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# WORKSHOP ON EXCHANGING INFORMATION ACROSS A CHEMICAL PRODUCT CHAIN (STOCKHOLM, SWEDEN, 15-16 JUNE 2004)

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IOMC

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***This publication was produced within the framework of the Inter-Organisation Programme for the Sound Management of Chemicals (IOMC).***

**The Inter-Organisation Programme for the Sound Management of Chemicals (IOMC) was established in 1995 following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. The participating organisations are FAO, ILO, OECD, UNEP, UNIDO, UNITAR and WHO. The World Bank and UNDP are observers. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organisations, jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment.**

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## WORKSHOP REPORT

### INTRODUCTION

Exchanging information about products throughout their life cycle including across countries (both by governments and industry) is an important element in the development of chemical product policies. However, due to antitrust, legal and cultural barriers, sharing information is not always possible.

This document reports the outcome of a Workshop that was held to improve information exchange across a chemical product chain. The Workshop is an outcome of the project "***Identifying Problems Associated with Exchanging Information across a Chemical Product Chain"*** that was endorsed at the 35th Joint Meeting of the Chemicals Committee and the Working Party on Chemicals, Pesticides and Biotechnology. **Annex I** gives a short historical background of this project and more general background for the Chemical Product Policy.

**The goal of the project** is (i) to understand more clearly the sharing of information about potential hazards, releases and risks from expected exposure to chemicals from products throughout their life cycle, (ii) to identify common problems, and (iii) to propose recommendations for improving information exchange across a chemical product chain. Work is necessary to better understand the barriers which might exist to collecting, disseminating and sharing such information.

To achieve this, surveys were conducted in individual participating countries for a "fact finding" purpose using a questionnaire. A questionnaire was developed to elucidate a selected set of product supply chains (see **Annex II**). Member countries were invited to identify a chemical or more in either an article or a preparation, and to carry out a survey on the state of information sharing in their own country about potential hazards and risks from exposure to chemicals across a supply chain.

Germany, Japan, Sweden, Korea and the United States agreed to participate in this activity and nominated a contact point. Germany selected EDTA and its use in washing and cleansing agents; Japan selected automotive products, electronic and electrical products and paint; Korea selected toluene in paint; Sweden selected chromates used for leather tanning; the US selected lead in wire cable. Sweden offered to host the Workshop that is reported here.

### OBJECTIVE AND SCOPE OF WORK

The aim of the Stockholm Workshop was:

i to present the results of the country surveys;
ii to discuss the conclusions; and
iii to propose recommendations for improving information exchange across a chemical product chain.

The expected outcomes of the workshop were

- for participants to be enlightened with new ideas for taking actions in their own country;
- for the Joint Meeting to discuss about the recommendations from the workshop and, if appropriate, to decide whether OECD should take over some of the recommended activities; and
- provide the public, non-OECD member countries and industry with a declassified report.

The final report is intended for discussion by the 37th Joint Meeting in November 2004.

**THE STOCKHOLM WORKSHOP**

The *OECD Workshop on Exchanging Information across a Chemical Product Chain* was held in Stockholm from 15th to 16th June, 2004. Twenty eight participants including government representatives from 8 countries (representing the regions of Asia, North America and Europe), representatives from the chemical industry and from the automotive industry and a representative from the European Commission attended the Workshop. Mr. Gunnar Bengtsson (Sweden) chaired the Workshop. The participant's list and agenda can be found in **Annexes III and IV**, respectively. The workshop was hosted by the Swedish Environmental Protection Agency and the Swedish Chemicals Inspectorate.

Mr. Mats Olsson, Deputy Director of the Swedish Environmental Protection Agency welcomed participants. Ms. Laurence Musset from the OECD Secretariat introduced the background and issues, and the Chairperson opened the discussions. The morning of the first day (held in plenary) was devoted to presentations of the country surveys, and comments to these from industry were given. The purpose was to lay the groundwork for breakout session discussions during the afternoon and next morning. Three presentations were also given on the second day, by representatives of the European Commission and of industry, as examples of how to improve information exchange across a chemical product chain.

The following questions served as the main catalysts for identifying common views on issues and potential solutions:

- Based on the findings in the country surveys, do you recognise additional needs for information?
- Do you have a common view on the identified needs for information?
- Based on the findings from the country surveys, do you recognise additional barriers?
- Which barriers are the most significant?
- Do you have additional ideas for improvements concerning information flow across the supply chain?
- Which proposals are considered to have the greatest potential to overcome barriers and improve the information exchange across the supply chain? For each idea it should also be considered the possibility to develop and implement the proposal, as well as the time aspects.
- What actors can influence the proposed solutions, and what tools can be used?
- What actions can be recommended for OECD, for countries and for industry?

These questions were all discussed in each of two parallel breakout groups at two breakout sessions. After the conclusion of each breakout session, participants reconvened in plenary to hear and discuss summaries of the breakout outcomes. At suitable times, the chairs and rapporteurs of the breakout groups compiled a draft meeting report. The workshop concluded with a review in plenary of the recommendations and considerations as presented below. Due to lack of time, it was agreed that the Issue Team responsible for the workshop organization would draft the full report on the basis of text agreed at the Workshop and review it.

The Chairperson and the Secretariat thanked the hosts for their large support and contributions towards the success of the meeting.

## HOW TO OVERCOME THE BARRIERS FOR INFORMATION FLOW ACROSS THE SUPPLY CHAIN?

### CONSIDERATIONS, RECOMMENDATIONS AND PROPOSALS FOR FURTHER WORK

At the first breakout session, the two breakout groups discussed *information needs in the supply chain and barriers for flow across the chain*. A large number of needs and barriers were identified, as enumerated in **Annex V**. The breakout groups agreed on some issues; when these were discussed in plenary, the Workshop agreed on the following **considerations and recommendations**:

- There is already some understanding of the needs and barriers for information flow justifying the identification of actions. There is also a wealth of information that could be better used to meet the information needs;

- Various databases are available; however, there is a need for a link to a portal system, as for instance the planned US-EU portal for chemical hazard data;

- The information needs across supply chains are extremely diverse and complex, and information may flow smoothly across some links and poorly across others;

- Supply chains are increasingly international. This increases the complexity of the chain due to *e.g.* different languages and cultures of those involved, and underlines the need for international harmonization of information requirements in order to make the information task of a manageable size for upstream enterprises;

- Information needs and pertaining barriers should be listed for specific supply chains, groups of supply chains or otherwise be broken down into manageable segments, as a basis for actions to meet the needs;

- There is room for academic research into information needs for various target groups in the supply chain, barriers to meet the needs, and methods to overcome the barriers;

- Because of the complexity of the supply chain, it is vital to prioritize the most important needs, to target the information according to the groups in need of information, and to adapt the amount and precision of the information to the needs. Frameworks for prioritization, as discussed by the Tokyo workshop, might be useful tools to develop;

- A holistic view on information on products including components is needed, implying that information on chemicals should become an integrated part of other information systems in the supply chain (*e.g.* Life Cycle Analysis, Risk Assessment, ISO 14000, Ecolabel, etc.);

- A greater involvement and correspondingly intensified communications between manufacturers and users in the awareness of use in chemical products facilitate a safe handling and disposal;

- The barriers to communication are often particularly large for small and medium-sized enterprises (SMEs). Special activities directed to SMEs are justified. The new work areas for OECD's activities on PRTR may be an example. They include a proposal to enable the

OECD to support its member countries to obtain an inclusion of better quality data from SMEs in national PRTR.

- The incentives to provide information need to be clarified and strengthened, as well the dis-incentives of not providing it; and

- In considering approaches to improve the flow of information, it is important to recognize the right to protect proprietary information.

The breakout groups also discussed ideas and *proposals to overcome the information barriers*. An inventory of such ideas and proposals is given in **Annex VI.** The two breakout groups agreed on some proposals. When they were discussed in plenary, the Workshop agreed on the following **additional recommendations*:***

- The UN Globally Harmonized System for Classification and Labelling of Chemicals (GHS) should be implemented by countries;

- The current OECD work to develop Emission Scenario Documents for chemical products could be strengthened by considering the outcome of the CPP work; and

- Countries and industry should continue developing tools specifically for SMEs enabling them to interpret evaluate and use information, for example enabling them to make GHS classification and share information.

Furthermore, the Workshop discussed the utility of establishing and communicating lists of prioritised substances for selected product groups. There was concern, however, that such information might be uncritically used without proper account of exposures and thus lead to unnecessarily restrictive decisions. The workshop did not have time to work out a balanced proposal on the issue.

In addition to general recommendations, the Workshop also prioritized and agreed on three **proposals for further work** to overcome information barriers related to the following items:

- **Identification of various information needs for various actors along supply chains (Table 1);**

- **SMEs support to overcome the barriers for information flow across the supply chain (Table 2); and**

- **(Material) Safety Data Sheets as a tool to overcome the barriers for information flow across the supply chain (Table 3).**

The description, objective and target of these activities are given in **Tables 1, 2 and 3** below. Due to timing, the Workshop agreed that the proposals by the Issue Team would be further elaborated and presented to the Joint Meeting, in addition to the Workshop Report.

**Table 1**

| **Activity title** | *Identification of various information needs for various actors along supply chains.* |
|---|---|
| Already ongoing or planned at the international level? Yes/no | Similar activities are ongoing in some countries. Within the European Commission there have been several studies in connection with the REACH program. |
| Objective (link to the barrier) | Gather further specific and detailed information to support the further elaboration of recommendations for removing information barriers in the supply chains, taking the needs of SMEs into specific consideration. One aim is to support the targeting and digestion of information for different actors. |
| Description | Scoping-study and following surveys based on performed country case studies and other available information sources, in order to identify different information contexts pertaining to different actors (or actants). This activity needs to be more detailed and broader in scope than the already performed country studies and also include links to actors (including authorities) along the supply chain. In particular the studies need to regard SMEs and their links to other actors (including authorities). The studies need to be focused on chemicals and identification of information barriers but also to follow the supply chain of different products taking into account other information systems and reporting. |
| Target (industry, country, OECD, other) | OECD, countries |
| Timing to first report from activity (1, 3, 10 years) | 1 year for scoping study (including suggestions for further actions), 3 years for the following surveys. |
| Resource implication | Yes |
| Priority (H, M, L) | High |

**Table 2**

| **Activity title** | *SMEs support to overcome the barriers for information flow across the supply chain* |
|---|---|
| Already ongoing or planned at the international level? Yes/no | No |
| Objective (link to the barrier) | Barriers are large for SMEs |
| Description | OECD should encourage the organisation of a workshop involving SMEs to explore ways of overcoming their barriers to information exchange. |
| Target (industry, country, OECD, other) | OECD |
| Timing to first report from activity (1, 3, 10 years) | 1 year |
| Resource implication | Yes |
| Priority (H, M, L) | High |

**Table 3**

| **Activity title** | *Safety Data Sheets (SDS) as a tool to overcome the barriers for information flow across the supply chain* |
|---|---|
| Already ongoing or planned at the international level<br>? Yes/no | No, but<br>1)Distribution<br>Good examples exist: SDS are being shared in France (300 suppliers/distributors and downstream users such as the automotive industry)<br>2) Data Format Standardisation<br>XML-formats have been defined by CIDX (Chemical Industry Data eXchange) for e-business transactions, which could be extended to SDS data. IUCLID is also addressing formats.<br>3). The contents of SDS are being harmonised in GHS.<br>GHS and IUCLID 5 should be awaited before the activity b) below is started |
| Objective (link to the barrier) | Facilitating the access to and distribution of chemical information on substances and preparations in a complex supply chain. |
| Description | IOMC should set up an issue team to make a survey of this area.<br><br>a) Use of an international SDS database on the internet<br><br>b) Data transfer and data input, including also confidential data<br>- International agreements on SDS<br>- Standardisation of data format<br>- Data security issues<br>- Business to Business (data transfer from one system to another)<br>- Easy data input by SMEs<br><br>c) Protocols for the creation SDS/Labels<br><br>The survey could be seen as a first step to give the impulse and be evaluated before further steps are taken |
| Target (industry, country, IOMC, other) | IOMC could be the facilitator and take the lead.<br><br>Country/Region: A promoter is needed as well as an application service provider ready to share a common protocol.<br><br>Industry: voluntary to join, each company decides |

## ANNEX I

## BACKGROUND

At the 31st Joint Meeting in November 2000 a document was introduced to facilitate discussions of possible opportunities for further integration of work within the Industrial Chemicals Programme. One suggestion in this paper was to examine policies for managing the risks posed by chemical substances and products through their life cycle and to consider whether such activities could be integrated into the OECD chemicals work. Delegates expressed their interest in the concept of Integrated Product Policy (IPP) and related work on tracking chemical products through commerce, as they felt that these concepts aim at addressing a current gap in knowledge. This is also in line with the conclusions in the OECD Report *Environmental Outlook for the Chemicals Industry.*

The OECD Report *Environmental Outlook for the Chemicals Industry* was published in 2001. This report presents "New approaches for the future" in chapter 8 "Conclusions: Achievements and future challenges". It was recognised that one group of main issues that will deserve more attention in the future is to create a holistic approach to chemical safety that not only addresses the risks to man and the environment resulting of the production of the individual substances, but also the risks posed by products made from these substances (page 106). Holistic approaches to chemicals management attempt to prevent injury to human health and damage to the environment throughout all stages of a chemical product's life cycle. Such life cycle management approaches require that sufficient information on the potential risks at each stage of a product's life be made available to each of the parties involved for follow-up (page 81).

At the 32nd Joint Meeting in June 2001 a paper was presented on issues associated with the IPP within the context of chemicals management and considerations for the future work in this area within OECD. As an outcome of these discussions it was decided to organise a workshop on these issues. The Workshop on a Chemical Product Policy was held in Tokyo in September 2002. The objective was to explore issues and develop a work plan of possible activities that the OECD could carry out to help governments and others to better evaluate and manage releases of chemicals throughout their life cycle.

One particular area of work identified by the Workshop was information sharing on chemical products. The sharing of information about potential hazards, releases and risks from expected exposure to chemical products throughout their lifecycle, including across national borders, is expected to be an important aspect of Chemical Product Policy. Thus, this is an important element in the development of Chemical Product Policy as well as in the overall management of risk. However, the Workshop acknowledged that there are a variety of barriers posed by confidentiality concerns, antitrust and other legal provisions and cultural barriers that curtail efforts to collect, to disseminate and share information among stakeholders. Overlapping or inconsistent legislation and regulations may pose additional barriers to the efficient exchange of information on, and management of, chemical products throughout the supply chain, and thus it may be worthwhile to identify such barriers. Therefore, country surveys were considered to identify barriers that hinder the exchange of information. Costs incurred by governments and industry due to such barriers and options for barrier removal will be also explored.

At the 34th Joint Meeting, Japan expressed that it was willing to work as the Lead Country to develop a draft work plan for this project and Sweden expressed its willingness to support Japan. An Issue Team was organized and the work for the development of the draft work programme was undertaken. A draft work plan was submitted to and endorsed by the 35th Joint Meeting.

## ANNEX II

## POLICY, METHODOLOGY AND QUESTIONNAIRE DEVELOPED FOR THE COUNTRY SURVEYS CONDUCTED IN PREPARATION FOR THE STOCKHOLM WORKSHOP

The purpose of the country survey shall be "fact finding" on the state of "information sharing on chemical products," including factors that both inhibit and promote information sharing. The result will be an issue paper/analytical study that describes the problems associated with gathering information on, and exchanging information within, a chemical product chain will be prepared. The study will also suggest possible approaches for overcoming these problems.

In the survey, each participating country will be requested to carry out its own survey on information sharing. The survey of individual countries will be made in a flexible manner under the condition that it is aimed at a fact finding purpose. For transparency, sources of information should be identified (even generally) in the response. A questionnaire will be used to obtain information to clarify common/individual problems of the participating countries with respect to the management of chemicals through their life cycle. At the same time, relevant legislation and voluntary activities by industry will be surveyed in order to understand the background of individual participating countries. (Surveys with respect to supply chain and legislation will be made separately, but might influence each other).

It should be noted that the survey should be mainly focused on the information sharing in Business to Business relationship. However, it is important to notice that the information provision from industry to end-users including consumers should influence the desirable information sharing in Business to Business.

## METHODOLOGY

I Convene a group of experts (government representatives, chemical producers and users) within each country to identify one or more chemical product supply chains for investigation. The chains should provide useful information concerning the factors that both inhibit and promote the collection and sharing of relevant information necessary for chemical product risk management. Use the questionnaire provided to implement this survey. However, depending on individual needs, countries may supplement this survey by asking additional questions.

II Conduct the above survey with respect to information collection and sharing.

III In parallel with (or as part of) the above survey, conduct another survey on existing legislation related to the flow of information as it applies to chemical products (and voluntary initiatives and instruments that have been used to manage chemical products).

IV Hold a meeting of experts in each country (meeting or teleconference) to review the country survey results and recommend steps needed to facilitate greater and improved information exchange.

**QUESTIONNAIRE**

The purpose of this questionnaire is to clarify the state of "information sharing on chemical products and their risks" along their life cycle and to identify problems relevant to "information sharing." It is requested that each participating country conducts its own survey utilizing this questionnaire in a manner appropriate for its conditions.

1. Questions related to relevant background

    1.1 Substance selection and supply chain definition. Please provide a description of the supply chain to which your survey answers pertain, including whether it involves an article or a preparation. (As long as the purpose of the survey is appropriately met, the participating countries can select the substance and the supply chain.)

    1.2 What legislation is relevant to the acquisition and transfer of information for chemicals management? How is such legislation related to chemicals management? (To clarify substances, the stages of a chemical's life cycle and threshold volume of production, required information items and related details (kind of substance and product, volume or concentration of the substance, information on the chemical's hazardous effects and directions for use, method and accuracy of measurement or estimation, etc.), etc. that individual laws specify should be noted.)

    1.3 Are there any weaknesses with respect to chemicals management that are imposed by the governing legislation, what weaknesses does the legislation present? (Why is legislation problematic for information acquisition, transfer and understanding? Explanation based on facts is requested.) Are there any particular parts of the legislation that help facilitate chemical's management?

    1.4 What voluntary activities by industry are being taken in practice relevant to acquiring and transferring information for chemicals management? How are such activities related to chemicals management, and how are they related to chemical information sharing?

    1.5 What weaknesses exist regarding voluntary activities with respect to chemicals management?

    (Why are they problematic for information acquisition, transfer and understanding? Explanation based on facts is requested.)

2. Questions to analyze information sharing (numbering to be corrected)

    2.1 What kind of information is necessary for the purpose of chemical life cycle management (from upstream to downstream actors, and from downstream to upstream actors)? What kind of necessary information is not available (or insufficient) for such a purpose? Who needs such information, and when? (Fact finding is requested from the aspect of "Where does needed information disappear?", "Is the accuracy and preciseness of the information sufficient?", "What kind of chemical problems can happen due to insufficient information sharing?", etc.)

    2.2 Why is such information required? (For domestic or foreign legislation, voluntary guidelines by industry, or future safety requirements, etc.?)

    2.3 Why is it difficult to obtain or provide such information? (Both direct and induced causes should be analyzed.)

2.4 What problems are presented with the sharing of confidential information and how is this addressed?

3. Question(s) relevant to solutions:

Proposed ideas for solving problems (What are individual countries considering? What should be addressed internationally?)

**ANNEX III**

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**ANNEX IV**

**FINAL AGENDA FOR OECD WORKSHOP**
**EXCHANGING INFORMATION ACROSS A CHEMICAL PRODUCT CHAIN**

**14 June**

14.00 Pre meeting for Workshop Chair and chairs and rapporteurs for the sessions

**15 June**

| | |
|---|---|
| 8.30 – 9.00 | Registration |
| 9.00 | Welcome note by Deputy General Director Mats Olsson, SEPA<br>Introduction by Ms Laurence Musset, OECD Secretariat<br>Introduction by Dr Gunnar Bengtsson, Workshop Chair |
| 9.30 | The studies on exchanging information across a chemical product chain are presented by the Japan, Korea, USA, Germany and Sweden (5x30 min) |
| 11.00 | *COFFEE* |
| 11.30 | Continuance of presentations of the survey studies |
| 12.30 | Presentations by BIAC (Business and Industry Advisory Committee to OECD) - Comments on presented country surveys by Prof. Dr. Marina Franke, Procter & Gamble |
| 13.00 | *LUNCH* |
| 14.00 | Introduction to Breakout Session I |
| 14.15 | Breakout Session I - Identified obstacles for information flow across the supply chain(120 min)<br>*COFFEE during session when convenient* |
| 16.30 – 17.30 | Reports from Breakout Session I in plenum |
| *17.30 –19.00* | *Session chairs and rapporteurs prepare conclusions from Session I* |

19.00 Evening event

**16 June**

| | |
|---|---|
| 9.00 | Presentation of the conclusions from Breakout Session I, Workshop Chair |
| 9.30 | Presentations by Authorities and Actors in the supply chain:<br>1/ Proposed REACH requirements and tools for information Exchange in chemical supply chains (Frans Christensen, JRC, European Chemicals Bureau)<br>2/ Information Issues in the Automotive Industry (Urban Wass, Volvo Technology AB)<br>3/ Electronic transmission of MSDS: Improving the EHS information flow on supply chain (Jacques Desarnauts, Atofina) |
| 10.30 | Introduction to Breakout Session II |
| 10.45 | *COFFEE* |
| 11.00 | Breakout Session II – Possibilities and solutions, Recommendations for OECD, for countries and for industry |
| 13.00 | *LUNCH* |
| 14.00 | Reports from Breakout Session II in plenum |
| 15.00 | *COFFEE* |
| 15.30 | Discussion in plenum, conclusions and recommendations |
| 16.30 | End of workshop |
| 16.30 – 17.30 | **Finalizing the report from the work shop, session chair and rapporteurs** |

**WORKSHOP DOCUMENTS**

| | |
|---|---|
| Draft Agenda | |
| Document 1 | Background document |
| Document 2 | Questions for the breakout sessions |
| Information Document 1 | Japan Survey Report |
| Information Document 2 | Summary of the Country Survey Reports |
| Information Document 3 | US Survey Report |
| Information Document 4 | Germany Survey Report |
| Information Document 5 | Sweden Survey Report |
| Information Document 6 | Korea Survey Report |

## ANNEX V

## INFORMATION NEEDS ACROSS THE SUPPLY CHAIN - WHY AND WHAT?

In the country surveys, different needs and reasons for the information exchange in the production and supply chains were identified. The information needs described below refers (i) to findings in the studies, (ii) to additional needs identified by participants in the breakout groups.

*Reasons for information exchange across the supply chain – some examples*

- Requirements in legislation - suppliers obligations;
- Safe working environment, obligations in legislation;
- Compliance with product safety regulations (difficult without complete information);
- Risk assessment;
- Reducing animal testing;
- Cost savings;
- Eco design of components and articles;
- Customers demands
  - Green procurement by public and private enterprises;
  - Ecolabel (consumer products, if criteria for the product group);
- Environmental Product Declarations (EPD), ISO 14025 ;
- Environmental management system (EMS), for own use of chemicals or for requirements on suppliers;
- Choosing appropriate waste treatment;
- Responsible Care Program;
- Media, public, NGOs demands;
- Image of the industry; and
- Protection of human health and the environment.

*Specific information needs – some examples*

- names/identification of hazardous chemical substances;
- concentrations of regulated chemicals in products and articles;
- hazardous properties and risks;
- information on compounds which are breakdown products or metabolites;
- various uses of chemicals;
- material and additives in components and articles;
- emissions of chemicals from products and articles;
- exposure data;
- recycling of materials and articles;
- instructions for waste treatment;
- regulatory status (domestic and international) of substances and preparations; and
- identification system for preparations.

*Comments related to information needs*

- A wider concept of IPP (relation between chemicals and products) is relevant here; information on chemicals is relevant for decision making. This is because exposure to chemicals during the lifetime of the product might be important and to avoid goal conflict.

- There are different information needs based on the place in the supply chain. The perspectives of appropriate information is different as among manufacturers to customers, vs. information on product content which could be useful for other purposes, *e.g.*, life cycle assessments, government assessments. Different actors along the chain have different information needs (for example, initial customer has different needs from the recycler). One area for further consideration or research could be an investigation of the different information needs associated with different actors across the supply chain. To date legislative programmes have been the primary drivers for provision of information. The questions asked by other actors are likely to seek different kind of information.

- Hazard information is being gathered for High Production Volume (HPV) chemicals under OECD SIDS programme, and being made available via UNEP chemicals.

- There may be chemicals which may be "of interest" but, due to low production volume, will not necessarily have available hazard information.

- Downstream entities are not always aware of chemicals in the product acquired from their suppliers. At what levels does or should reporting occur? Factors important for assessment and decision-making include hazard, functions, exposure, production volumes and use patterns. However, the degree of precision to be associated with that information will differ depending on the specific needs of the user (customer, risk assessor, general public). The cost and burden associated with information gathering will depend on the degree of precision of measurement and the scope of information sought. Consideration should be given to use of ranges, which also will help protect trade secrets and reduce Confidential Business Information (CBI) claims.

- Product performance (such as market forces for quality) is strong motivator for information gathering.

**Barriers for information flow across the supply chain**

The country surveys stated that the identified information needs were only partly satisfied. The barriers described below were identified in the studies or proposed by participants in the breakout session. Please note that these are general examples and not always applied.

**Barriers related to chemical information**

- Lack of data for hazardous properties of chemical substances;
- Substances and terms are not clearly defined, vary between companies and countries;
- Hazard information for chemicals in mixtures are not available;
- Low volume products with complex mixtures of substances are particularly difficult to generate data and provide information;
- Measurement technique for some chemical substances are not established, leading to that the accuracy or measurement technique of information is not sufficient;
- Credibility of SDS is questionable; they are standardized and not applicable to all users;
- Paper SDS is obsolete, too difficult to capture changes and remain current;
- Danger in too much information killing the message; amount of information is overwhelming and not prioritized;
- Disclosure of information could lead to consumer or authority requests to phase out without consideration of benefits to health or environment; disclosure of some types of hazard or adverse information could have adverse business impacts or create a negative impression of the company, whereas companies that remain silent would not suffer from the same stigma; and
- In some circumstances it can be difficult to know the quality of information.

**Barriers related to confidentiality/data protection**

- Information that is transferred beyond the immediate customer is more out of control and thus a problem;
- Additives in polymers (*e.g.* rubber, plastic) and other constituents of articles might be regarded as confidential;
- There may be cases where the customer has a use of the material that he doesn't want the supplier to know;
- Potential conflict between the interest of the companies need for confidentiality and chemical information needed in the society for risk reduction; and
- "Free rider" problem.

**Barriers related to liability**

- The provided information might not always be trustworthy;
- Those who provide information may have concerns about liability; and
- Those receiving the information may not accept to share a part of liability;

**Barriers related to lack of resources/costs/competence**

- Lack of competence, limited resources, skills and funds, insufficient technology, particular for SMEs. SMEs (whether as a supplier or customer) often lack independent technical expertise, and must rely on information provided by others;
- Time consuming and costly to collect and disseminate the chemical information. It is sometimes difficult or impossible for upstream companies to pass on the costs of information downstream;

- Lack of competence of suppliers to make and provide the safety data sheet (SDS);
- Lack of competence in user companies to understand the chemical information/SDS;
- Lack of common understanding of what information is needed and why;
- Expectations for information differ depending upon user (information does not necessarily target audience); and
- Lack of technical capability and communication skills in understanding information.

**Barriers related to the (international) supply chain**

- Complex supply chains;
- Insufficient collaborations between the different actors in the supply chain;
- Lack of trust among players in the supply chain, including how information will be used;
- Difficulties to get information for imported goods (no harmonised legislation);
- Lack of motivation for some actors;
- Lack of demand or positive incentives to deliver information (in addition to legislative requirements for assessment and labelling); lack of good explanation, clearly understood drivers, and articulation of the benefits on why information is needed;
- Insufficient understanding of culture, language, legislation, and values (*e.g.*, precautionary principle) of other countries;
- For products where the life cycle is short or with significant innovation, the supply chain is not stable; and
- Sheer diversity among supply chains makes the development of uniform or common policies/approaches difficult.

**Barriers related to legislation**

- Gaps in legislation for the life cycle of a product covering production, use, transport, trade and waste;
- When chemicals are used for production of materials and articles the chemical information is lost because these manufacturers are not obliged to supply chemical information further to their customers;
- The information flow over the product supply chain is hindered due to link not obliged to provide the information further, *e.g.* trading industry;
- Legal requirements for classification and SDS are different in various countries; and
- There is no obligation for the downstream users to provide information on uses and exposure to the chemical producer/importer.

**Barriers related to compliance with legislation**

- Information is not provided due to non compliance or violations of the legislation.

**Barriers related to systems and schemes to cope with chemical information in production and use of articles**

- Chemical reactions and changes during use of products are information problems;
- Lack of tools such as LCA;
- Information on chemicals are not always compatible with other information systems, *e.g.* EPD, LCA;
- No harmonised format for information exchange on chemicals in articles;
- The relationship between suppliers and customers can influence the information exchange, *e.g.* large suppliers often do not respond quickly to information requests by small customers;

- Newly developed systems, such as IMDS (International Material Data System; internet based database system used in the automotive industry), still need improvement and require certain skills to use;
- Multiple requests coming from different customers; and
- Lack of tools/methodologies/incentives to enter into voluntary programmes.

**Barriers related to conflicts with other environmental impact from products**

- Use of energy and materials/resources might come in conflict with use of chemicals in articles; and
- Recycling of materials in articles might be influenced negatively by chemical contents, *e.g.* additives in plastic might lead to decreased use of recycled material.

## ANNEX VI

## HOW TO OVERCOME THE BARRIERS FOR INFORMATION EXCHANGE ACROSS A SUPPLY CHAIN?

The country surveys presented some ideas and proposals on how to overcome barriers for the information flow across the supply chain. The participants in the breakout groups identified additional barriers. All ideas and proposals are presented below for information; all ideas were not supported such that only a few of these ideas/proposals were selected by the breakout groups and further discussed in plenary. The list of possible ideas is included here for transparency, and does not imply agreement or endorsement.

Standard data scheme and calculation system

1. Development of a scheme to ascertain the chemical contents of products (taking into account CBI). It is important to develop a procedure to judge the accuracy and reliability of the provided information.

Measurement

2. Develop technologies to measure the chemical contents of substances, preparations and articles, etc.

Assessment

3. Develop the life cycle chemical risk assessment method: risk assessments already take into account substances in articles, but there are weaknesses in the process. Guidelines to assess typical emission data should be developed corresponding to types of items such as preparations or articles, service conditions, etc.

4. Define Exposure Scenarios to communicate on the supply chain and develop simple risk assessment tools for SMEs.

5. Emission Scenario Document (ESD): description of sources, pathways, production and use pattern that quantify the emissions or releases of a chemical. The expansion of ESD that are being developed at OECD would be useful. Risk assessment technique for the life cycle of a substance in a product should then be improved. Encourage participation of CPP experts in the current OECD work on ESD.

Classification

6. UNECE Globally Harmonised System for Classification and Labelling of Chemicals should be implemented by countries.

7. Harmonize EU, US, and Asia-Pacific SDS thanks to GHS.

Information systems

8. Development of a chemical substance information portal: A portal system that links information sources containing data on chemicals of various companies.

9. Development of a multilingual chemical substance database and international harmonization scheme containing practical and up-to-date information, including domestic and international regulatory status and uses of substances, to help enterprises and/or end-users easily access.

10. Development of a multilingual articles database and international harmonization scheme containing practical and up-to-date information, to help enterprises and/or end-users easily access.

11. A practical system for data security and protection on an international level would be a step forward to reducing problems on information sharing for industry.

12. Development of a standard SDS database: A standard database containing up-to-date SDS data generated by private enterprises, etc. that can be readily used by stakeholders.

13. Introduce requirements in the Environmental Product Declarations (EPDs) (ISO TR 14025) to include chemical information and develop techniques to make EPDs more usable to SMEs.

14. Investigate different technical possibilities for information transfer through supply chain.

15. Develop easy access systems for substances with very hazardous properties.

16. Develop EMS/SDS IT communication standards (XML)

SMEs support

17. SDS generation support system for SMEs: A method to generate SDS from supplier data, a system that supports SMEs to easily generate SDS, etc.

18. In order to prevent discontinuance of information flow across the product chain, it is most important to develop programs to support SMEs for their generating and transferring chemical information.

19. Partnership between SMEs and international enterprises should be strengthened in the future.

20. Establish close cooperation with the OECD task force on PRTRs who is working to find ways to better include information on releases and transfers from products and SMEs to PRTRs to avoid duplication of work and to strengthen the efforts through joint support.

21. Develop detailed guidelines for SMEs for how to use the SDSs for planning use of chemicals.

22. Development of standardised requirements for the information submitted from SMEs to larger companies when supplying chemical products/chemicals

Partnership and dialogues

23. Greater involvement of users and correspondingly intensified communication between manufacturers and users, and simplification of exposure scenarios.

24. Develop dialogue between the producing industry and the authorities.

25. Information and campaigns to increase the awareness of suppliers about articles contribution to the widespread of hazardous chemical substances and chemical products.

26. Establishment of an international chemicals information network.

27. Make better use of existing and ongoing work on information flow through the supply chain.

28. Establish and communicate lists of unwanted substances for selected product groups, for instance, compounds "x" and "y" used in textiles.

General

29. Requirements, tools, or legislation could be developed to improve sharing and transferring of information over the entire lifecycle of chemicals so that the flow of chemical information could be maintained in a consistent and continuous way, upward and downward.

30. OECD could design a council recommendation on information sharing.

31. Projects could be undertaken to further explore liability regimes and regulations established with appropriate "grandfathering" or limits on any potential liabilities that may occur during a transition to sounder environmental practices.

32. Introduce the product perspective into the ISO standard 14001 for chemical management systems.