posed by existing chemicals in four steps:

- Step I Data collection
- Step II Priority setting
- Step III Risk assessment
- Step IV Risk reduction

The data reporting is divided into two broad categories — firstly, data on high production volume (HPV) substances produced or imported in quantities exceeding 1000 tonnes per year, and secondly, data on low production volume (LPV) substances which have been produced or imported in quantities between 10 and 1000 tonnes per year. The data required for HPV chemicals is specified as follows:

- Name and EINECS number of the substance
- Quantity of the substance produced or imported
- Information on the reasonably foreseeable uses of the substance
- Data on the physico-chemical properties of the substance
- Data on the pathways and environmental fate
- Data on the ecotoxicity of the substance
- Data on the acute and subacute toxicity of the substance
- Data on carcinogenicity, mutagenicity and/or toxicity for reproduction of the substance
- Any other indication relevant to the risk evaluation of the substance

The toxicity data requirements are comprehensive:

- 5.1 Acute toxicity
 - 5.1.1 Acute oral toxicity
 - 5.1.2 Acute inhalation toxicity
 - 5.1.3 Acute dermal toxicity
 - 5.1.4 Acute toxicity (other routes of administration)
- 5.2 Corrosiveness and irritation
 - 5.2.1 Skin irritation
 - 5.2.2 Eye irritation
- 5.3 Sensitization
- 5.4 Repeated dose toxicity
- 5.5 Genetic toxicity in vitro
- 5.6 Genetic toxicity in vivo
- 5.7 Carcinogenicity
- 5.8 Toxicity to reproduction

- 5.9 Other relevant information
- 5.10 Experience with human exposure

The EU Directive makes it clear that industrial and commercial secrecy shall not apply *inter alia* to the name of the substance, the name of the manufacturer, the summary results of the toxicological and ecotoxicological tests.

On the basis of the information submitted and on the basis of national lists of priority substances, the Commission shall regularly draw up lists of priority substances or groups of substances *requiring immediate attention because of their potential effects on man or the environment*. These lists are published by the Commission; three such lists have so far been published.⁸ The main motivations for establishing the EU working list are twofold: first as the basis for the priority lists, and second because industry is encouraged to include substances on the working list as by doing so, HEROs (High Expected Regulatory Outcome substances) can be better identified and possible NEROs (No Expected Regulatory Outcome substances) can be removed from the working list if convincing evidence is brought forward by industry.⁹

References and Notes

1. Julian Perry Robinson, “Memorandum submitted by J P Perry Robinson, University of Sussex”, Foreign Affairs Committee, Eighth Report, *Weapons of Mass Destruction*, 2 August 2000, Appendix 29, HC Paper 407 of session 1999–2000, p. 203 [also available via <http://www.parliament.uk>].
2. Department of Trade and Industry, *1999 Annual Report on the operation of The Chemical Weapons Act 1996*, DTI/Pub 4913/2k/6/00/NP, June 2000.
3. Graham S Pearson, ‘Toxic Chemicals: A Multilateral Export–Import System’, *Chemical Weapons Convention Bulletin*, no 34, December 1996, pp 1, 3–8
4. See for example, Richard Stevenson, “Responsible Care: 10 years on”, *Chemistry in Britain*, May 1999, 27–30 and Richard Stevenson, “Clearing the backlog”, *Chemistry in Britain*, July 2000, 34–38.
5. Agenda 21 is a comprehensive and far-reaching programme for sustainable development which was agreed by consensus at the Rio de Janeiro summit.
6. European Chemicals Bureau website at <http://ecb.ei.jrc.it/>
7. European Community, *Council Regulation (EEC) No 793/93 of 23 March 1993 on the evaluation and control of the risks of existing substances*, [available at http://ecb.ei.jrc.it/Directives/793_93.htm].
8. European Community, *Commission Regulation (EC) No 1179/94 of 25 May 1994 concerning the first list of priority substances as foreseen under Council Regulation (EEC) No 793/93* [available at <http://ecb.ei.jrc.it/Priority-Setting/priolist01.htm>]. European Community, *Commission Regulation (EC) No 2268/95 of 27 September 1995 concerning the second list of priority substances as foreseen under Council Regulation (EEC) No 793/93* [available at <http://ecb.ei.jrc.it/Priority-Setting/priolist02.htm>]. European Community, *Commission Regulation (EC) No 143/97 of 27 January 1997 concerning the third list of priority substances as foreseen under Council Regulation (EEC) No 793/93* [available at <http://ecb.ei.jrc.it/Priority-Setting/priolist03.htm>].
9. European Community, *Priority Setting* [available at <http://ecb.ei.jrc.it/Priority-Setting/>].

The notification schemes for new substances, manufactured or imported within the EU, were first introduced during the 1970s by individual member states. The current version is the 7th Amendment¹⁰ to Directive 67/548/EEC which requires the provision of data, with increasing detail, according to the quantity of the substance placed on the market, *viz.* 10kg, 100kg, 1000kg per year per manufacturer with further toxicological and ecotoxicological testing required at quantities exceeding 100 and 1000 tonnes per year.

Type of Notification	Annual Quantity
Level 2 (1000 tonnes)	> 1000 tonnes
Level 1 (100 tonnes)	> 100 tonnes
VIIA	> 1 tonne
VIIB	> 100kg and < 1 tonne
VIIC	> 10 kg and > 100kg

As an example of the additional data required as the quantity placed on the market increases, the toxicological data requirements are summarised below:

Toxicological testing	Type of Notification
4.1 Acute Toxicity [see note below]	
4.1.1 Administered orally	VIIC, VIIB, VIIA
4.1.2 Administered by inhalation	VIIC, VIIB, VIIA
4.1.3 Administered cutaneously	VIIA
4.1.5 Skin irritation	VIIB, VIIA
4.1.6 Eye irritation	VIIB, VIIA
4.1.7 Skin sensitization	VIIB, VIIA
4.2 Repeated dose	
4.2.1 Repeated dose toxicity	VIIA
4.3 Other effects	
4.3.1 Mutagenicity	VIIB, VIIA
4.3.2 Screening for toxicity related to reproduction	VIIA
4.3.3 Assessment for toxicokinetic behaviour	VIIA

Note:

For acute toxicity testing at VIIC or VIIB one route of administration is sufficient. Gases should be tested by inhalation. Substances other than gases should be tested by oral administration. At VIIA, substances other than gases shall be administered by at least two routes, one of which should be the oral route. The choice of the second route will depend on the nature of the substance and the likely route of human exposure. Gases and volatile liquids should be administered by the inhalation route.

For repeated dose testing, the route of administration should be the most appropriate having regard to the likely route of human exposure, the acute toxicity and the nature of the substance. In the absence of contra-indications the oral route is usually the preferred one.

As the quantity of a new substance increases through Level 1 to Level 2 so the additional toxicological data required converges with the data required for High Production Volume existing substances. The Directive also requires that the substances shall be classified as very toxic, toxic or harmful according to the following criteria:

	Very toxic	Toxic	Harmful
LD ₅₀ oral in rat, mg/kg body weight	< 25	25 to 200	200 to 2,000
LD ₅₀ dermal in rat, mg/kg body weight	< 50	50 to 400	400 to 2,000
LC ₅₀ (inhalation) rat, mg/litre/4 hours	< 0.25	0.25 to 1	1 to 5

The data provided in the new substances notification procedure is used to assign one of the following risk assessments¹¹ to the new substance:

- The substance is of no immediate concern
- The substance is of concern ... assessment revision deferred to tonnage threshold attainment.
- The substance is of concern ... assessment to be reviewed immediately
- The substance is of concern ... recommendations for risk reduction to be instigated immediately.

Organization for Economic Co-operation and Development (OECD)

The 29 nation¹² OECD in 1991 adopted a Council decision/recommendation¹³

considering that strengthened national and co-operative international efforts to investigate systematically and reduce the risks of hazardous existing chemicals will substantially alleviate threats of serious or irreversible damage to the environment and/or the health of the general public or workers ...

DECIDES that Member countries shall co-operatively investigate high production volume (HPV) chemicals in order to identify those which are potentially hazardous to the environment and/or to the health of the general public or workers.

In addition, the decision-recommendation:

DECIDES that Member countries shall establish or strengthen national programmes aimed at the reduction of risk from existing chemicals to the environment and/or the health of the general public or workers

and:

RECOMMENDS that, where appropriate, Member countries undertake concerted activities to reduce the risks of selected chemicals taking into account the entire life cycle of the chemicals. These activities could encompass both regulatory and non-regulatory measures including: the promotion of the use of cleaner products and technologies; emission inventories; product labelling; use limitations; economic incentives; and the phase-out or banning of chemicals.

The decision-recommendation also:

INVITES the Secretary-General to take the necessary steps to ensure that this work is carried out in co-operation with other international organizations and, in particular, in collaboration with the UNEP/IRPTC and the IPCS.

In order to make this task manageable, the OECD decided to concentrate on high production volume (HPV) chemicals — these are chemicals being produced or imported at levels greater than 1000 tonnes per year in at least one OECD country. The chemicals are listed in an OECD list of high

production volume chemicals.¹⁴ In addition, the OECD has agreed a minimum set of data in order to determine its potential hazard — the Screening Information Data Set (SIDS).¹⁵ This enables resources to be concentrated on carrying out further work on chemicals of concern.

Using the data from the SIDS, mainly provided by co-operation with the chemical industry, OECD Member countries prepare a SIDS Initial Assessment Report (SIAR) which highlights any potential risk and contains recommendations for further action, if any, on the chemical. The SIAR is discussed at a meeting of experts from all Member countries, from other international organizations, and from non-member countries, as nominated by the United Nations International Programme on Chemical Safety (IPCS), as well as representatives of the manufacturing companies. The SIAR, amended as appropriate, is made available world-wide by publication by the International Register of Potentially Toxic Chemicals (IRPTC) of the UNEP Chemicals programme. The current aim is to complete SIDS testing for the first tranche of 1000 chemicals on the HPV list — which contains 4,100 chemicals — by 2005.

International Council of Chemical Associations (ICCA) Global Initiative on HPV Chemicals

The global chemical industry launched a global Initiative on High Production Volume (HPV) chemicals on 3 October 1998 at the meeting of the Board of Directors of the ICCA. The goal of this initiative is to prepare harmonized, internationally agreed data sets and initial hazard assessments under the SIDS programme of the OECD. The key element of the ICCA initiative is the improvement of the current database of approximately 1,000 OECD HPV chemicals based on information gathering and where necessary additional testing by the end of 2004.

National Initiatives

Individual countries such as the United Kingdom and the United States of America have adopted particular national strategies to augment the regional and international initiatives into the evaluation of the risk assessment of chemicals. As an example of a national approach, the United Kingdom has recently published a chemical strategy¹⁶ setting out policies to avoid harm to the environment or to human health through environmental exposure to chemicals. This strategy includes the need for precautionary action for chemicals which are likely to cause serious or irreversible damage to the environment and identifies environmental persistence, tendency to bioaccumulate and toxicity as the properties that are especially important. A Stakeholder Forum to be established in mid 2000 will advise the UK government on establishing criteria for rapidly identifying those chemicals which need a risk management strategy as a matter of urgency. These criteria are to be published by December 2000 in order to trigger a structured review process and provide a fast-track procedure for high risk chemicals. The strategy states that all documents considered by the Stakeholder Forum and all records of its meetings will be made available to the public.

The United States of America in 1998 announced the Chemical Right-to-Know (RTK) Initiative¹⁷ which was the US government response to an Environmental Protection Agency (EPA) study that found that very little basic toxicity information is publicly available on most of the HPV chemicals made or used in the USA. It should be noted that the US definition of HPV chemicals is different from that used in the rest of the world as the US definition is a chemical produced in or imported into the USA in amounts of over a million pounds a year — approximately 444 tonnes. The RTK initiative aims to rapidly test chemicals — using the same tests as in the OECD SIDS — and make the data available to scientists, policy makers, industry and the public. An EPA Chemical Hazard Data Availability Study¹⁸ showed that the US produces or imports close to 3,000 chemicals at over 1 million pound a year yet there was no basic toxicity information publicly available for 43 per cent of the HPV chemicals produced in the US and that a full set of basic toxicity information is only available for 7 per cent of these chemicals. The EPA has invited industry chemical manufacturers and importers to participate in a voluntary challenge programme to provide the basic

10. European Community, *Council Directive 92/32/EEC of 30 April 1992 amending for the seventh time Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances* [available at http://europa.eu.int/eur-lex/en/lif/dat/1992/en_392L0032.html].
11. European Community, *Commission Directive 93/67/EEC of 20 July 1993 laying down the principles for assessment of the risks to man and the environment of substances notified in accordance with Council Directive 67/548/EEC* [available at http://europa.eu.int/eur-lex/en/lif/dat/1993/en_393L0067.html].
12. The 29 member states of the OECD are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.
13. OECD, *Decision-Recommendation of the Council on the Co-operative Investigation and Risk Reduction of Existing Chemicals*, C(90)163/Final, 31 January 1991 [available at <http://www.oecd.org/ehs/CA90163.HTM>].
14. The latest list is OECD, *The 1997 OECD List of High Production Volume Chemicals*, Paris, 1997 [available at <http://www.oecd.org/ehs/hpv.htm>].
15. Information on the SIDS, the SIDS Manual and the current status of SIDS are all available at <http://www.oecd.org/ehs/hpv.htm>
16. Department of the Environment, Transport and the Regions, *Sustainable production and use of chemicals — a strategic approach, The Government's Chemicals Strategy*, London, December 1999. Available at <http://www.detr.gov/environment/chemistrat/index.htm>
17. Environmental Protection Agency, *Chemical Right-to-Know Initiative*. Available at <http://www.epa.gov/chemrtk>
18. Environmental Protection Agency, *Chemical Hazard Data Availability Study*, prepared by EPA's Office of Pollution Prevention and Toxics, April 1998. Available at <http://www.epa.gov/opptintr/chemtest/hazchem.htm>

toxicity data on the HPV chemicals they produce. EPA intends that chemicals not adopted in the voluntary programme be tested under the HPV Test Rule. Some 2080 of the 2800 HPV chemicals were adopted by deadline of 1 December 1999. Detailed information on much of this programme is available on the EPA website.

Notification of new chemicals is required in the US under the TSCA (Toxic Substances Control Act) Inventory Update Rule¹⁹ which requires the reporting of basic data every four years on chemicals produced or imported in an amount exceeding 10,000 pounds (4,540 kg ~ 4.5 tonnes). Typically data is provided on approximately 9,000 organic substances each four years. However, unlike the EU notification of new substance requirements, the US requirement does not require provision of toxicity data although proposals are currently being considered²⁰ to modify the US requirement so as to require the collection of a broad-based database of use and exposure information on chemicals produced or imported in quantities exceeding 25,000 lbs.

Other Initiatives

Although particular attention has been given above to the EU, OECD and ICCA initiatives demonstrating how there is a concerted effort to obtain data both on existing chemicals and on new chemicals placed on the market, it is evident that there are several global activities which are aimed at taking forward the six priority programme areas of Agenda 21, Chapter 19 so that there is sound management of chemicals worldwide. These include:

- The International Programme on Chemical Safety (IPCS)²¹ established in 1980 with the WHO as its executing agency. The two main roles of IPCS are to:
 - to establish the scientific basis for safe use of chemicals, and
 - to strengthen national capabilities and capacities for chemical safety
 IPCS products include Health and Safety Guides, Environmental Health Criteria documents, International Chemical Safety cards.
- The Intergovernmental Forum on Chemical Safety (IFCS)²² established in 1994 which has as one of its functions the identification of priorities for cooperative action on chemical safety particularly taking into account the special needs of developing countries. IFCS has established Priorities for Action²³ for the implementation of the six priority programme areas of Agenda 21 Chapter 19.
- The Inter-Organization Programme for the Sound Management of Chemicals (IOMC)²⁴ established in 1995 provides a mechanism to coordinate the efforts of intergovernmental organizations in the assessment and management of chemicals. IOMC compiles summary reports of ongoing activities categorized by the six priority programme areas of Agenda 21 Chapter 19.
- The Global Information Network on Chemicals (GINC)²⁵ initiated in 1994 to foster generation and circulation of chemical-related information among all countries and international organizations for the

promotion of chemical safety. The pilot phase is being carried out in the Asia and Pacific region.

Recapitulation

There are already mechanisms in place within nations and regions, such as the European Union which are also reflected in other areas of the world, notably through the OECD and UNEP Chemicals programmes, to respond to the Agenda 21 Chapter 19 priority programme area to expand and accelerate the international assessment of chemical risks. These programmes ensure that data regarding the risks to public health and to the environment is available for both existing and new chemicals.

The data required increases with the quantity of chemical — using the EU situation as a model, the data requirements are as follows:

Annual Quantity	Existing Chemicals	New Chemicals
> 10 kg and < 100kg		VIIC
> 100kg and < 1 tonne		VIIB
> 1 tonne		VIIA
10 to 1000 tonnes	Low Production Volume	
> 100 tonnes		Level 1 (100 tonnes)
> 1000 tonnes	High Production Volume	Level 2 (1000 tonnes)

It is noted that the EU scheme is intended to identify HEROs (High Expected Regulatory Outcome substances) as well as possible NEROs (No Expected Regulatory Outcome substances) and that national schemes, such as that in the United Kingdom, includes the establishment of a fast-track procedure for chemicals that present a high risk to public health or to the environment.

Given that the EU is planned to expand to include many of the Central and Eastern European states and that international trade in chemicals will continue to increase, it is reasonable to expect that the EU requirements for toxicity information on both existing and new chemicals will come to be applied to an increasing extent around the world.

In addition, there is considerable emphasis throughout in making information on the risks posed by chemicals available to the public.

The CWC Requirements

The general purpose criterion within the CWC in Article II.1(a) states that “chemical weapons” include “Toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes”. As chemical weapons, by their nature, involve toxic chemicals which cause death, temporary incapacitation or permanent harm to humans or animals, there is clearly a parallel between chemicals which might be used as chemical weapons and existing or new chemicals which are highly toxic — and are the subject of the ongoing national, regional and international initiatives aimed at ensuring the sound management of chemicals and the reduction of risks to human health or the environment.

In considering how National Authorities in the states parties to the OPCW might implement the general purpose criterion, it is evident that particular attention should be focused on those chemicals that present the greatest risks to public health and that are available in quantity for purposes not prohibited under the CWC. As traditionally, it has been recognised that for a single attack using chemical weapons, a quantity of about 1 tonne is required, it follows that for a militarily significant capability, a quantity of 300 tonnes or more would be needed. Consequently it would be appropriate for National Authorities to utilize in respect of existing chemicals, the data emerging from the ongoing international HPV chemicals programme (for chemicals in the US in excess of 444 tonnes per annum and elsewhere in excess of 1000 tonnes per annum) and, and in respect of new chemicals, the data relating to new substances being placed on the market in quantities in excess of 1 tonne, in order to identify those chemicals that presented the greatest risk to public health. National Authorities could then determine what further action was appropriate to ensure that the national obligations under Article VI.2 of the CWC are being met.

The general purpose criterion also applies to newly encountered hazardous chemicals which might be judged to lack market potential and so fail to enter the reporting systems. Such chemicals may be more toxic than the traditional stockpiled chemical weapon agents — and thus smaller quantities than 300 tonnes may present a risk to the Convention. It is, however, noted that the UK Health & Safety Executive guidance²⁶ on the notification of new substances states that the regulations apply to anyone who supplies a new substance which “includes selling it, lending it to someone else, passing it on, giving it away or importing it” into the EU. Furthermore, the EU requirements for the notification of new substances do require provision of toxicity information for any new chemical produced in quantities in excess of 10 kg. Whilst it is possible that a significant military quantity (300 tonnes or more for a traditional CW agent — or a smaller quantity for a more toxic novel chemical) of a new chemical that has not been placed on the market could be produced — and thus present a risk to the CWC — it is recognized that the overall trend is increasingly to require the provision of toxicity information on chemicals being produced in a facility for health and safety reasons and for the provision of such

information on new chemicals being placed on the market in quantities in excess of 10 kg. National Authorities implementing the general purpose criterion will also need to consider other chemicals, both known and novel, which have not entered the reporting chains in the chemical safety regimes.

From the point of view of the effective implementation of the CWC, there is much to be said for the states parties individually encouraging both the implementation and extension of the international HPV chemicals programme and the EU notification of new substances.

As the general purpose criterion is a central provision in the CWC, it is important that both the fact and the method of its implementation is made generally known. It would be important for National Authorities to report to the OPCW as well as nationally both that they have taken effective action and the nature of this action to implement the general purpose convention thereby strengthening the CWC.

19. Environmental Protection Agency, *The TSCA Inventory Update Rule (IUR)* [available at <http://www.epa.gov/opptintr/iur98/>].
20. Environmental Protection Agency, *Fact Sheet: Proposed IUR Amendments*, 26 July 1999. Available at <http://www.epa.gov/opptintr/iuramend/iurafact.htm>
21. For further information on the International Programme on Chemical Safety (IPCS) see <http://www.who.int/pcs/>
22. For further information on the Intergovernmental Forum on Chemical Safety see <http://www.who.int/ifcs/ifcsinfo.htm>
23. Available at http://www.who.int/ifcs/res_2.htm
24. For further information on the Inter-Organization Programme for the Sound Management of Chemicals see <http://www.who.int/iomc>
25. For further information on the Global Information Network on Chemicals see <http://www.nihs.go.jp/GINC/other/aboutginc.htm>
26. Health & Safety Executive, *The NONS Regulations*. Available at <http://www.hse.gov.uk/hthdir/noframes/nons/nons2.htm>

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Developments in the Organization for the Prohibition of Chemical Weapons

Notable events that occurred during the period under review, from mid-June to early September 2000, include the accessions and ratifications of four additional states to the Chemical Weapons Convention (CWC) — Mozambique, the South Pacific island state of Kiribati, Jamaica and Gabon. Mozambique's instrument of accession was

deposited at the United Nations (UN) on 15 August, and the country became a member state of the OPCW as of entry into force on 14 September. It is hoped that the three other southern African states not party to the Convention (Angola, Zambia and the Democratic Republic of Congo) will follow Mozambique's example.