



# Chemicals in products



## The need for information

An emerging policy issue  
that needs global cooperation

**V**irtually all manufactured articles today, from consumer goods to machinery and construction materials, have chemicals included or added to them to enhance the appearance or performance of the product. Impurities or by-products of the manufacturing process may be present as well. Most of these chemicals are benign, but many have known or suspected risks.

Not just chemical products but also manufactured goods, i.e., those produced for the function they bring and not for their chemical properties, can hence pose a risk due to the chemicals they contain.



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Research on the effects of chemicals, including some in common use, continues to identify hazards posed by them to human health or the environment.



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## **G**lobal trade and distribution

International trade of manufactured goods results in global distribution of the chemicals they contain. When used or discarded, these products can release chemicals to the environment, which can enter people's bodies through the air, water or food, as well as through direct skin contact. Thus common products like toys, clothing, furniture, carpets, electronic equipment, automobiles, building materials etc. can pose a global risk due to the chemicals that are distributed with them. Addressing risks posed by these chemicals contained and transported in products requires action globally, on many levels and involving many actors.

# R

## ecycling of discarded products

Recycling of materials is a growing need in our present society where raw materials are getting scarce. For recyclers to be able to ensure the quality and safety of recycled materials they need to know the chemicals that they contain. Information on chemicals in products is hence a prerequisite for sustainable use of resources.



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## Information is required for managing risk

Information on chemicals, including their adverse effects and potential release and exposure, is required for understanding the risks and how to control them at different stages in a product's life, from design and manufacturing via use, possibly recycling and ultimate waste disposal. The information should also be tailored for the particular stakeholder needs, including:

- determining the chemicals to use in products;
- protecting workers;
- purchasing based not only on performance but also on environmental, health or safety considerations;
- ensuring safety and quality of recycled materials; and
- guiding proper use and waste disposal.



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## **E**merging chemical hazards

Past efforts related to the chemicals content of products have typically focused on known hazards. But what happens when a chemical already in widespread use is found to have harmful effects? Recent examples include chemicals like brominated flame retardants, certain plastic additives, and fluorinated chemicals that can interfere with hormonal systems and have serious adverse effects on humans and wildlife, the greatest concern being interferences with the developmental processes of the unborn. To identify in which products these substances are present requires significant effort and expense, if at all possible. If information about the chemicals present in a product would be made available throughout the supply chain it would make it possible to identify where these hazards are and save significant costs.

## Increasing initiatives to control risks

Chemicals content information can be transmitted with products. Examples include ingredients in foods, cosmetics and pharmaceuticals. For pesticides, declaration of the active ingredient is required and almost all countries of the world also require registration before the product can be placed on the market. Such “upstream” controls hardly exist for other types of chemicals including those that enter common consumer goods. Control measures tend to be put in place only after it has become apparent that the risks of a particular chemical / chemical group are unacceptable.

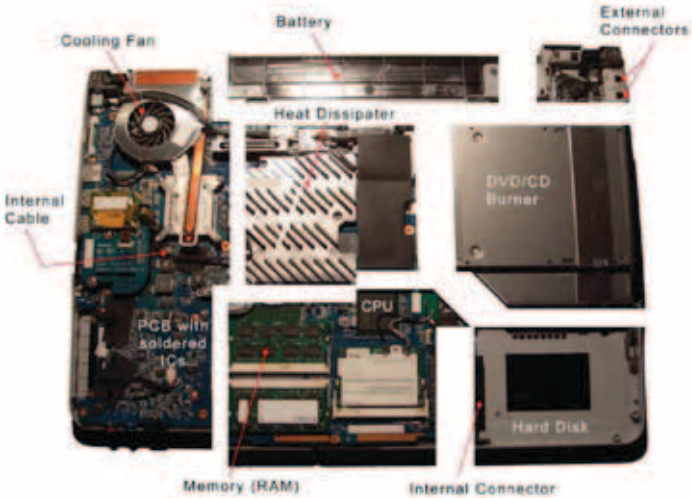
Recent initiatives are aimed at enhancing the control of industrial chemicals. Different regions have stepped up their work and control of the use of particularly hazardous substances in consumer products. Examples include the bans or restrictions for certain products containing bisphenol A (e.g., in EU and Canada) the US restrictions and third-party verification for lead in children’s products and a range of new restrictions for hazardous substances in toys in the EU, including labeling requirements for certain allergenic fragrances.





Some general requirements on information on chemicals in products also exist, e.g. in the EU any supplier of an article which contains chemicals identified as being of very high concern must provide information on that chemical to professional customers and also to consumers upon request. Some waste and recycling legislation also requires certain sectors, such as the automotive industry, to find out and report some of the chemicals content in components of their products.

The electronics sector also has developed systems, for example in Japan, which are used to transmit content information and to meet legislative requirements for waste handling and recycling. Similar legislative measures are also under consideration in a number of countries and for certain product sectors. It's evident that the levels of knowledge and disclosure required for placing chemicals (including chemicals in products) on many of the world's markets is increasing significantly.



## **B**usiness advantages

Manufacturers and distributors of products increasingly understand that transparency about their products' chemistry is a fundamental part of doing business. Forward-looking companies are making strides not only in addressing risks but also in avoiding them and some are actively working to ensure they know what chemicals are going into their products. The advantages to this approach are many, including:

- manufacturers know and are able to control what is in their products, thus protecting their brand;
- manufacturers would be well positioned to approach a growing market of consumers who are demanding safer products;
- companies using the safest chemistry available are frequently already in compliance with emerging legislation.



“ We aim to be increasingly transparent about our materials and behaviors to enable our customers to make more informed decisions and advance the built environment. ”

Howard Williams, Vice President, Construction Specialties, Inc., USA





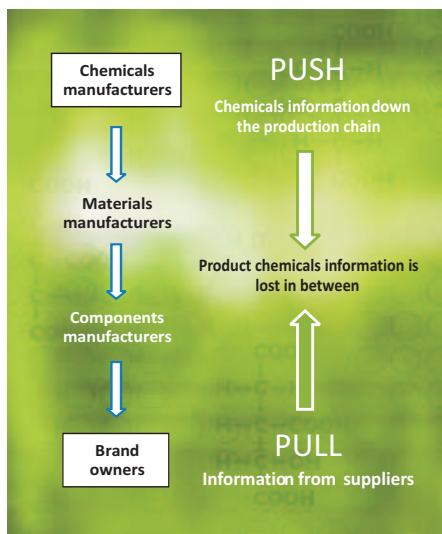
## **A** global need to know about chemicals in products

The international chemicals community is working to address concerns associated with chemicals in products. The Strategic Approach to International Chemicals Management (SAICM) ([www.saicm.org](http://www.saicm.org)) is the world's premier forum for moving towards sound chemicals management. SAICM is a voluntary policy framework, implemented in a multi-stakeholder process, and sets as one of its objectives that information and knowledge about chemicals contained in products "is available, accessible, user friendly, adequate and appropriate to the needs of all stakeholders".

As a step towards fulfilling this objective, the second session of the governing body of SAICM, the International Conference of Chemicals Management (ICCM2), in May 2009 recognized chemicals in products as an emerging policy issue, and adopted a resolution which invited UNEP to lead a Chemicals in Products (CiP) project.

## The Chemicals in Products project

The CiP project was mandated to:



- **collect**  
information on and review existing information systems pertaining to chemicals in products;
- **assess**  
that information in relation to the needs of all relevant stakeholders and identify gaps; and
- **develop**  
specific recommendations for actions to promote implementation of the SAICM objective with regard to such information.

Under the advice of a multi-stakeholder project steering group representing all regions, UNEP undertook a number of activities to implement the above mandates, including a survey, scoping meeting, general analytical study and in-depth studies into the four product sectors of textiles, electronics, toys and construction materials.

## Findings and lessons learned so far

Findings from the CiP project discussions and studies reveal a dynamic and highly varied spectrum of activities aimed at providing chemicals in products information including efforts within the manufacturing phase, at the consumer level, governments and by actors outside the supply chain.



## Key conclusions and points for future consideration:

- 1** The current state of chemicals in products information exchange is not enough to allow stakeholders to practice sound management of chemicals throughout the life cycle of products and to fulfill the objectives of SAICM.
- 2** There are initiatives for transmitting chemicals in products information. These usually respond to regulatory requirements and / or market forces (e.g., business risks and consumer demand) and are often established within a specific product sector.
- 3** Significant gaps exist between the information currently available on chemicals in products and what stakeholders need to know. Certain product sectors have almost no information exchange system(s) available. Those that have are most often providing information about chemicals that are absent or below a certain limit in the articles. And in most developing countries almost no systems are available for any product sectors.
- 4** Types of information systems range from widely-used restricted substance lists and ecolabels to complex databases like the automotive industry's International Material Data System (IMDS) for reporting on chemicals above a certain level in individual components.
- 5** Many brand owners want content information from their suppliers and some have made considerable progress in obtaining it. There are however significant obstacles to getting this information; one major problem is data being regarded as confidential business information.
- 6** There are significant potential benefits to be gained by a harmonized approach to chemicals information exchange; such an approach could build upon elements of successful existing practices and would help to avoid a patchwork of differing systems.
- 7** Key considerations for any chemicals in products information exchange include:
  - ensuring that information is available and transmitted throughout the production chain; and
  - a differentiated approach is needed for different actors and sectors, including information tailored to the different needs of the stakeholders (e.g., product designers, consumers, governments, recyclers).

## W hat next?

An international workshop in early 2011 considered the results of the CiP project (see conclusions on page 11) and recommended the development of a non-legally binding framework to facilitate information exchange among stakeholders. It also identified elements to include in the project's recommendations for future action, including:

- identification of the roles and responsibilities of the different stakeholders throughout the life cycle of articles;
- principles on what information could be transferred to different stakeholders, how that transfer could take place and how to define and treat confidential business information and;
- building on experiences of best practices information exchange.

Provided that the recommendations are adopted at the third ICCM meeting in 2012 it is also envisaged that pilot studies may be undertaken in one or more product sectors.

Stakeholders with activities and interest in participating in the Chemicals in Products project are encouraged to contact the UNEP Secretariat.



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