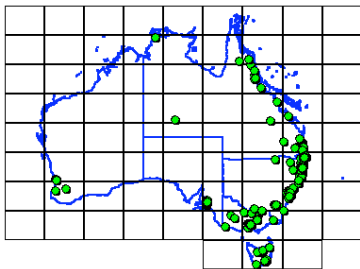


NATIONAL TOXICS NETWORK



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The Synergy of Chemical Conventions; Opportunities and Obstacles *- an NGO Perspective*

For many public interest non-government organizations (NGOs), the challenge of effective synergistic implementation of the chemical conventions is far from simply a policy issue. The growing urgency of the chemical body burden in humans and wildlife require us to support initiatives to improve chemical management and reduce the global chemical load. Chemical contamination of the environment shows no respect for territorial borders and therefore countries on their own, cannot respond effectively. The coordinated implementation of chemical multilateral environmental agreements (MEAs) can provide real opportunities for full life cycle management of chemicals at a national, regional and international level. There are opportunities for coordination and harmonization in policy, information management, technical skills, capacity building and training, as well as legislation. The synergy between the chemical MEAs is one way of building effective international and regional frameworks to minimise and prevent the impacts of toxic chemicals and hazardous waste. This paper will provide an NGO perspective on the interlinkages and synergies between the chemical conventions and the obstacles to their combined implementation. It makes recommendations in priority areas for international capacity building initiatives and provides` a South Pacific case study in legislative synergies. The paper draws on the experience of the authors¹ in capacity building initiatives and legislative development in chemical management, in Australia, the Pacific region and internationally.

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While it outlines the benefits of synergy, it will also focus on the challenges faced by countries attempting the combined implementation of a selection of international or regional chemical instruments.

Priority International Chemical Instruments

There are many chemical conventions and agreements to consider, both internationally and regionally. This paper is not intended to cover all of the conventions; instead it will focus on those, which we believe to be the most significant in providing a sound framework for chemical management. We suggest that at a minimum this should include the ratification and implementation of the following: ²

- Stockholm Convention on Persistent Organic Pollutants (2001) (“Stockholm Convention”)
- Basel Convention on Control of the Transboundary Movements of Hazardous Wastes and their disposal (1989) (“Basel Convention”)
 - Waigani Convention to Ban the Importation into Forum Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movements and Management of Hazardous Wastes within the South Pacific Region (1995) (“Waigani Convention”)
 - Bamako Convention on the on ban of the import into Africa and the control of transboundary movement and management of Hazardous Wastes within Africa 1990 (“Bamako Convention”)
- Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998) (“Rotterdam Convention”)
- International Labour Organisation Convention 170, Convention Concerning Safety in the Use of Chemicals at Work, 1990 (“ILO C 170”)
- Globally Harmonised System for Classification and Labelling of Chemicals.³ (“GHS”)

These MEAs can be grouped according to their focus and approach. The Stockholm Convention aims to eliminate persistent organic pollutants and is unique in that it prohibits the production of any new chemicals with POPs characteristics.

The second group, Basel and its regional counterparts, Waigani and Bamako deal with the avoidance and minimisation of the generation of hazardous waste and the prevention of transboundary movement of such hazardous waste, with certain exceptions. These conventions provide the platform for eliminating products or hazardous substances, which are wastes. The Rotterdam Convention provides both a mechanism for banning the import of a chemical on the grounds of human health and environmental concerns, but it is also important in providing a

² This is not to suggest that those MEAs not listed do not have an important role in chemical management but rather that acknowledging limited resources and capacity that those listed are the minimum requirements.

³ This agreement does not contain binding legal obligations, rather is a system which nations are expected to harmonise with, or in the case of nations without chemical classification and labeling systems, to use as a system.

mechanism for exchange of scientific, legal and economic information regarding the hazards, risks, toxicology and ecotoxicology of certain substances.

The third group, ILO 170 and GHS, relate mainly to the provision of information on the hazards of chemicals, both generally and in the workplace.⁴ These are important conventions because they require systematic and universal provision of information on the hazards of chemicals in commerce. They both require classification on the basis of inherent characteristic, not risk.

Although not specifically focused on chemicals, the *Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* (1998)⁵ has an important role to play in ensuring access to information and environmental democracy in chemical management.

Although the MEAs have different focuses and approaches there are many commonalities and opportunities for synergies in both their implementation and related capacity building activities. Yet there are also many impediments to this synergy. There are obstacles such as the competing sectoral interests at the national and international level, severe limitations in administrative capacity and financial and technical resources. As well there is often a lack of political and public support, and in many cases the absence of a comprehensive legislative framework. There is also a general lack of stakeholder capacity among governments, industry, agriculture, NGOs and even Convention Secretariats to work in a truly cooperative manner.

This lack of capacity for synergy among all stakeholders needs to be addressed. National governments may need practical help in the form of concise and easily understood procedural manuals for the combined MEA implementation, as well as help in developing legislative and technical capacity. Whereas, industry and NGOs require a free flow of information and effective models for participation.⁶ As well, the Convention Secretariats and UN bodies will need to improve their capacity to work together in a fully coordinated way to harmonise training initiatives, information provision and even reporting mechanisms.

A Rationale for Synergy - Why is the Combined Implementation of Chemical Conventions Important ?

Life Cycle Management of Toxic Chemicals

A prime benefit of the combined implementation of chemical MEAs is that it provides the framework for improved domestic chemical management and stronger, more effective regional frameworks. Coordinated implementation provides crucial elements for 'life cycle management'

⁴ The ILO 170, Art 5, does, however, provide for the banning or restricting of a chemical based on hazards.

⁵ United Nations Economic Commission for Europe Convention on Access to Information, Public Participation In Decision-Making & Access to Justice in Environmental Matters (1998) ILM 38 p. 51 [Aarhus Convention]

⁶ Civil society involvement in implementation is a requirement of the Stockholm Convention, participation and consultation is required with representative bodies under ILO C 170, Art 3, the Basel secretariat states that effective implementation of Basel Convention requires "actions at all levels of society" and the "Convention would benefit from a broader NGO involvement. It would encourage broader understanding and interest in the Convention from the wider society". (UNEP/CHW/OEWG/2/10)

of toxic chemicals. For example, the combined implementation of priority chemical MEAs can address most aspects of a chemical's life cycle including the:

- evaluation of hazardous chemicals to determine hazards based on inherent characteristic;
- development and application of clean production methods to avoid generation of hazardous wastes, substances and products;
- provision of information to all levels of society on hazards of chemicals;
- reduction and eventual elimination of POPs releases;
- use and production of POPs;
- international trade in toxic chemicals;
- transport of hazardous and radioactive waste;
- avoidance of the introduction of new hazardous chemicals either via unintended use or illegal dumping;
- environmentally sound remediation of waste stockpiles; and
- identification of contaminated sites.

The requirement of the MEAs for proactive information dissemination and technical capacity building can improve a country's environmentally sound management of chemicals and hazardous waste.

Effective identification of synergies and interlinkages may help ensure that the highest common denominators across the MEAs are applied. Identification of synergies will prevent action under one convention, undermining the implementation of another.⁷ An example is the use of incineration as a method of 'environmentally sound disposal' of hazardous waste. With incineration as one of the main sources of dioxin and furans, it is no longer appropriate to dispose of hazardous waste in this manner.

Consolidating Principles to Govern Chemicals Management

Another of the key values of developing interlinkages between the chemical MEAs is to consolidate important principles of environmental sustainability. Important principles like intergeneration equity and the precautionary principle were highlighted at the Rio Earth Summit in 1992 and are firmly enshrined in Agenda 21. Some of the chemical MEAs embody elements of these principles while others are somewhat lacking. Developing a synergistic approach to the implementation of chemical MEAs ensures that these vitally important principles are fully incorporated into all aspects of chemicals management. The following are those principles most relevant to chemical and waste management.

⁷ An example of undermining the obligations of one convention by another, or indeed by itself is clear in the case of the Basel Technical Guidelines on plastic waste and their disposal. The technical guidelines have no mechanism for the avoidance of waste generation, no guidance on additives such as brominated flame retardants or metals. Furthermore, the failure to treat PVC, a halogenated chlorinated plastic, separately from other plastics severely undermines the aims and obligations in the Stockholm Convention. Indeed the guidelines suggest the use of waste from the incineration of plastics which are contaminated, amongst other toxics with dioxins and furans, to be used as road base and placed in landfills. (see Basel Action Network report on 6th Conference of Parties to Basel Convention, Feb 2003)

- **Intergenerational Equity** - All babies are now born with a cocktail of chemicals in their bodies, the fetus and developing child is particularly vulnerable to the harmful effects of toxic chemicals. The principle of intergenerational equity recognizes that we have an obligation to provide a safe world and clean environment for future generations. Yet, the production of hazardous waste and hazardous substances is increasing over time and the planet is polluted with chemicals from pole to equator to pole. The proper implementation of chemical MEAs can provide a framework to leave a clean rather than a toxic legacy for our descendants.
- **Precautionary Principle justifies a preventative approach** - A number of chemical MEAs⁸ have the aim of phasing out hazardous substances, wastes and/or POPs based on inherent characteristics of the chemical. This goes beyond traditional “risk management” of hazardous chemicals, and recognizes that chemicals with certain characteristics cannot be adequately managed. This has emerged in response to the inadequacy of a risk management approach to protect human health and the environment. It exemplifies a precautionary and preventative approach. A necessary constituent part of the precautionary approach is to reverse the burden of proof as to the safety of chemicals before production and use may occur. This concept can be partially observed in ILO Convention C170, which states that employers may not use a chemical unless adequate information is provided on the hazards and safety of that chemical.⁹ The Stockholm Convention likewise prevents the production and use of new POPs chemicals.¹⁰
- **Principles of elimination and substitution** -The principle of elimination is very strong in the Stockholm Convention and is a mechanism to implement a precautionary approach to prevent the production, use and release of persistent organic pollutants POPs. The Stockholm Convention addresses both intentional and unintentional POPs, and the aim for elimination applies to both categories. Several regional agreements go further than the elimination of POPs (which includes the ability for long range transportation), and aim to phase out hazardous substances.¹¹ The Stockholm Convention recognizes the important role of the substitution principle.¹² This principle can also be stated to be consistent with clean production and indeed is a mechanism to substitute polluting processes, chemicals and products with safe alternatives. Substitution is at the heart of clean production, which aims to avoid the generation of hazardous substances in the first instance, rather than trying to manage the hazardous risk in the production, use and disposal of chemicals and products.
- **Polluter Pays** - This principle is that the responsibility for the harm to human health and the environment must lie with the producer of the hazardous substance. This is not adequately recognized in many chemical MEAs, however paragraph 19.49 Agenda 21 requires adoption of policies based on producer liability principles, as well as precautionary, anticipatory,

⁸ Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (1976) [Barcelona Convention] Bamako Convention, Stockholm Convention, and OSPAR Convention for the Protection of the Marine Environment of the North East Atlantic (1992) [OSPAR Convention].

⁹ Article 10(2) ILO Convention C170.

¹⁰ Article 3 Stockholm Convention

¹¹ Barcelona Convention, OSPAR Convention.

¹² Article 5(c) Stockholm Convention

lifecycle approaches to chemical management. The Bamako Convention imposes strict, unlimited liability as well as joint and several liability on hazardous waste generators.¹³

- **Common but differentiated responsibilities** - This is a crucial guiding principle in achieving equity and crucial in achieving the objectives of these chemical MEAs. The practice of waste dumping in the developing world by developed nation's companies is an example of gross inequity created between 'south' and 'north', which is recognized in Basel and related conventions. The ability of developing nations to protect human health and the environment from hazardous substances and wastes is limited by their need to deal with poverty and development issues. Furthermore, many of the toxic problems are created by developed nation's companies producing and selling products in developing regions where there is limited legal, administrative and infrastructure capacity to deal with hazardous products on a lifecycle basis. In this context, implementation of the MEAs must include resourcing for capacity building and clean technology transfer projects in developing nations.
- **Sovereignty and obligations to protect human health and environment** - With competing pressures from other international and regional agreements, in particular from the free trade agenda, it is very important that nations are protected in their ability to ban and severely restrict chemicals, in production, use and import/export activities.¹⁴

The synergy of principles and obligations of the chemical MEAs provide the framework for environmentally sound chemical management and give individual countries and the global community a way to address the ever increasing pollution of humans and the environment.

Impediments and Obstacles to Effective Interlinkages

While the combined implementation of the MEAs are a crucial step in addressing environmental issues and developing capacity, they do impose significant extra commitments on regulators in developing and smaller countries. Real world resource limitations imply that unless sufficient resources and capacity building assistance are made available for developing countries to adequately implement MEAs, those countries may need to assess which of the conventions they should progressively ratify, based on their own clearly defined needs.

A recent report by the United Nation's University¹⁵ found that many small island states suffered common problems when facing the challenges of MEA negotiations, ratification and implementation. They included insufficient financial and technical resources to enable them to manage and meet their responsibilities under the conventions, a lack of effective regional support for capacity building and representation of regional interests in international forums, as well as

¹³ Article 4(3)(c) Bamako Convention

¹⁴ Waigani Convention, Stockholm Convention Arts 4 & 5, Basel Convention Art 4, Rotterdam Convention, Bamako Convention Art 4, ILO Convention 170 Art 5

¹⁵ Inter-Linkages Synergies and Coordination between Multilateral Environmental Agreements
United Nations University, Tokyo, Japan July 1999

insufficient technical capacity to adequately brief negotiators and governments. The report also reflected the general resource constraints, in that the implementation of MEAs require the coordination of broad human and financial resources, as well as technical training and public information programs.

The example of lack of capacity in Africa, under the Bamako Convention has also been highlighted:

The ratification of the Bamako Convention on the ban of the import into Africa and the control of transboundary movement and management of hazardous wastes within Africa, by African countries has been very slow. Institutional and resource constraints and inadequate enforcement of legislation have hampered implementation of these conventions. In the IGAD sub region, peace and security problems have further hampered the implementation of these conventions.¹⁶

More recently, the lack of legislative frameworks has been identified as a significant obstacle to ratification in small island states.

Addressing the Obstacles

Many apparent obstacles can be addressed with improved and coordinated training and capacity building (manuals, training workshops, information provision, electronic data publication) as well as proactive information sharing and management initiatives. Through the linking of policies and activities, there is a high potential for sharing and reducing supplementary costs and decreasing the additional burdens within and between implementing agencies. While implementing a number of MEA inevitably leads to some additional costs and changed budget allocations, these can be offset through interdepartment cooperation and the identification of synergies.

By focusing on the functional aspects of clustering MEAs, (Waigani, Basel, Rotterdam and Stockholm Convention, Bamako, / ILO C170, GHS.), capacity-building activities, information management, communications and human resources as well as legislation can be effectively coordinated, providing savings in time, staff and resources. Similarly, by initiating and financing multipurpose projects, some of the costly and time-consuming duplications that emerge when departments or national governments act in isolation, can be avoided.

The differing chemical MEAs have a wide variety of obligations, however there are several common themes, relating to information provision and exchange, participation of civil society, legislative requirements, monitoring and enforcement. These themes are interlinked and often interdependent, which provides opportunities for synergies in cost savings and for capacity building activities.

¹⁶ Review and Appraisal of the Implementation of Agenda 21 in Africa, Second Meeting of the Committee on Sustainable Development Addis Ababa, Ethiopia 26-29 November 2001

Following are examples of administrative interlinkages.

Competent Authority and Focal Points:

The Convention requires that Parties identify a Competent Authority (or National Authority) and Focal Point. Efficiencies could be made if one highly trained department or agency can act as the competent authority for the chemical MEAs, with input from relevant departments as required by the Convention subject matter. However, care is needed to ensure adequate resources are directed towards that agency to ensure there is capacity for proper representation of the different focuses of the MEAs. Practical issues such as data management, technical information provision, and adequate training must be supported.

Participation of Civil Society:

Involvement of civil society and NGOs in the implementation of MEAs can greatly expand the capacity of the responsible agencies. The 2000 Bahia Declaration on Chemical Safety¹⁷ acknowledged that an informed public is vital for effective chemical management and called on all governments to; increase access to information in chemical safety, to recognise the community's right-to-know about chemicals in the environment and their right to participate meaningfully in decisions about chemical safety that affects them.

The involvement of local knowledge and expertise is often overlooked because it is often not seen as an obligation of a Convention¹⁸ or it is not customary to engage civil society. However, under the Stockholm Convention this is no longer so, as Articles 7, 9 and 10 explicitly requires engagement of the public, especially the most impacted groups, such as women and children's health organisations. An example of participation in implementation is in the development and implementation of a national hazardous waste strategy¹⁹ under the Basel Convention. Such participation assist in extending the communication of hazardous chemicals and waste issues into the community and is likely to increase political support and cooperation in implementation and enforcement.

Inter-linkages with interested civil society allow a government to call on support and information from a range of organisations to aid in the implementation of MEAs. This also helps address the challenges of translating international obligations into national and local environmental agendas that are meaningful to the general public and thereby receive political support.

Effective consultation with stakeholders from industry to civil society can:

- decrease overlapping activities and responsibilities;
- improve joint problem identification;

¹⁷ Intergovernmental Forum on Chemical Safety, *Bahia Declaration on Chemical Safety*, Third Session - Forum III Final Report of Intergovernmental Forum on Chemical Safety (IFCS/FORUM III/23w) Brazil, October 2000 at para 11/6

¹⁸ Often under domestic parliamentary or constitutional processes a government will be required to consult with the "public". However experience shows that this is often a cursory attempt at consultation, particularly if it concerns complex chemical issues, and there is not openly available information on the subject matter. To this end public information on chemical production, use, ecotoxicity, health impacts is absolutely essential. Proper engagement cannot occur without adequate information.

¹⁹ Article 4(4)(e) Basel Convention

- foster cooperative solutions;
- increase the degree of ownership of implementation measures; and
- assign clear responsibilities within existing structures.

While involvement of civil society carries with it resource implications, within a country, a cooperative interdepartmental approach to consultations on sound chemical management and the preparation or adaptation of public awareness literature should aid in reducing required resources in time. For capacity building projects to be effective they should involve all stakeholders including NGOs and civil society at the earliest opportunity.

Information Exchange Obligations:

As the complexity of problems increase, the need for information intensifies; the amount of available information proliferates, it becomes harder to get and use relevant information and as complexity, interdisciplinary, and technical sophistication of available information increases, less and less can be used by decision makers and problem solvers in its original format.²⁰

There are several different forms of information to be exchanged in accordance with chemical MEAs with a range of differing stakeholders, including listings of bans or severely restricted chemicals, identification of hazardous wastes, inventories on POPs, notification of transboundary movements of waste, notifications to Parties or transit states, volumes of hazardous waste generated, development of clean production initiatives, safety and hazard information on chemicals.²¹

These obligations create a heavy workload on agencies and departments in governments of small island and developing nations, therefore programs are needed to provide adequate data and information systems as well as developing capacity to gather data for the purposes of monitoring and enforcement of obligations. Combined training on information management as well as infrastructure assistance is crucial for ongoing information management.

Pollution Release Transfer Inventories are an important tool to assist public involvement, as well as a useful tool in monitoring levels, sources and types of toxic pollution in the environment.²² UNEP, UNIDO and UNITAR all have programmes on development of PRTR's, with UNITAR providing development tools online.

²⁰ Saracevic, T. & Wood, J.B., *Consolidation of Information, A Handbook on evaluation, restructuring & repackaging of scientific & technical information*. General Information Program & UNISIST of the UN Educational, Scientific & Cultural Organisation, Paris 1981 (PGI-81/WS/16) at 50

²¹ Rotterdam Convention, Basel/Waigani/Bamako, Stockholm Convention, ILO Convention 170, GHS.

²² Articles 9(5) & 10(5) Stockholm Convention

Publicity of Information and Confidential Business Information:

As much information should be made publicly available as possible and through easily accessible methods suitable to the country/region. The Intergovernmental Forum on Chemical Safety in November 2003 stated²³

“For all chemicals in commerce, appropriate information detailing inherent hazards should be made available to the public, and generated where needed. Essential health, safety and environmental information should be made accessible. Other information should be made accessible according to a balance of public right to know and the need to protect valid confidential business information...”

Under ILO C170, hazard and safety information is to be made available to workers, with allowable limitations for CBI.²⁴ Rotterdam parties agree to provide publicly available information on domestic regulatory actions (Article 14). There is a provision for confidential data protection with the parties agreeing to protect confidential information as mutually agreed. However, Rotterdam describes information that can not be regarded as confidential²⁵ including information on precautionary measures, hazard classification, the nature of the risks, safety advice, summary of the toxicological and ecotoxicological tests, safety data sheet and the expiry and production date of the chemical.

Article 10 of the Stockholm Convention obligates parties within their capabilities, to promote and facilitate up-to-date public information about POPs. Public information includes educational, training and public awareness programs on the health and environmental effects, the alternatives, as well as public participation programs. Article 9 sets out the kind of information that will be exchanged between Parties. Information on safety, human health and environment is explicitly not to be subject to CBI restrictions.²⁶

It is clear that information exchange and provision is a key component of effective implementation of chemical MEAs, therefore proper attention needs to be given to a countries' capacity to receive, manage and make information accessible. This is a major challenge for capacity building programs.

Legislation:

Lack of adequate legislative frameworks to implement the various obligations of the chemical MEAs is a major stumbling block to effective and speedy implementation of the chemical MEAs. These obligations range from banning or restricting chemicals, consultation, liability regimes,

²³ Intergovernmental Forum on Chemical Safety, Fourth Session, November 2003. Final Report Executive Summary, p8.

²⁴ ILO Convention 170 Article 18 (3) & (4).

²⁵ Information referred to in Annexes I & IV, including common name, chemical name, trade name & chemical abstract Service (CAS) number, hazard classification, uses, physico-chemical, toxicological and ecotoxicological properties, regulatory information, risk or hazard evaluation, hazards & risks to human health, including the health of consumers & workers or the environment, information on alternatives & their relative risks, integrated pest management strategies, industrial practices & processes, including cleaner technology)

²⁶ Art 10 Stockholm Convention

reporting, information exchange to monitoring and enforcement. When this involves several chemical MEAs the task becomes very complicated indeed.

In 1996 the Basel Secretariat published the Revised Model National Legislation on the Management of Hazardous Waste as well as on the Control of Transboundary Movements of Hazardous Waste and their Disposal. The model was to help participating countries comply with the obligations of the Basel Convention (para 4, Article 4) which request the parties to take appropriate legal, administrative and other measures to implement and enforce the provisions of the Convention.

A case study is provided further on in this paper, setting out a possible step by step approach to addressing building effective legislative frameworks for small island Pacific nations. In this case, an omnibus environmental legislation was developed that could progressively encompass the obligations under Conventions.

Responses to Administrative Synergies

A sensible response to the needs of combined implementation could see a focus on cooperation between government departments, Secretariats, national governments and NGOs in areas of:

- coordinating information management, including collating, organising and sharing data on chemicals;
- standardised data criteria and collection;
- facilitating capacity-building through training programmes;
- coordinating research;
- promoting technology transfer and clean production;
- seeking financial support for national governments;
- assisting in developing model legislation for national governments;
- assisting in developing public awareness programmes on sound chemical management;
- promoting public involvement in chemical management strategies;
- assisting national governments in meeting reporting requirements;
- facilitating meetings regarding the MEA's; and
- coordinating the policy development for chemical management regional strategies.

One pertinent example is the Memorandum of Understanding (MOU) between the United Nations Environment Program (UNEP) and South Pacific Regional Environment Program. In order to make the best use of the expertise available within the Secretariat of the Basel Convention, the MOU promotes coordination and synergies of cooperation between both Secretariats, in the fields of information and clearinghouse mechanisms, joint training material and activities, joint programs and cooperation in fundraising.

The MOU saw the adaptation of existing Basel Convention documents and tools to meet the needs of the Waigani Convention. These include model national legislation, movement document, notification documents, technical guidelines, annual reporting form, and characterisation of hazardous waste.

Capacity Building Initiatives for Synergy

While there are many requirements of a capacity building program for synergy among the MEAs, following are some priority areas that could be addressed. A capacity building program should result in a suite of transferable capacity building and information tools designed in response to clearly defined needs. These can be provided as information systems on CD and the Internet, as hardcopy training kits, procedural manuals and public awareness kits. Information management and delivery is a major component of any capacity building initiative, as are workshops and training in administrative and technical needs.

Information Delivery and Management:

An effective way to promote and support the benefits of synergy would be the cooperative establishment of an information repository to distribute user defined information, manuals, training kits and any relevant data required to facilitate synergy. This joint project would be the catalyst for the Convention Secretariats to better coordinate their programs of harmonizing chemical management to protect human health and the environment across the globe.

In 1981, the UN Educational, Scientific & Cultural Organisation recommended information consolidation as an effective response to the challenges of information management. Information consolidation refers to “the responsibility exercised by individuals, departments or organisations for evaluating and compressing relevant documents in order to provide definite user groups with reliable and concise new bodies of knowledge.”²⁷ The goal of any information system is the provision of appropriate information for decision-making,²⁸ as the value of that information is only a function of the effect it has on increasing the probability of the right decision being made.

To help ensure this, the 1980 UNISIST Meeting on Planning and Implementation of National Information Activities in Science and Technology²⁹ made a number of recommendations, which are still very relevant today. They included a more active investigation of the user’s needs and better evaluating of services and products in terms of their needs. Through this approach the providers of information can better tailor a variety of information services/products to a variety of user levels and demands.³⁰

Prior to the development of an information management system, a thorough study of users and their needs is essential to :

- determine data priorities;
- define information formats to reflect requirements;
- identify and assess working regional/social catchments;
- described and recommend data access sites;

²⁷ id at 14

²⁸ Wetherbe, J. C. *Systems Analysis & Design*, 3rd Ed. West Publishing Company, St Paul USA 1988 at 52

²⁹ Saracevic & Wood op cit at 45

³⁰ id at 46

- identify appropriate techniques for the dissemination of data and background documents;
- prepare a prototype to test information delivery;
- test the prototype's suitability at workshops; and
- make recommendations on the implementation of information systems.

The author's experience designing and developing local regional and international chemical management information systems, has shown the need to develop clear organisational aims and objectives for all information systems, for example, in this instance they could be stated as 'assisting the rapid and effective acceptance and implementation of the chemical conventions to gain the benefits of synergy.' With this, the user needs assessments can be better facilitated with the results of the studies greatly enhancing the development of the required information systems and capacity building initiatives.

Through a data consolidation process, vast amounts of information covering the MEAs, their interlinkages and chemical management in general can be assessed against the users' stated requirements. This distillation of data then needs to be cataloged and stored in the information repository - retrieval system. All documents stored in the information repository should be presented in a uniform format with standardised information retrieval procedures being crucial to the success of any information delivery system.

Logical cataloging classifications for storage folders tested by the end users must be established. The following classifications have been suggested from our preliminary assessments:

- Convention Handbooks – index – documents
- Procedural Manuals – index – documents
- Training Kits – index – documents
- Fact Sheets – index – documents
- Synergy Themes – index – documents
- Case Studies – index – documents
- Model/Template Legislations – index – documents

By providing an information system as an electronic repository, the users have an easily identifiable and accessible retrievable tool to assist them in their implementation of MEAs. Searches of the system are by following the 'menu catalog structure' or by 'key word search' or by pre defined selection of a subject by 'themes' across conventions, for example PCB transport and destruction.

Data life cycle management is also a major consideration. All data needs to be maintained, as the degree of acceptance of the information is based on data that is of high-quality and has been maintained in an up-to-date fashion. Data format refers to how the information is recorded and on what medium it can be retrieved in. The preferred format is as electronic files to be available as Adobe Acrobat.pdf format but it is also a requirement that the information can be accessed in its original paper format. There are of course many mechanisms for delivering information with a readily identifiable clearing-house as one of the preferred models.

Training and Workshops:

By providing simple but comprehensive training manuals, efficiency in management and resources can be achieved. By providing electronic manuals that can incorporate and facilitate the collection of local information, the turnover of staff and regulators and the subsequent training time can be more effectively addressed.

Training kits and workshops for chemical MEAs need to be fully coordinated and be based on a comprehensive 'user needs' assessment of the requirements of developing and transitional countries. They need to provide data that is uniform in look and feel, with training material available to all levels of government and civil society. The training manuals need to be presented both electronically and in hardcopy and be designed to provide information categories that answer the most common queries and the greatest challenges. They need to be fully cross-referenced and searchable, providing all background materials and references, as well as all required reporting forms in one central location (on CD and web based).

Through a cooperative user needs assessment of developing and transitional countries, priority themes that crossed Convention boundaries could be identified, for example, chemical analysis and monitoring, and import/export control. Themes such as these would benefit from a cooperative approach to the extensive training and capacity building required.

Risk Assessment Tools:

Risk evaluation and management is a requirement for decision making in the chemical conventions. The various MEAs require quite different levels of risk evaluation but all to some degree rely on international hazard assessments. These obligations highlight the need to ensure the capacity of all stakeholders to access the scientific and technical information involved and utilise risk assessment models and/or software. While there is no commonly accepted definition for the term 'risk',³¹ risk assessment is presented as a process whereby information on the toxic effects of a chemical is combined with information on an organism's exposure to that chemical to produce an estimate of the likelihood of any adverse outcomes. The 1998 UNITAR international expert meeting on risk management for priority chemicals emphasised that in-depth risk assessment is not a prerequisite to the implementation of risk reduction measures.³²

A cooperative project to identify and describe the various levels and approaches to risk assessment as required by the Conventions would serve an identified need. This could be supported by the distribution of public domain risk assessment software³³ with supporting manuals and training kits, to national regulators (and interested stakeholders) from developing and transitional countries.

³¹ Renn, O., "Three Decades of Risk Research: Accomplishments & New Challenges," (1998) Vol. 1 (1) *Journal of Risk Research* at 50

³² United Nations Institute for Training & Research (UNITAR) Series of Thematic Workshops on Priority Topics of National Chemicals Management Capacity Building, 'Strengthening National Capacities for Risk Management Decision-Making for Priority Chemicals', Final Report of the Observation and Conclusion of an International Expert Meeting, Geneva, 19-21 October 1998 at 13

³³ For example *RISK*ASS/STANCE* for Windows, Version 1.1, 1995; National Chemicals Inspectorate, KEMI, *RISKLINE*, Info Nordic AB Sweden, 1996; Japanese Research Center for Chemical Risk Management, "Risk Learning" 2004

Model Template Legislation:

When establishing environmental legislation afresh, an Act can be a useful instrument in identifying and promoting synergies, but adaptation of already existing and sometimes piecemeal legislation is a far greater challenge. While the development of legal frameworks and environmental legislation remains a significant obstacle to speedy ratification and implementation of the chemical MEAs, it is essential that this be addressed in a cooperative and synergistic manner. There is an urgent need to develop model templates for environmental management legislation with avenues to encompass obligations under the conventions. The issue of developing legislation is further discussed in the following case study.

A South Pacific Case Study In Legislative Synergies

One of the cornerstones of effective implementation of chemical conventions is appropriate domestic legislation. To lessen the burden on developing countries to implement chemical conventions there is considerable logic in developing legislative synergies between the various chemical conventions. This however, creates a number of challenges. Experience within Pacific Island Countries suggests that there are a number of obstacles to implementing effective environmental legislation to meet obligations under international conventions. These challenges can be seen as a number of limitations and include:

- limited administrative capacity;
- limited finance;
- limited technical support;
- limited political support; and
- limited public support and an acceptable level of transparency.³⁴

Developing comprehensive legislation to build in synergies with a number of chemical conventions can help alleviate some of these legislative limitations, however they can also compound some of the problems. Experience suggests that building a basic framework for environmental management legislation and then creating an avenue for progressive development to encompass obligations under the conventions may be the best approach.

By exploring some of the limitations we may be able to steer a path towards effective and synergist implementation of the chemical conventions:

Limited Administrative Capacity:

Experience suggests that environmental legislation with complex administrative structures based on western models do not work. In these instances, inappropriate environmental standards are weakly enforced.³⁵ Limited capacity is a significant issue for developing countries when trying to implement a number of international environmental conventions. For the purpose of efficiency,

³⁴ These are not in any order of priority

³⁵ See Edward D. McCutcheon, "Think Globally, (En)act Locally: Promoting Effective National Environmental Regulatory Infrastructure in Developing Nations", *Cornell International Law Journal*, 1998, (pp395-454), p. 443

some have suggested that simple command and control legislation is appropriate.³⁶ To overcome a too centralised government control system, some Pacific Island countries have established environment committees for each of the islands. For a developing country with one land mass, regional environment committees, may be an option.

Limited Finance:

Limited finance is a perennial problem for developing countries. In the Pacific environmental activities are often funded on a project by project basis. Once the project funding runs out so too does the management of the activity. Developing synergist legislation across a number of chemical convention may create an opportunity for developing countries to progressively seek administrative funding from each of the conventions sequentially, thus creating a certain level of continuity in funding.

Limited Technical Support:

Many developing countries lack the technical know-how and technical equipment to test for pollution and toxicity of chemicals as a back up to enforcement procedures. This severely limits the effectiveness of any legislation. Finding a legislative solution to this problem is not easy. It may be possible to set standards on qualitative rather than quantitative limits however some level of technical knowledge of chemicals is essential and the employment of new technical staff would be necessary. Another technical limitation relates to judiciary and legal institutions. In many developing countries comprehensive environmental laws are poorly enforced because trained legal personnel and judicial decision-makers lack any knowledge of the toxicity and health implications of chemical misuse. In the Pacific, some efforts have been made to run workshops for judges and other legal personnel, but more needs to be done.

Limited Political Support:

Clearly political support is necessary to enact new legislation. Politicians need to know that new environmental regulations will not harm the country economically.³⁷ In the Pacific, the high turnover of politicians makes the task of having well informed ministers that more difficult. One way of helping to facilitate political support is to establish national environmental protection councils. Such councils have the role of overseeing the administration of environmental legislation, policy and programme as well as giving advice to the minister on the importance of new legislation. A well informed environmental council may be able to persuade the minister that using a synergistic approach to chemical legislation may be preferable. In the Pacific environmental councils have helped convince ministers that taking decisive steps to manage chemicals will not necessarily create economic hardships.³⁸

³⁶ Command and control legislation is described by Eisen as statutes and regulations which impose detailed, legally enforceable limits, conditions, and affirmative requirements on industrial operations, generally controlling sources that generate pollution on an individual basis. However this definition may be more relevant in the United States rather than in a developing country. Simple command and control may be more of a limited set of standards regulated by legislation and regulations. See Joel B. Eisen, "From Stockholm to Kyoto and Back to the United States: International Environmental Law's Effect on Domestic Law", University of Richmond Law Review, January, 1999, (pp1435-1502), p. 1435

³⁷ Environment legislation in Tuvalu was rejected by Cabinet because it was perceived to be "anti-development" *personal interview* with Ursula Kaly, former environmental adviser to the Government of Tuvalu

³⁸ Personal observation

Limited Public Support:

Commensurate with the need for political support is the need to ensure that the public is happy with new legislation. Experience in the Pacific has shown that legislation will fall over at an early stage if it does not have public support.³⁹ One of the key elements of engendering public support for environmental legislation is a well-informed public which understands the importance of such legislation. This can be quite difficult with legislation covering a number of conventions. To some extent, some of the public concerns can be addressed by showing the health benefits of taking a cradle to grave approach to the management of hazardous chemical.

Local, regional and indeed, international NGOs can play a key role in public understanding of chemical conventions, and thus of legislation aimed at implementation.

Taking a Step by Step Approach:

Overcoming the limitations of administrative support, funding, technical inadequacies, politics, and lack of public support to develop comprehensive legislation that meets the obligations of a number of conventions creates some interesting challenges. To some extent these are likely to be overcome if a step by step approach is taken. Experience in the Pacific suggests that it is useful to first develop omnibus environmental legislation and then build from there. The omnibus legislation would essentially establish legislative authority for the minister and her/his department. It may also have general provisions for environmental impact assessment. From there regulations can be developed for specific issues or conventions. Using regulations rather than stand-alone legislation helps accelerate the passage of the legislation yet still maintaining an administrative link to the omnibus environmental legislation. This approach does however, create issues of transparency. Regulations may be passed with the approval of the executive of government without needing passage through parliament. The balance between expediency and transparency needs to be considered carefully.

First Step, Basel:

Developing regulations to embrace the Basel Convention (or in the case of the Pacific, the Waigani Convention.⁴⁰) may be a useful first step. The Basel (and Waigani Conventions) provides a useful legislative framework or building block for other chemical conventions to link with. Basel establishes a process for:

- developing waste management and waste minimization plans;
- instigating pollution prevention measures for hazardous wastes and other wastes;
- listing hazardous wastes and other wastes;
- establishing regulatory measures to control the export, import, transit and disposal of hazardous wastes and other wastes;
- invoking prior informed consent procedures; and
- establishing communication and notification processes for hazardous wastes and other wastes.

³⁹ An early draft of environmental legislation in the Cook Islands rejected by the public because there was insufficient consultation with the outer islands. Charles Carlson, Secretary of Outer Islands Affairs, Cook Islands, *personal interview*, 24 Sept 2003.

⁴⁰ The Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Waste and to Control the Transboundary Movement and Management of Hazardous Waste Within the South Pacific Region, 1995 (Waigani Convention).

Furthermore the Basel legislation can link in with omnibus environmental legislation by requiring the establishment of a Competent Authority and a Focal Point for waste and empowers environment officers to enforce matters related to waste.

Next Step, Rotterdam:

The next step may be to develop regulations associated with the Rotterdam Convention (though for some developing countries the Stockholm Convention may be the next appropriate step). The Rotterdam Convention broadens the scope of chemicals to be listed and regulated and elaborates prior informed consent procedures established under the Basel regulations. It builds on the communication and notification process established under Basel to include additional chemicals and products.

Then the Stockholm:

With the Stockholm Convention, waste management plans established under the Basel Convention can be further elaborated by developing a special screening process for POPs. This is particularly important in many developing countries where the destruction of waste through burning is a significant source of POPs. This is a particular problem for the burning of municipal and hospital wastes and creates interesting legislative challenges as some of the prime producers of POPs are often government institutions such as hospitals and municipal waste dumps. Proper disposal of old pesticides is another serious issue and legislation to ban certain chemicals by building on the Basel provisions, needs to be matched with effective and environmentally safe alternatives. The challenge lies in legislating to stop the production of POPs while at the same time finding environmentally sound technologies to deal with them. This creates a financial burden for developing countries with external technical an important backup to national regulatory measures. Finally, import and export provisions established under Basel and Rotterdam could be further elaborated under Stockholm.

Conclusion

Public interest and environmental NGOs view the interlinkages and synergies between the international chemical instruments as an essential component in a global approach to life cycle management of hazardous chemicals. It is a pertinent and essential response to the growing chemical load on us and the planet. No country alone can deal with the challenges of transboundary movement of POPs nor the international trade in hazardous waste. International instruments supported by the global community are the only way to address these threats. While we clearly acknowledge the obstacles to combined implementation of the chemical conventions, NGOs view it both effective and expedient to exploit the shared themes and obligations of the chemical conventions to efficiently utilise limited resources by avoiding duplication and hopefully, through a synergistic response address the growing threats of global chemical contamination.

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