

Strengthening National Awareness Raising and Education for Chemicals Management

Observations and Conclusions of an
International Expert Meeting
Geneva, Switzerland
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Final Report



IOMC

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About the Series of Thematic Workshops on Priority Topics of National Chemicals Management Capacity Building...

The Series of Thematic Workshops on Priority Topics of National Chemicals Management Capacity Building provides a forum to facilitate an exchange of experience and to identify practical steps which interested countries can take to systematically address certain chemicals management priority topics. The series addresses priorities which have been identified by countries through National Profiles and in the context of National Programmes for the Sound Management of Chemicals and which have also been highlighted through the Intergovernmental Forum on Chemical Safety (IFCS). Many of these topics (e.g. chemicals legislation) are inter-sectoral in nature and cut across the activities of various ministries and interested parties at the national level. For this reason, integrated and co-ordinated approaches, which take into consideration the perspective of all interested parties and build upon existing international experience, are considered of great importance.

The workshops are co-ordinated by UNITAR and involve interested countries, IOMC Participating Organizations, industry, public interest groups, and other interested parties. Thematic workshops on the following topics have been held:

- * Strengthening National Information Systems and Information Exchange for the Sound Management of Chemicals, September 1998
- * Strengthening National Awareness Raising and Education for Chemicals Management, October 1998
- * Developing and Strengthening National Legislation and Policies for the Sound Management of Chemicals, June 1999
- * Strengthening National Capacities for Risk Management Decision-Making for Priority Chemicals, October 1999

The reports of the workshops are meant to serve as practical inputs to country-based initiatives in the respective areas and may also highlight certain issues which may require further attention at the international level.

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Table of Contents

Executive Summary	i
1. Introduction	1
2. Overview of Key Themes	7
3. Awareness Raising and Education as Integral Parts of Sound Chemicals Management	9
4. Important Initial Steps in Developing an Effective Awareness Raising/Educational Initiative	11
5. Identifying the Relevant Target Groups and Understanding Their Needs	13
6. Ensuring Effective Communication	15
7. Measuring Success	19
8. Potential Challenges to be Faced	21
9. Strategies for Sustainability	23
10. The Potential Contribution and “Added Value” of an Integrated National Approach	25
Annex A: Summary of Presentations.....	29
Annex B: Workshop Agenda.....	38
Annex C: List of Participants.....	41

Executive Summary

The thematic workshop on *Strengthening National Awareness Raising and Education for Chemicals Management* was the second in a Series of Thematic Workshops on Priority Topics of National Chemicals Management Capacity Building and took place from 19-21 October 1998 in Geneva, Switzerland. It brought together 20 participants from national governments, international organizations, industry, labour, and public interest groups. The event was organized as a forum for bringing together representatives from the pilot countries which participated in the *UNITAR/IOMC Pilot Programme to Assist Countries in Implementing National Action Programmes for Integrated Chemicals Management* which are working in this area, as well as experts from other interested countries and organizations, in order to exchange experiences and discuss practical approaches for carrying out effective awareness raising/educational activities in the field of chemicals management.

Some of the main themes which emerged from the meeting included: improving national chemicals management and safety through awareness raising and education; planning and implementing an effective awareness raising/educational initiative; and developing a systematic and integrated approach to awareness raising and education at the country level.

The workshop outlined key principles and steps to developing and implementing an effective awareness raising and education initiative. Important issues included: clearly understanding the issue to be addressed; defining the objectives of the initiative; identifying the relevant target group(s); and understanding each target group's specific needs. Determining the type and content of the information to be provided, the way in which information will be presented, and the channels of communication to be used were also highlighted by the workshop as important issues. More specifically, emphasis was placed on tailoring the message to the needs of each target group; providing practical and useful information; ensuring two-way communication; and building upon existing experience.

The workshop also defined areas in which capacity building is needed in order to support more effective action at the country level in awareness raising and education for chemicals management and safety, and discussed strategies to meet such needs. These included: strengthening of skills and expertise in communications; building capacities among the various target groups; capacity building for the various networks and mechanisms which may be involved in the implementation of awareness raising and education initiatives; and strengthening of national information systems.

1. Introduction

1.1 Background and Problem Statement

Adequate awareness/knowledge of risks and benefits of chemicals is essential.

People in virtually all sectors of society come into contact with, use, and make decisions about chemical substances and products. For example, workers in various economic sectors handle chemicals in the course of their work; farmers decide on whether, how much, and what chemical products to apply to their crops; consumers purchase and use a variety of chemical-containing products for cleaning and home repairs, for combatting pests, and for personal health care; children may come into contact with chemicals in the home or in their neighbourhoods; truckers and other transport personnel are involved in moving chemicals from one place to another; governmental policy-makers make regulatory decisions which affect how and which chemicals are used in the country; and industrial managers make decisions regarding the production and use of chemicals as well as on measures for protecting the health and safety of their employees. Many other examples can be found of people who are in one way or another involved in chemicals management.

Adequate awareness and knowledge on the part of all of these groups in society is essential to ensure that the benefits of chemicals can be realized without incurring unacceptable risks to health and environment. Recognizing this, many different groups and organizations have undertaken activities at the local and national levels in order to raise awareness and provide education and training for chemicals management and safety. Examples of such initiatives include, *inter alia*, training activities within industry, public awareness campaigns conducted by national poison control centres, grassroots awareness raising activities of non-governmental organizations and consumer groups, and educational programmes in schools and universities.

There is often a lack of interaction and co-ordination.

While the importance of awareness raising and education has been generally recognized and many such activities are ongoing, challenges continue to exist. For example, there is often a lack of interaction and co-ordination among those who are involved in awareness raising and educational activities. This may result in duplication of efforts and inefficient use of limited resources and, in some cases, may lead to the communication of conflicting messages. Similarly, opportunities for incorporating chemicals management issues into ongoing awareness raising/educational activities may be missed due to insufficient knowledge of chemicals-related issues among organizations and groups which are actively involved in environmental/health issues at the

grassroots level. Another challenge is that in many countries chemicals management — and environmental issues more generally — may not be considered of high priority by those in position of authority, thus the political will and resources needed for effective action in this area may be lacking.

Other challenges may also exist, such as low levels of literacy and multiple languages which can make communication difficult. Logistical barriers may also exist, particularly in developing countries, such as lack of communications infrastructure (e.g. radio, television, telephone). In addition, the lack of the necessary means and “enabling environment” which would allow people to act upon the information they receive may often mean that high-risk behaviours will continue despite concerted awareness raising/educational efforts.

Countries indicated interest to pursue national action in the area of awareness raising/educational activities.

All of these challenges underscore the importance of developing a systematic and sustainable approach to awareness raising/education as an important component of national chemicals management. Following the preparation of a National Profile, many countries have recognized this and have identified awareness raising and education as a priority area for action. In the context of the *UNITAR/IOMC Pilot Programme to Assist Countries in Implementing National Action Programmes for Integrated Chemicals Management*, in which Argentina, Ghana, Indonesia, and Slovenia are participating, two countries — Ghana and Indonesia — have established Technical Task Forces to address this topic area and Slovenia has identified awareness raising, education, and training as a key cross-cutting theme in its National Action Programme. Through their National Profiles and related follow-up activities, other countries have also indicated an interest to pursue systematic national action in this area.

1.2 Organization and Aim of the Workshop

The thematic workshop on *Strengthening National Awareness Raising and Education for Chemicals Management*, which was organized in the context of the *UNITAR/IOMC Pilot Capacity Building Programme*, took place in Geneva, Switzerland from 19-21 October 1998. Twenty participants from national governments, international organizations, industry, labour, and public interest groups took part in the meeting.

The event was organized as a forum for bringing together representatives from the pilot countries which are working in this area, as well as experts from other interested countries and organizations, in order to exchange experiences and discuss practical approaches for carrying out effective awareness raising/educational activities in the

The International Policy Context for Awareness Raising and Education

At the international level, countries have agreed in various policy fora on the need for effective awareness raising and education as a critical basis for chemicals management and safety. For example:

Chapter 19 of Agenda 21 states that “the broadest possible awareness of chemical risks is a prerequisite for achieving chemical safety. The principle of the right of the community and of workers to know those risks should be recognized....” Chapter 19 also identifies “effective education programmes” as one of the eight basic elements for the sound management of chemicals.

The **Intergovernmental Forum on Chemical Safety (IFCS)**, in its “Priorities for Action”, has recommended that “continued campaigns to increase the public awareness of chemical risks and their prevention should be run.”

field of chemicals management. Among the objectives of the meeting were to identify practical steps which interested countries might take to strengthen national awareness-raising and educational programmes, building upon the experiences gained by the pilot country task forces and others, and to discuss strategies for tailoring such activities to existing national/local circumstances and the needs of individual target groups. In addition, it is foreseen that the outcomes of the meeting will serve as an important input into the development of a UNITAR/IOMC guidance document provisionally entitled *Awareness Raising and Education for Chemicals Management and Safety* which will be designed to assist interested countries in addressing awareness raising and education in a systematic and integrated way.

The workshop commenced on the first day with a series of presentations by representatives of the pilot countries, as well as by experts from other countries and organizations with relevant activities and expertise. The second and third days of the meeting were devoted primarily to round-table discussions on various aspects of the topic, drawing upon the practical experiences and expertise of participants. Participants also engaged in a working group exercise during which they worked through the types of considerations and strategies that a task force or other group would need to consider in developing an awareness raising strategy to tackle a particular chemicals-related issue or problem. Participants also provided comments on the draft *Thought Starter on Awareness Raising and Education for Chemicals Management and Safety* which has been prepared as a means to assist a country-based task force or other group in addressing key considerations when initiating national capacity building activities in this area. Toward the end of the meeting, draft summary conclusions were circulated to all participants for their review, and following the addition of specific comments and revisions, were endorsed by participants.

This report aims to capture the main themes that were discussed during the workshop and to present them in a way which is hoped to be of practical use to other interested countries and organizations. In particular, it is hoped that the report may provide some “food for thought” for countries which are interested in developing an integrated national approach to awareness raising and education in the field of chemicals management. It was recognized that training is an essential part of sound chemicals management and should be considered in connection with awareness raising and education, in particular as it is often difficult to draw a clear line between the three types of activities. Nevertheless, the focus of this report is primarily on awareness raising

and, to lesser extent, on educational initiatives, as this most accurately reflects the content of the discussions.

1.3 Country and Expert Presentations

Presentations by Country Representatives

Important to make use of existing networks and mechanisms.

Country representatives, including Dra Fawrita Cadick and Mr Sulistio Sukamto (Indonesia), Mr Sam Adu-Kumi and Mr Richard Yeboah-Asuamah (Ghana), Dr Lucija Jagodic (Slovenia), and Mr Saidu Momadou Jallow (The Gambia), shared experiences gained in addressing awareness raising, education, and training as a priority topic within the framework of a National Action Programme for Integrated Chemicals Management. Some of the key points made during these presentations included:

- the potential benefits of developing a coherent national strategy for enhancing awareness raising and educational activities in a systematic way;
- the importance of bringing together all concerned and interested parties in order (1) to facilitate an ongoing exchange of experience and expertise and (2) to identify opportunities for integrated approaches which build upon the ongoing activities of various groups;
- the need for strengthening skills and capacities in this field, and in particular the need for building up expertise in countries in the field of public communications; and
- the importance of making use of existing networks and mechanisms (e.g. schools, medical services, public interest groups) in order to reach out to, and communicate effectively with, various relevant target groups.

Presentations by Representatives of Non-Governmental and International Organizations

Issues of risk communication, risk perception and trust important to consider.

Following the country presentations, a series of presentations was made on awareness raising and educational activities aimed at addressing various specific target groups and chemicals management issues. Dr Jakob Brassel (Novartis) presented some of the experiences gained by the crop protection industry in conducting training and awareness raising activities in developing countries. Mr Harsh Jaitli (Society for Participatory Research in Asia) discussed participatory approaches to

awareness raising and education for workers, with a particular focus on unorganized sectors dominated by small-scale enterprises. Mr Ronald Macfarlane (Pesticide Action Network) discussed issues of risk communication, risk perception, and trust which are important to consider when seeking to increase awareness and encourage changes in behavior among consumers and the general public. Mr Andres Latapi (Presencia Ciudadana) discussed issues of public participation in environmental decision-making, the importance of the Right-to-Know in this regard, and the need for building capacities to ensure effective participation. Dr Jenny Pronczuk (International Programme on Chemical Safety) discussed key considerations in developing awareness raising programmes for poisoning prevention, including the need to start from a well-defined problem and the importance of tailoring the message and material to the specific needs of each target group. Professor Dr Hans de Kruijf (Utrecht University) addressed the importance of educating various target groups in order to reduce risks and foster informed decision-making at all stages of the chemical life cycle, and outlined some practical strategies for incorporating chemicals-related education into schools and universities.

More comprehensive summaries of the presentations are provided in [Annex A](#).

2. Overview of Key Themes

Several key themes emerged during the introductory presentations which were of particular importance for countries and which provided the general framework for more detailed discussions during the remainder of the event. The eight key themes which emerged can be clustered around the following headings:

Improving National Chemicals Management and Safety Through Awareness Raising and Education

Awareness raising and education are important/integral parts of improving chemicals management.

Awareness raising and education were recognized as important and integral parts of virtually all activities aimed at improving chemicals management. The benefits of such activities can be far-reaching, ranging from better protection of health and environment to other more indirect social and economic benefits. At the same time, it was noted that without certain enabling conditions in place, the likelihood that awareness raising/education will lead to actual improvements will be limited. It was also noted that awareness raising and education must be done on an on-going basis; one-time initiatives are not likely to be sufficient. Discussions during the workshop were centred around the following questions, the outcomes of which are reflected in Chapter 3 below:

- What is the relationship and contribution of awareness raising and education to other aspects of national chemicals management and to sustainable economic and social development more generally?

Planning and Implementing an Effective Awareness Raising/Educational Initiative

While awareness raising and education is a broad area within which a wide range of activities and programmes can be undertaken, certain common principles and strategies for developing effective initiatives in this area can be identified. Building upon their respective areas of expertise and their own practical experiences, participants discussed various issues related to the planning and implementation of effective awareness raising and educational activities. The main themes of the discussion were centred around the following questions, each of which is further addressed in Chapters 4-9 below:

- What are some important initial steps in developing an awareness raising/educational initiative?

- Who are some of the key target groups and what are their needs?
- What are some strategies and principles for effective communication?
- How can the effectiveness of an awareness raising/educational initiative be assessed?
- What are some potential challenges to be faced in implementing awareness raising/educational activities?
- What are some strategies for fostering sustainable programmes/initiatives in this area and for ensuring lasting results?

Developing a Systematic and Integrated Approach to Awareness Raising and Education at the Country Level

In the context of their efforts to address awareness raising and education within the framework of a multi-stakeholder National Action Programme, the pilot country task forces are charting new territory with regard to integrated and systematic national approaches in this area. Drawing on these and other relevant experiences, the group discussed the following question, the outcomes of which are summarized in Chapter 10 below:

- How can an integrated national initiative provide added value and otherwise contribute to effective and ongoing efforts to raise awareness and provide education in the field of chemicals management and safety?

3. Awareness Raising and Education as Integral Parts of Sound Chemicals Management

3.1 Linkages with Other Aspects of National Chemicals Management

Public awareness and adequate training are necessary.

There was general agreement that awareness raising and education are among the important pillars of sound chemicals management, and that critical linkages exist with other aspects of a national chemicals management programme. For example, sufficient public awareness and adequate training and education are necessary for attaining chemicals management objectives, such as preventing accidents/poisonings, reducing workplace exposures, implementing regulatory standards, fostering pollution prevention, etc. In addition, it was noted that a lack of awareness of chemicals-related issues among decision-makers and the public can make it difficult to generate the necessary political will and mobilize the resources needed for concerted national action to improve chemicals management.

Similarly, the effectiveness of awareness raising/educational activities depends in part on the existence of other key elements of the national chemicals management programme, such as a solid legislative framework, systems for accessing and disseminating relevant information on chemicals, and the existence of the capacities and resources needed by various groups to improve their chemicals management practices.

3.2 Fostering Prevention Throughout the Life Cycle

Awareness and education are considered key to a preventive approach. At each stage of the chemical life cycle, from production and processing through transportation, use, and disposal, individuals and groups make decisions and undertake activities which ultimately determine what impacts chemicals will have on the environment and/or human health. Empowering people with relevant knowledge and skills enables them to make informed decisions and prevent adverse effects and unnecessary risks from occurring.

3.3 Necessary but not Sufficient

It was recognized, however, that while education and awareness raising are necessary and important for improving chemicals management and safety, such efforts alone are not sufficient. Raising awareness among

members of a certain target group, for example, will not necessarily translate into better protection of health or environment unless the conditions are such that people are able to make a change in their own behaviour or otherwise bring about improvements. Thus there exists an important link between the existence of an “enabling environment” and the effectiveness of awareness raising/educational activities. Some of the factors which can contribute to the existence (or absence) of an enabling environment may include: economic and resource issues (e.g. whether the actions needed to reduce risks are economically feasible), power relationships (e.g. such as that between employer and employees); the level of political will; and whether the existing regulatory framework and enforcement practices are sufficient to hold people accountable for their actions.

3.4 Potential Economic and Societal Benefits of Effective Awareness Raising and Education

Generally speaking, the primary aim of awareness raising/educational activities related to chemical safety is to bring about improvements in human health and environmental protection by changing peoples’ understanding, perceptions, and actions. In addition to the anticipated benefits to health and environment, improved awareness can also lead to certain economic and social benefits. Some examples of such benefits may include:

- a better informed and “empowered” community which can participate more effectively in decision-making processes;
- cost savings and other economic benefits for industry/agriculture as a result of actions taken to reduce waste or emissions or to improve worker or product safety (e.g. savings from reduced input costs or waste disposal fees, improved markets for agricultural products with lower pesticide residue levels);
- reductions in medical care costs, environmental remediation costs and other costs to society that may arise due to mismanagement of chemicals;
- enhanced implementation of laws, regulations, and policies as a result of increased awareness within the regulated community as well as in the society as a whole; and
- general improvements in quality of life, and a sense of shared values with greater trust and integrity within the community.

4. Important Initial Steps in Developing an Effective Awareness Raising/Educational Initiative

4.1 Understanding the Issue to be Addressed

When embarking upon the development of an awareness raising/educational initiative, it is important to have an understanding of the nature of the issue to be addressed as well as any existing or potential problems. Collection and analysis of relevant information can help to ensure an “evidence-based” approach and to focus the initiative on relevant issues. Particularly for developing countries, this information gathering stage can pose a considerable challenge, as the types of data and information needed to fully understand an issue or problem, as well as its implications and underlying causes, are often not available. The involvement of affected groups and others who know the situation well becomes all the more important.

While starting from a concrete and well-defined issue or problem is important, it is not necessary – nor advisable – to wait until a problem occurs before taking action. In fact, it was stressed that in order to have a preventive approach and to fulfil the aims of the precautionary principle, potential problems or “near misses” must be considered when identifying areas in which awareness raising and/or education may be needed.

4.2 Defining the Objectives of the Initiative

Clearly defining the objectives of the initiative is another important initial step when developing an awareness raising/educational programme. Some objectives may be short-term in nature (e.g. to bring about an immediate change in attitude or action among members of the target group), while others may be medium- or long-term objectives (e.g. to improve the overall level of awareness of chemical safety issues or to reduce environmental impacts).

Useful to identify positive *interim* objectives.

While changing behaviour and thereby preventing environmental and/or health risks is often the ultimate objective, it was recognized that this may take a long time to achieve and in some cases may not be feasible due to other factors which effectively prevent individuals from undertaking the desired change. Thus, it is often useful to identify positive interim results that can be expected to occur in the short- or medium-term as more practical targets for the initiative. Closely related to this is the important (and often overlooked) step of identifying indicators of success. The purpose of an indicator is to be able to assess

whether and to what degree the initiative is achieving its objectives. Issues related to the selection of appropriate indicators and the benefits and challenges of measuring success are further discussed in Chapter 7 below.

5. Identifying the Relevant Target Groups and Understanding Their Needs

5.1 Identifying the Relevant Target Group(s)

In addition to gaining a solid understanding of the issue(s) to be addressed and setting practical objectives, another vital step in the development of an awareness raising/educational initiative is to identify the relevant target group(s). Some possible target groups include:

Identifying relevant target group(s) is a vital step for this initiative.

- members of the general public;
- workers/farmers/fisherfolk;
- employers/managers;
- entrepreneurs and owners of small businesses;
- transporters/truckers;
- distributors/sellers;
- administrators and decision-makers;
- financial decision-makers/bankers/insurers/donors;
- regulators/customs officials;
- consumers;
- parents/caretakers of home and children;
- children;
- students;
- teachers/educators;
- medical professionals;
- journalists;
- religious leaders/groups;
- etc.

In identifying relevant target groups, a distinction can often be made between the *primary target group* (i.e. the group whose behaviours/actions/beliefs the initiative is intended to address) and *intermediary target groups* (individuals/groups who may be instrumental in spreading the message to members of the primary target group, such as teachers, journalists, doctors, etc.) A distinction can also be made between people who are directly involved in using/handling chemicals and others such as policy-makers.

5.2 Understanding Each Target Group's Specific Needs

Understanding the needs and perspectives of the identified target group(s) is a critical stage in the process. In addition to practical issues such as language and literacy rates, it is important to gain a thorough understanding of the circumstances under which members of the target

Target group involvement early on helps to ensure the resulting initiative is practical and well accepted.

group operate, including the various social, economic, and cultural factors which might influence or constrain their actions and decisions. The language and symbols with which the members of the target group are comfortable and familiar are also important to understand, in order to help ensure that the message will be acceptable and meaningful to the group. Logistical factors, such as the places and means through which members of the target group are likely to obtain information, are also important. Considering ways to ensure effective two-way communication is also important.

Gaining an understanding of the needs and perspectives of the target group can be achieved through means such as surveys or focus groups, as well as by involving members of the target group directly in the process of developing the awareness raising/educational initiative. Target group involvement early on can help to ensure that the resulting initiative will be practical and well accepted. Involvement of target groups also allows for field testing of messages and refinement of awareness raising strategies. In this context, participatory approaches were particularly recommended.

6. Ensuring Effective Communication

Deciding upon the specific information to be communicated is another element of developing an awareness raising/educational initiative. In addition to determining what factual information should be conveyed, the way in which this information will be presented (e.g. tone, style, language), as well as what channels of communication are likely to be most effective, need to be carefully considered. Following is an overview of some key considerations in this context.

6.1 Tailoring the Message to the Needs of Each Target Group

Present the message(s) in a tone and style familiar to target groups.

An awareness raising initiative may often be addressed to several target groups or to one general group (e.g. the public) which can be thought of as comprising various subgroups. While the basic information to be conveyed may be similar, often the level of specificity, the tone and mode of communication, the format (e.g. oral, visual or written), and the type of language used will need to be tailored to the needs of each specific target group. Some of the factors to be taken into account include, for example, age and gender, level of education and literacy, existing perceptions and beliefs related to the problem, cultural background, occupation, relationship to the issue/problem (e.g. are members of the target group directly involved in the creation of the risk or are they indirectly affected?), etc.

Presenting the message in a tone and style with which the members of the target groups are familiar and comfortable, and in a manner which will be attractive and inviting, will help to ensure that the message will be received. Paying attention to cultural norms is also important, as evidenced by an example cited by one participant in which a series of pictorial messages were not well accepted by members of a target group because the female character was depicted wearing trousers in an area where this manner of dressing is not well accepted. All of these considerations underscore the importance of involving members of the target group in the process of developing and implementing the initiative.

6.2 Providing Information that is Practical and Useful

Information provided in an awareness raising message or in the context of an educational programme should be of practical use to the members of the target group. The aim is not simply to provide information; rather it is to empower people to make informed choices and to better protect themselves, their families and communities and the environment from

Communicating effectively with various target groups

Experiences indicate that different target groups will respond more or less positively to the message being conveyed in an awareness raising/educational initiative depending upon how well the information meets their needs and the manner in which it is presented.

For example,

*for **decision-makers***, the key is to keep the information as brief as possible, recognizing that high level officials may not have the time to read more than a page. If a decision/action is needed, this should be made immediately clear. It is also advisable to consider in what context and by whom the information is presented in order to be sure that it receives attention.

*for **workers***, it is important to keep in mind that their actions may be in part determined by factors such as the availability of the necessary safety equipment as well as concerns about productivity, job security, etc. Thus, a key focus should be on providing practical measures which can be implemented under existing circumstances.

*for **children***, the information should be simple and presented in a way that will attract attention. Cartoons, plays, and other forms of entertainment are often effective means of reaching out to young children.

Many other examples can be found of strategies and techniques for reaching out effectively to specific target groups. Existing experiences of those who are directly involved in this field can provide a wealth of information and practical ideas on how such activities can be designed to attract attention and meet the needs of various groups.

chemical-related risks. Thus, a well-designed message will include clear explanations of the issue/problem (e.g. what are the contributing factors, potential impacts) and provide practical measures which people can take to avoid unnecessary risks including possible alternatives to chemical use if appropriate. It is also often useful to highlight possible motivations for taking the desired action, such as ways in which the desired changes in behaviour may benefit members of the target group.

Recognizing that knowledge alone is often not sufficient to bring about real change, participants emphasized the need to consider what other actions might be needed in order to enable the target group to take the desired action on a sustained basis. In some cases, it may be possible to provide the necessary means as part of the initiative (e.g. providing personal protection equipment in conjunction with worker training or offering free child-proof safety caps as part of a poisoning prevention awareness raising campaign). However, in other cases, creating an “enabling environment” will require changes that are beyond the scope of the initiative or programme.

6.3 The Importance of Two-Way Communication

Selecting a trusted and credible messenger is key.

Carrying out effective awareness raising and education requires more than simply disseminating information. Ideally, it should be an interactive process of “two-way” communication which involves not only the delivery of the message, but ensures that the viewpoints, perceptions, and values of the group can be incorporated into the solutions to the problems/issues at hand. Two-way communication also enables members of the target group to ask questions, obtain clarifications, and provide their perspectives on the issue. Such interaction can also help to ensure that those responsible for implementing the awareness raising/educational activity are in touch with the emerging concerns and circumstances of the target group. Two-way communication is also essential for building up mutual trust. It was noted that for modes of communication which do not include face-to-face interaction (e.g. posters, radio spots), a contact point or other means should be provided for questions and feedback.

6.4 Selecting Appropriate Channels of Communication

There are numerous channels and tools for communication which can be used to raise awareness, ranging from local cultural activities (e.g. singing and theatre performances) to modern electronic means (e.g. television, radio, video). Careful selection of the appropriate means can help to ensure that the message will be attractive and accessible to the

target group. Finding out where members of the target group are likely to get their information and, perhaps more importantly, knowing which sources they trust are important considerations in selecting appropriate channels of communication.

Selecting a trusted and credible messenger was emphasized as an issue of vital importance. Finding the right persons and using the right networks to communicate can be key determinants of success and in some cases may be even more important than the content of the message itself. It is often useful to work through existing networks such as community organizations, workers' associations, professional societies, schools, medical services, etc., not only because this is likely to be more cost effective but also because these are familiar and trusted institutions with which people are likely to interact on an ongoing basis.

6.5 Building Upon Existing Experience

Benefit from
lessons learned
and experiences
gained by others.

Existing experiences can provide a useful and practical basis for the development of effective awareness raising/educational initiatives. In addition to saving time and resources, making use of existing approaches and materials makes it possible to benefit from the lessons learned and experiences gained by others. Thus the group recommended that an important part of the groundwork when developing an initiative or programme should be to contact neighbouring countries, other localities/regions, as well as international and/or non-governmental organizations to learn about approaches which have been used, what the positive effects and drawbacks of these have been, and to find out about existing materials/resources which could potentially be adapted and used in the local/national context.

7. Measuring Success

Important early on to establish a “baseline” against which impacts can be compared.

Assessing the effectiveness of an awareness raising campaign or educational programme can be challenging but is nevertheless an essential aspect of programme planning and implementation. The results of such an assessment can highlight achievements, indicate areas for improvement and help to ensure that resources are not being wasted on programmes which are not achieving the intended results. The assessment process can also provide useful insights into the issue, thereby bringing to light other possible factors which might need to be considered and fostering an enhanced understanding of target group concerns. In addition, being able to demonstrate success can be useful in obtaining additional resources and support.

In order to be able to measure the impact or success of the initiative once it is operational, it is important to have identified early on in the process the specific objectives of the campaign, to have established a “baseline” against which the impacts can be compared, and to have identified practical indicators of success.

7.1 Identifying Practical Indicators

A possible first step: determine whether the message has been received/understood by the target group.

Measuring the effects of an initiative, such as changes in understanding or behaviour, can be a difficult task, particularly given that the effects may be delayed or occur over a long period of time. Thus it is important to focus on practical approaches. For example, before attempting to measure actual changes in understanding and/or behaviour, a first step might be to simply determine whether the message has been received and understood by the target group. If so, the next step would be to determine whether and how the target group has acted upon this information. Specific, targeted changes in behaviour (e.g. increased number of inquiries to local authorities, changes in purchasing patterns) can provide simple indicators. Other practical indicators may include, for example, whether members of the target group continue to discuss the issue, whether any actions are taken on related matters, whether attempts are made to obtain additional information on the topic, etc. Many of these types of indicators can be observed in the short- or medium-term and thus are particularly useful.

In selecting and interpreting indicators, care must be taken to avoid misleading or paradoxical results. For example, a statistic which indicates a very low rate of accidents may simply be due to a lack of reporting rather than an improved level of safety. Similarly, an increase in the number of accident reports following an awareness raising

initiative may be a result of peoples' heightened awareness rather than an indication that safety conditions have worsened.

7.2 Strategies for Assessment

Useful to evaluate programme on a periodic or ongoing basis.

In order to apply the identified indicators, a certain amount of data and information will need to be collected. In this regard, harmonized data collection methods will help to ensure that the data are reliable and comparable, and will aid in the identification of trends over time.

Given the importance of the assessment phase, and to avoid any potential bias, it may be valuable to have an outside "third-party" conduct the evaluation. The outcomes of a third party analysis are often considered more credible and a fresh outside perspective can aid in identifying means for improvement. It may be useful to evaluate a programme on a periodic or ongoing basis, as this can aid in identifying the need for adaptation in light of changing circumstances. Assessment over time can also help determine whether the effects were short-lived or whether the initiative has had a sustainable impact. The results of the evaluation phase should not be considered as ends in themselves, but should be actively utilized in further improving the design and implementation of the initiative.

8. Potential Challenges to be Faced

In developing and carrying out activities aimed at raising awareness or providing education in the field of chemicals management, some challenges may arise. Among the possible obstacles cited by the representatives of the country-based task forces and others include:

8.1 Lack of Political Will and/or Support of Certain Stakeholder Groups

Certain actors and stakeholder groups may have interests which appear to conflict with the objectives of an awareness raising/educational initiative. In other cases, key actors may be reluctant to provide the necessary backing and support for the initiative. Often, opening up dialogue with such groups and involving them in the process can help in overcoming potential obstacles. It may also be necessary to raise the awareness of relevant decision-makers in order to convince them of the need for action in this area.

8.2 Resource-Related Constraints

Collaboration among interested parties a key highlight - can overcome potential resource-related constraints.

Obtaining the financial and human resources needed for implementing an awareness raising/educational programme can, in some cases, pose challenges, although it was noted that making use of existing mechanisms/networks and building upon relevant ongoing activities can reduce the need for significant amounts of additional resources. Participants cited several examples in which various actors/groups involved in an initiative were able to contribute valuable expertise or capacities, thereby facilitating the achievement of cost-effective results. Thus, collaboration among interested parties was highlighted as a key to overcoming potential resource-related constraints. Raising awareness and generating support among relevant decision-makers is also considered vital for obtaining the necessary financial and other resources.

8.3 Conflicting Information/Messages

Recognize the potential influence other sources of information may have on peoples' perceptions.

Awareness raising/educational activities do not occur in a vacuum. It is important to recognize the potential influence – positive and/or negative – that other sources of information may have on peoples' perceptions and opinions and their receptivity to additional information, such as that being presented in an awareness raising/educational message. Being aware of other sources of information can often make it possible to build upon and complement such information, to clarify any factual

points, and to better understand what factors might have led to the varying perceptions of the risk or problem. Ensuring transparency and good communication among all concerned parties, and simply acknowledging that there will always be differences in opinion, can help to avoid or ameliorate possible problems in this regard.

8.4 Changes in Awareness do not Equal Changes in Behaviour

Another challenge which may arise in carrying out awareness raising/education is the fact that changes in a person's knowledge or understanding do not necessarily translate into changes in their actions. There may be other factors (e.g. economic, social, cultural) which constrain or otherwise influence their decisions and actions. While it is not possible to address all of these other factors in the context of an awareness raising/educational programme, they should be recognized and, when possible, efforts should be made to create the conditions needed for people to take positive action.

Overcoming challenges which relate to broader socio-economic and political factors, and which are therefore beyond immediate control, can be particularly difficult. Nevertheless, the importance of providing information and increasing awareness should not be underestimated, as an adequate level of awareness within a society can often be a prerequisite for any type of broader, more systemic change with regard to chemicals issues and/or human health and environmental protection more generally.

9. Strategies for Sustainability

Another important consideration is how to develop awareness raising/educational programmes which are sustainable over the medium- and long-term. It was recognized that this can refer both to the sustainability of the programmes themselves as well as to their impact on the issue/problem at hand and the behaviours/actions of the members of the target group. Following are some of the ideas and strategies which were discussed in this context.

9.1 Embedding Awareness Raising and Education into Ongoing Activities and Programmes

Awareness raising and educational efforts need to be sustained over time until the knowledge and/or behaviours have become integrated into the consciousness of the society. In order to ensure that a chemicals-related awareness raising initiative or educational programme is not merely a “one-off” but will be sustained over time, it is important to consider ways of embedding such activities into ongoing programmes. Building chemical safety messages into existing public health campaigns, for example, or incorporating chemicals management into school curricula is likely to be a more sustainable approach than developing an entirely separate initiative. Giving careful consideration to how an initiative might be institutionalized or otherwise made permanent is a key to ensuring that it will have a long-term perspective.

9.2 Documenting and Replicating Success Stories

Documenting success stories and making these available to others (both nationally and internationally) so that they can be replicated and/or adapted by others was also recognized as useful. In addition to learning about successful and proven approaches, exchanging experiences can also help to avoid the replication of ineffective or costly strategies. Publicizing the results of successful initiatives can also serve as a motivation for those involved in their development and implementation.

9.3 Raising the Profile of Chemicals Management and Safety Among Decision-Makers

Recognizing that other actions (e.g. on the part of relevant government authorities, industrial managers) may be needed in order for increased awareness to translate into positive action among members of a target group, participants stressed the need to raise the profile of chemicals management issues among decision-makers within and outside of

Raising awareness among decision-makers can help generate necessary political support and resources for awareness raising/educational programmes.

government. In addition to focussing attention on chemicals-related issues, raising awareness among decision-makers can help generate the necessary political support and resources needed for awareness raising/educational programmes. Highlighting key linkages between chemicals management and sustainable economic and social development was considered to be a useful entry point for convincing decision-makers of the need to focus on chemicals management issues, which in many countries may not be viewed as of priority importance.

9.4 Fostering a Decentralized and Participatory Approach and Building Local Capacities

Fostering ownership can help contribute to sustainability.

Building relevant capacities at the local or “grassroots” level is another key aspect of building sustainability into awareness raising/educational activities. It was generally recognized that in order to effectively reach out to end users and various sectors of society, it is often most effective to implement programmes and activities in a decentralized way. In order to achieve this, people at the local level must be empowered with the necessary skills and means, e.g. through training of trainers. In addition to strengthening relevant capacities, steps should be taken to ensure that those at the local level will have continual access to relevant information and will be able to keep up to date with new developments.

A decentralized approach can also facilitate increased involvement of members of the target groups and thereby help to ensure that the initiative is meaningful and relevant to their needs. Participatory approaches, in which the members of the target groups are involved in identifying the issues to be addressed and in developing and implementing awareness raising/educational strategies, can help contribute to sustainability by fostering ownership and by ensuring that initiatives are adapted to evolving circumstances and needs.

10. The Potential Contribution and “Added Value” of an Integrated National Approach

Identify potential synergies between ongoing activities of various groups.

In light of the broad scope and the numerous potential linkages which exist in the area of chemicals management education and awareness raising, the development of an integrated national initiative can be a promising way forward for countries interested in strengthening national capacities in this area. The experiences gained to date by the pilot country task forces and others indicate the potential contribution and “added value” of developing an integrated national approach. Such an approach involves effective co-ordination among relevant actors as well as the development of strategies for addressing issues in a multi-sectoral, integrated way and effectively building upon existing capacities. In practical terms, developing an integrated national approach may entail the establishment of a national task force, network or other mechanism for involving concerned parties and organizing systematic action.

The nature and structure of an integrated national initiative should be tailored to each country’s needs and situation, including existing national administrative, legal, and political structures. For example, in some cases a suitable mechanism may exist which could serve as the basis for integrated and multi-stakeholder action, thus the establishment of a task force/network might not be necessary, whereas in other countries the creation of such mechanism may be considered essential.

Some potential contributions of an integrated initiative in this area might include: increased awareness among all concerned parties of what activities are ongoing; more systematic and transparent identification of priority needs in this area; the identification of potential synergies between ongoing activities of various groups; increased cost-effectiveness and practicality as a result of enhanced exchange of expertise, materials, and experiences; and the creation of awareness raising/educational initiatives which reflect a more preventive and holistic approach to chemicals management and safety.

10.1 Providing a Forum for Multi-Stakeholder Interaction

Interaction among the various actors currently or potentially involved in, or otherwise concerned with, chemicals-related awareness raising/education is considered a key to the development of integrated and cost-effective approaches. Such actors might include relevant governmental ministries/agencies (e.g. health, environment, labour, education) as well as parties outside of government such as industry and

Having an appropriate mechanism in place can lead to more efficient use of available resources and help avoid duplication of effort.

workers' associations, universities and professional societies, public interest groups, poison control centres, etc. An integrated national initiative in this field can help to ensure these various parties are able to learn about each others perspectives and activities on an ongoing basis and explore potential points of collaboration. While the nature of the mechanism through which such interactions might occur will differ from one country to the next, perhaps ranging from an informal network to a formally established task force or committee, having an appropriate mechanism in place can foster a cross-fertilization of ideas, lead to more efficient use of available resources (human, financial, and in-kind) and help avoid duplication of effort. While each stakeholder involved in the national initiative will need to contribute to the overall effort, it is also likely that each will be able to benefit from increased interaction with others and by having better access to existing materials, networks, and information. Emphasizing the mutual benefits of multi-stakeholder collaboration is one of the keys to generating interest and ensuring ongoing commitment to the process.

10.2 Building on Ongoing Activities and Making Use of Existing Networks/Structures

Some of the key actors involved in an integrated national initiative may be particularly well situated to contribute to effective implementation of activities in this domain. For example, a national poison control centre or a centre for occupational health and safety may have well-established programmes of direct relevance to awareness raising/education for chemicals management and safety, and therefore may provide a logical foundation for further activities in this area. Similarly, schools and universities provide a structured and systematic means for providing education and disseminating information throughout the country. Other entities such as public interest groups, extension services and medical clinics may have local counterparts and extensive networks which can be used in reaching out to end users at the grassroots level. Involving representatives of these sectors and groups can provide a means for tapping into these existing networks, mechanisms, and programmes.

10.3 Facilitating Linkages and Promoting Integrated Approaches

Given that awareness raising/education cannot be viewed in isolation from other aspects of national chemicals management and safety, addressing awareness raising/education as an integral component of broader national action can provide added value. Participants from countries which are undertaking National Action Programmes for Integrated Chemicals Management noted that linkages between

awareness raising/education and other topics such as legislation and enforcement, information collection, management, access, and dissemination, etc. can be facilitated in practice through ongoing interactions between the various task forces working on these topics. As a concrete example, in Indonesia the existing awareness raising/educational materials which have been collected will be made available to the task force on strengthening national information systems for integrated chemicals management. Linking the inventory of awareness raising/educational materials to the national information system will help to ensure that the materials will be accessible to a wider range of interested parties.

National Action Programmes are a suitable framework for integrated action.

In cases where National Action Programmes have been initiated, this should provide a suitable framework for integrated action in this area. If this type of broader initiative is not ongoing, other means might need to be found for forging relevant linkages with other aspects of chemicals management. Consideration might also need to be given to the relationship between the initiative at the national level and relevant entities and programmes at the regional/provincial level, in particular for large countries with federal structures.

In this regard it may also be important to think through what types of activities can be undertaken at the national level which would provide added value to activities at the regional/local level.

Experiences of the pilot countries and others indicate that pursuing the development of integrated approaches to chemicals-related awareness raising and education can represent an important contribution to broader national efforts to strengthen chemicals management. Approaching issues from an integrated perspective can also aid in the systematic identification of opportunities for risk reduction throughout the life cycle. While certain commonalities are likely to exist from one country to the next, the types of activities and mechanisms initiated in this regard should reflect the circumstances, priorities, and needs of each individual country.

Annex A: Summary of Presentations

Following are summaries of presentations made during the thematic workshop by country representatives and other experts.

Indonesia

Dr Fawrita Cadick of the Ministry of Health and Mr Sulistio Sukamto of the Ministry of Agriculture reported on the objectives and activities of Indonesia's Task Force on Raising Awareness on Chemical Safety. The aim of the Task Force is to foster an integrated national programme on awareness raising which addresses all stages of the chemical life cycle and involves relevant governmental and non-governmental entities with activities and interests in this area. The Task Force's approach has been to identify and focus efforts on specific priority chemical substances or products, such as those which are frequently misused or involved in poisonings. The nature of each problem is then carefully considered (i.e. is it a problem which exists due to lack of awareness/training, is it one which must be addressed through regulation/legislation, is it a matter of enforcement, or is it a combination of several of these factors?) in order to effectively target the work of the Task Force and to identify necessary links with other aspects of the national chemicals management programme.

Task Force achievements in 1998 included the compilation of an inventory of existing educational, training, and awareness raising materials and the development of a list of 100 high risk chemicals. The Task Force has also developed teaching materials for elementary schools, and working groups have been set up to develop other materials to be used in addressing priority issues. These materials will be made available for use by organizations and extension services which are in a position to conduct educational/awareness raising activities at the regional and grassroots level, thereby facilitating a decentralized approach. The Task Force has also started to identify indicators to be used in assessing the impact of specific awareness raising/educational activities.

Several challenges, which were noted by the Task Force representatives, include: difficulties in obtaining the data needed to set priorities and measure indicators of success; a need for further expertise in communications; and the large size of the country which makes it difficult to reach out to all areas and sectors. The representatives also highlighted several aspects which are considered important for successful work in this area, including: mechanisms for data

collection and access to chemicals-related information systems; a means for interaction and exchange among interested parties; a solid legal basis for chemicals management as well as effective enforcement; training of trainers/educators; and consideration of the various possible mechanisms/networks which might be used in reaching out to different groups. As a mechanism to facilitate ongoing exchange of information/experience, national priority setting and strategic development in this area over the long-term, the Task Force has recommended the establishment of a national “communication forum” involving all pertinent institutions from within and outside of government.

Ghana

Mr Sam Adu-Kumi of the Environmental Protection Agency and Mr Richard Yeboah-Asuamah of the Ministry of Education gave a summary presentation on the activities of the National Task Force on Public Education and Awareness Raising in Ghana. A general lack of education and awareness among members of the public has been identified as one of the major impediments to sound chemicals management in Ghana. In order to address this situation, the Task Force is working to develop a national strategy for awareness raising and public education and to identify human and other resources which can be mobilized to undertake action in this area.

Task Force activities have included the administration of a questionnaire to assess the existing level of public awareness and to gain a better understanding of typical problems faced and chemicals management practices currently utilized by various sectors of society. The Task Force is developing materials, such as brochures, television and radio documentaries, and school syllabi, to be used in the context of public education and awareness raising campaigns and to meet the needs of various target groups. The Task Force also plans to develop targeted project proposals to be submitted to potential donors as a means to secure necessary resources. In addition, a National Training Team is being formed to provide relevant training to individuals in existing institutions and networks in order to facilitate the provision of education and awareness raising among various sectors of society.

The Task Force representatives reported that lack of co-ordination and collaboration among various institutions was an initial obstacle, but that this situation has markedly improved as a result of increased teamwork. The Task Force representatives reported that lack of co-ordination and collaboration among various institutions was an initial obstacle, but that

this situation has markedly improved as a result of increased teamwork and interaction through the Task Force. The representatives also noted that several important linkages to other aspects of the National Action Programme for Integrated Chemicals Management have been identified. The link between awareness raising/education and other ongoing national efforts to strengthen the legislative infrastructure and to further develop a national information system for chemicals management were particularly noted.

Slovenia

Dr Lucija Jagodic of the Ministry of Health reported on several activities in Slovenia aimed at raising awareness of chemical safety issues among various target groups. Although Slovenia has not established a Task Force to focus specifically on awareness raising, education, and training, this topic has been identified as a priority to be addressed as an integral part of activities undertaken in the context of the National Action Programme.

Dr Jagodic reported on a project initiated in 1996 which aims to prevent poisonings and other accidents among children by raising awareness among parents. Pediatricians, midwives, and other relevant medical professionals are involved in disseminating brochures and discussing safety measures with parents and family members during regular clinical evaluations and home visits.

Another activity reported on by Dr Jagodic is aimed at reducing poisonings and long-term exposure among farmers by promoting the use of personal protectional equipment (PPE). In addition to targeting farmers directly, the project also seeks to encourage regional agricultural advisors to play a more active role in encouraging safe handling practices and use of PPE. Activities include lectures and articles in agricultural journals, as well as use of the mass media, such as radio programmes.

A third project which is planned will seek to inform and educate consumers and users of dangerous substances on possible risks and appropriate safety precautions. Activities will include distributing leaflets through retail shops, working with the print media, providing information to school children, and working with safety engineers at industrial facilities to promote worker safety.

Dr Jagodic noted that the experiences gained through these activities have served to highlight the need for working with various actors and groups, such as consumer organizations, schools, agricultural extension

services, and medical services. Among the challenges faced include a lack of human and financial resources; a need for increased expertise in public communications; and the difficulty of changing behaviours and attitudes among members of the target groups.

The Gambia

Mr Saidu Momadou Jallow of the Department of Agricultural Services provided an overview of educational and awareness raising initiatives in The Gambia, including the Environmental Education and Communication Programme which was established to promote environmental education and increase public awareness of environmental issues. Activities in this area are carried out in a participatory manner, with implementors and beneficiaries alike involved in planning, strategy development, and implementation.

Mr Jallow reported on some activities which have been conducted in this context, including: a National Environmental Award Scheme which encourages environmental activities by individuals and groups; the completion of a baseline survey on levels of environmental awareness; and the development of a resource centre for the collection and distribution of educational materials. Recently, a Task Force on the establishment of effective information dissemination and sensitization has been set up to address, *inter alia*, public education and awareness in the field of chemicals management.

Mr Jallow noted that currently many awareness raising and educational activities are conducted on a sectoral basis and are not well integrated. Another challenge is the lack of statistical data and other information on chemicals which are needed for setting priorities and tracking progress in this area. Mr Jallow concluded his presentation with a series of recommendations for effective education and communication efforts, including: the use of formal and informal educational programmes in reaching various age groups and sectors of society; use of the mass media; use of indigenous communication channels (e.g. theatre groups); use of local communicators to enhance receptivity to the message; strengthening of institutional infrastructure (e.g. training of field staff, communications training); assessing the needs and concerns of target groups; the use of a participatory approach in developing messages and identifying channels/types of communication which are appropriate to different target groups; and providing people with practical options and alternatives as part of the educational/awareness raising message.

Novartis

Dr Jakob Brassel of Novartis presented on experiences gained by the crop protection industry in safe use training and other related activities in developing countries, drawing upon various country-based initiatives. He emphasized the crop protection industry's shared responsibility with other sectors of society to promote and ensure sound management of agricultural chemicals, and highlighted the importance of using collaborative and participatory approaches. Achieving long-term commitment and sustainability is considered a key goal of training and capacity building projects. Dr Brassel noted that this can be facilitated through direct involvement of farmers and other concerned parties and by focussing on economic and other motivating factors which influence their decisions and actions. He also noted that involving relevant actors, such as non-governmental organizations, governments, and donor entities, can facilitate the replication of successful pilot approaches in other regions. Another important aspect of project implementation is the need to measure achievements, which entails conducting a baseline assessment at the beginning of the project and identifying and utilizing relevant indicators to measure results achieved.

Dr Brassel concluded by reiterating the crop protection industry's responsibility for, and commitment to, product stewardship throughout the product life cycle and distribution chain, and indicated the industry's willingness to explore partnerships with interested countries. He also expressed the opinion that the scope of activities in this area should not be limited to safe use training, but should be considered in a broader sense in order to contribute towards the overall goal of sustainable agriculture.

Society for Participatory Research in Asia

Mr Harsh Jaitli of the Society for Participatory Research in Asia (PRIA) discussed the work of his organization in promoting occupational health and safety within unorganized industrial sectors, which he noted are typically dominated by small-scale enterprises and are often not covered by existing laws and regulations. He noted that many large companies sub-contract their more dangerous operations to small companies in order to avoid liability. He pointed out the many realities which constrain workers' decisions and thereby pose considerable challenges to improvements in this area, such as economic pressures, fear of unemployment, low education and literacy rates, and lack of access to information concerning the chemicals they are using and the

related health risks. As an example, Mr Jaitli noted that workers who are paid on a per piece basis may be reluctant to use gloves or other safety equipment which might slow their rate of production.

Mr Jaitli explained the participatory approach which PRIA uses to raise awareness and build capacities among workers in the unorganized sectors in order to foster improvements in working conditions. Participatory research involves interaction between experts and workers, so that the real-life experiences of workers can be utilized in identifying possible health effects and developing solutions. Through workshops and other means, workers are directly involved in charting their occupational histories and collecting data on working conditions and health status of other workers in their sector. In addition to serving as a means for raising awareness and increasing knowledge among the workers, the results of this process can also serve as important inputs into policy change.

Pesticide Action Network

Mr Ronald Macfarlane of the Pesticide Action Network discussed issues of relevance to awareness raising among consumers and the general public, with a focus on risk communication which he defined as an interactive process of exchange of information and opinions among individuals, groups, and institutions. He explained the differences in the way in which people perceive risks as compared to how such risks might be defined by the experts, and noted that the most acceptable option may not always be the one with the lowest risk due to the ways in which people compare and evaluate risks (e.g. voluntary risks are more acceptable than involuntary risks, random fatalities are more acceptable than catastrophic events).

While risk communication has traditionally been a top-down exercise in which experts seek to deliver information to lay persons, Mr Macfarlane noted that effective risk communication requires a two-way dialogue based on a certain level of trust between sender and receiver. He also pointed out that while the goal of a risk communication or awareness raising campaign may be to bring about changes in behaviour among members of the target group, such behavioural changes may not necessarily follow even if an increased level of awareness and education is achieved. In light of this, Mr Macfarlane provided several examples of indicators which can be used to assess whether a campaign has had an impact, such as whether there has been an increase in consensus, whether the community or individual has acted on the issue and/or whether the increased understanding of the risk has led to informed consent. He concluded by stating that the

overall goal of risk communication is to empower people to address a problem or issue, and that while such communication is necessary it is often not sufficient due to the importance of other factors and possible constraints which individuals and groups may face.

Presencia Ciudadana

Mr Andres Latapi of Presencia Ciudadana discussed public participation in policy and decision-making and the importance of such involvement in the development and effective implementation of environmental and other social policies. In order to ensure that citizens can become meaningfully involved, he emphasized the importance of a legal basis for public participation, a key element of which is the right to access to information or the “Right-to-Know.” Together with the Right-to-Know is the obligation of citizens to make responsible use of information so that they can contribute in a constructive way to the policy process.

Mr Latapi stated that building capacities among public interest groups and the public to understand and correctly interpret environmental information is vital to effective citizen participation. At the same time, he noted that the information provided to the public may often be inappropriate or overly technical, thereby creating distrust and posing obstacles to effective public participation. Addressing these two aspects of information exchange, i.e. improving the relevance and quality of the information which is provided to the public while at the same time building the public’s capacities to make effective use of such information, can serve to foster transparency and constructive dialogue and thereby improve the situation for all concerned. To illustrate the important role of civil participation in environmental management and policy-making, Mr Latapi provided some examples of environmental issues in Mexico and highlighted various references to citizen participation and the Right-to-Know in Agenda 21 as well as in Mexican laws and initiatives.

International Programme on Chemical Safety

Dr Jenny Pronczuk of the IPCS provided some practical information and guidance based on experienced gained in working with countries in the development of toxicovigilance, education, and public awareness programmes for the prevention of toxic exposures and poisonings. She noted the importance of focussing on a specific problem and obtaining a thorough understanding of the problem from the start. Dr Pronczuk also discussed the need for different approaches depending upon the nature of the problem or issue. For example, concise and instructive “alerts”

should be used when a risk or problem is urgent, whereas more explanatory materials are typically used on a regular/on-going basis for non-emergency issues. Other programmes might be seasonal in nature, conducted at the time in the year when a certain risk or issue is of particular concern (e.g. toxic plant recognition, prevention of CO poisoning from home heating). She also discussed the benefits of targeting certain segments of the population, noting that children are a highly effective target group for poisoning prevention campaigns. To highlight the importance of selecting appropriate target groups, she cited an example of a programme which achieved very successful results in raising awareness among farmers by targeting the farmers' wives rather than addressing the farmers directly.

One of the keys to the success of an awareness raising/educational campaign emphasized by Dr Pronczuk is the attractiveness of the materials used. Materials (e.g. posters, brochures) which are dull, which use an inappropriate level of language and/or which contain too many imperatives ("don'ts") are likely to discourage the members of the target group and thus may not have the intended effect. Features of a good message are that it is clear, reassuring, friendly, and well adapted to the specific community in which it will be used.

During her presentation, Dr Pronczuk also explained the purpose of toxicovigilance, which includes active observation and evaluation of toxic risks, reporting to health authorities, and promoting actions to reduce risks, and noted the important role of poison prevention centres in carrying out educational and awareness raising activities in the field of chemical safety.

Utrecht University

Professor Dr Hans de Kruijf of Utrecht University discussed various issues regarding the incorporation of chemicals management and safety education into formal education, including schools and universities. He pointed out the roles of different actors throughout all stages of the chemical life cycle (e.g. producers, consumers, users) and noted that each group's relationship to chemical-related risks/issues as well as the degree of their responsibility should be taken into account in tailoring educational programmes to meet their needs. He also discussed the roles of various actors in society in chemicals management policy development and implementation. For example, the public may be involved in problem identification, scientists are involved in problem description, decision-makers are responsible for policy development, producers play a key role in policy implementation, and enforcement officials are responsible for monitoring and control. Educational

programmes should seek to provide each of these groups with the knowledge and skills they need in order to effectively contribute to this overall process. In particular, he stressed the importance of chemicals-related education at the university level, in light of the fact that today's university students are likely to be tomorrow's managers and decision-makers.

Professor de Kruijf provided some suggestions for fostering the development of educational programmes including: the importance of convincing teachers of the need to address chemicals-related issues in their courses; the need to provide education/training for teachers; and the value of preparing educational materials in direct collaboration with educators. Having a network of specialists and establishing linkages with professional societies also can be useful. He noted some effective educational strategies, such as incorporating chemicals issues/topics into existing courses and programmes of study and including field work and other hands-on experiences as part of the curricula. At the university level, he advocated including basic knowledge of chemicals, risks, policies, etc. into the standard curricula for all masters of science programmes as well as the creation of a masters' programme in environmental sciences, if one does not exist, with the option for students to specialize in fields of particular relevance to chemicals management, such as toxicology, water quality, human health, etc. Professor de Kruijf also noted that there are other forms of education which should not be overlooked, including post-graduate courses, refreshment courses for teachers, and courses for people already working in the field (e.g. managers, decision-makers, inspectors).

Annex B: Workshop Agenda

Monday, 19 October 1998

- 9:30** **Opening of Meeting: Introductions and Objectives**, *Mr Achim Halpaap, UNITAR*
- Session 1: Country Presentations**
- 9:45** **Raising Awareness on Issues of Chemical Safety: Perspectives and Experiences of a National Task Force in Indonesia**, *Dra Fawrita Cadick, Ministry of Health; Ir. Sulisto Sukamoto, Ministry of Agriculture*
- 10:15** **Public Education and Awareness Raising: Perspectives and Experiences of A National Task Force in Ghana**, *Mr Sam Adu-Kumi, Environmental Protection Agency; Mr Richard Yeboah-Asuamah, Ministry of Education*
- 10:45** **- Coffee Break -**
- 11:00** **Awareness Raising and Education for Chemicals Management and Safety in Slovenia**, *Dr Lucija Jagodic, Ministry of Health*
- 11:30** **Raising Awareness and Providing Information on Chemicals Management in The Gambia**, *Mr Saidu M. Jallow, Department of Agricultural Services*
- 12:00** **Open discussion**
- 12:30** **- Lunch Break -**
- Session II: Experiences Gained in Implementing Awareness Raising and Education Initiatives Addressing Various Target Groups**
- 14:00** **Experiences Gained in Conducting Participatory Awareness Raising and Education Programmes for Farmers and Workers**, *Mr Harsh Jaitli, Society for Participatory Research in Asia (PRIA), India*
- 14:20** **Experiences Gained by the Crop Protection Industry in Safe Use Training in Developing Countries**, *Dr Jakob Brassel, Novartis*
- 14:40** **Open Discussion on Awareness Raising and Education for Farmers, Workers, Small and Medium-Sized Enterprises (SMEs) and the Informal Sector**

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- 15:20** **Awareness Raising and Education for Consumers and the General Public,**
Mr Ronald Macfarlane, Pesticide Action Network (PAN), Malaysia
- 15:40** **Co-responsibility and Information as Means for Capacity Building,**
Andres Latapi, Presencia Ciudadana, Mexico
- 16:00** **- Coffee Break -**
- 16:20** **Experiences Gained Through IPCS Training Activities: Promoting**
Poisoning Prevention Through Awareness Raising, *Dr Jenny Pronczuk,*
International Programme on Chemical Safety (IPCS)
- 16:40** **Providing Education for Chemicals Management and Safety through**
Schools and Universities, *Professor H.A.M. de Kruijf, Utrecht University,*
The Netherlands
- 17:00** **Open Discussion on Awareness Raising and Education for Members of**
the General Public and Consumers
- 17:45** **Closing of Day 1**

Tuesday, 20 October 1998

- 9:30** **Session III: Developing An Effective Awareness Raising/Educational Initiative**
- Background Document: Thought Starter on Awareness Raising and Education for Chemicals Management and Safety (Draft, September 1998)*
- 12:30** **- Lunch Break -**
- 14:00** **Session III (continued): Developing An Effective Awareness Raising/Educational Initiative**
- 16:00** **Session IV: What is the Potential Contribution or “Value Added” of a National Task Force to Ongoing Awareness Raising and Educational Activities?**
- 18:00** **Closing of Day 2**

Wednesday, 21 October 1998

- 9:30 Session V: Key Themes of Relevance for Awareness Raising and Education for Chemicals Management and Safety**
- 12:00 - Lunch Break -**
- 14:00 Session VI: Review of Workshop Conclusions**
- 17:00 Closing**

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