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Policy Brief

Baltic Sea Centre
Stockholm University

Why we need a list of ingredients on consumer articles

Today, information on the chemical composition of articles is very scarce, making it difficult to understand which potentially hazardous chemicals are being released to the environment. The lack of chemical ingredient lists also hinders the assessment of human indoor exposure and forms a barrier to implementing a circular economy with non-toxic material cycles.

There is an urgent need for standardised methods and legal incentives to increase the availability of information on chemicals in articles for authorities, researchers, and consumers.

Emissions of chemicals to the environment can occur throughout the entire life cycle of a chemical substance, from the production to the waste phase. Emissions from e.g. industrial point sources are often important, but in certain cases, the dominant source is diffuse emissions of chemicals present in articles used in society.1 Articles of various kinds consumed in society contain a wide range of chemicals with different functions and inherent properties. These chemicals may be emitted from the materials making up the articles via diffusion or abrasion, and eventually disperse in the environment via transport in air or water. In this way, a chemical used for example as a flame retardant in a laptop can find its way to a marine environment such as the Baltic Sea. The continuous development of new products, changing consumption behaviours, and industry's adaptation to updated chemical regulations constantly changes the load and composition of chemical mixtures transferred from land to the marine environment.

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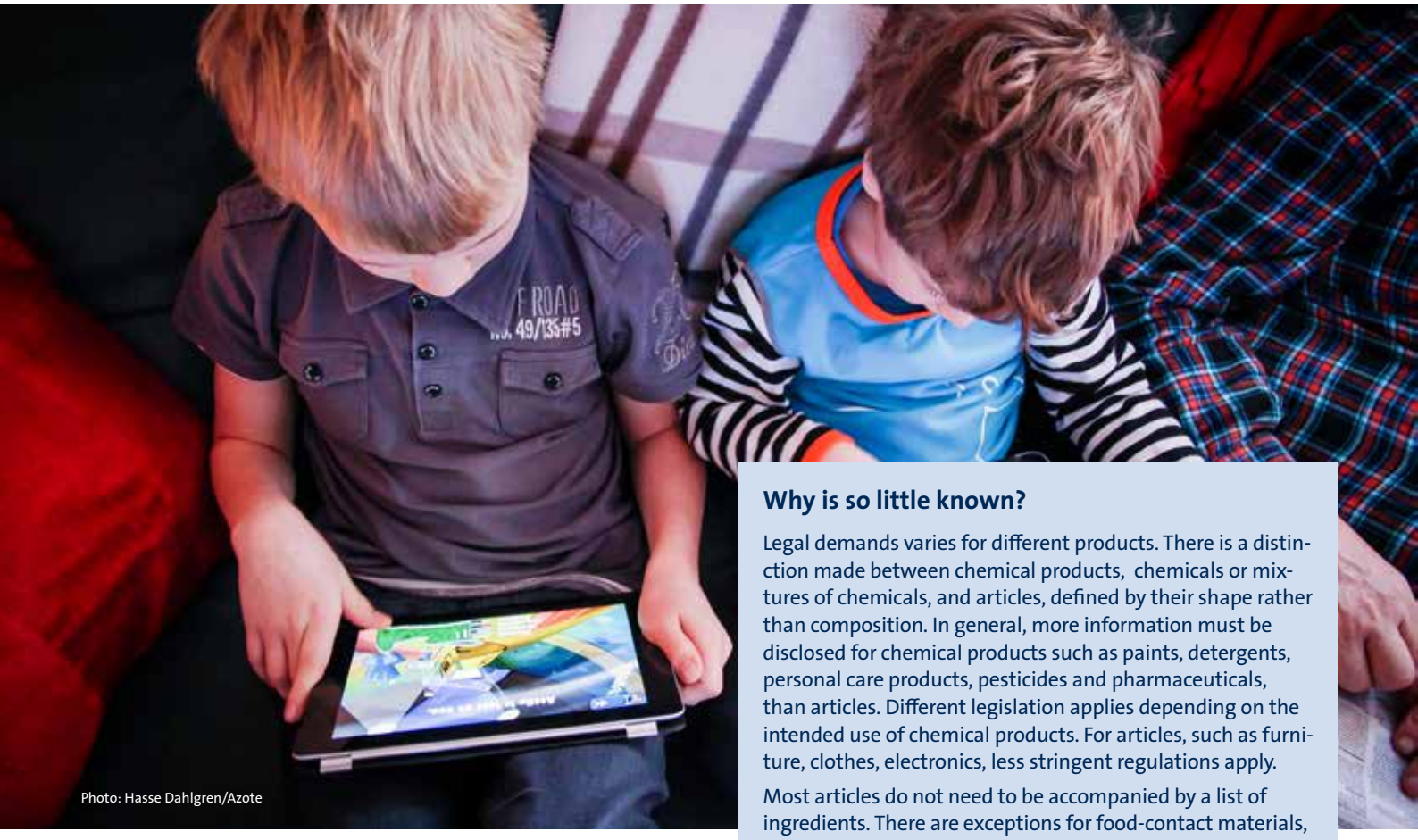
POLICY RECOMMENDATIONS

- **At EU level,** continue the development of harmonised tools across sectors to track chemical composition of products throughout the supply chain, including imported and recycled articles.
- **Establish a system to disclose chemical content in articles** to authorities, researchers, and the general public in order to help identification of new environmental contaminants and to fulfil the consumers' right-to-know. To ensure that confidential business information stays protected, the data could, if needed, be made available in an aggregated way.
- **Introduce labelling of articles** containing substances that are identified by the EU as being of Very High Concern (SVHCs) in order to enable consumers to make informed choices.
- **Legally oblige suppliers and companies** to grant authorities responsible for the management of chemicals (e.g. ECHA) full access to chemical composition data of articles which, in the long run, will assist the circular economy and reduce emissions of hazardous chemicals to the environment. Non-disclosure agreements can be used to ensure confidentiality for businesses.
- **Strengthen international-level support** and involvement, such as in SAICM and the Alliance for High Ambition on chemicals and waste, striving towards harmonisation of chemical regulations.



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NOT ENOUGH DATA ON CHEMICALS IN ARTICLES

It is reasonable to believe that we can use information on chemicals in everyday products to better track the chemical flows from society to the environment. However, a recent study from Stockholm University's Baltic Sea Centre found that there are currently not enough data on chemicals in articles to even answer questions such as: "Are we consuming more chemicals via everyday products in Europe now than ten years ago?" or "Is the threat posed by chemical contamination in the Baltic Sea increasing or decreasing?"

Chemical emissions during the consumer use phase of articles constitutes a particularly large knowledge gap. The chemical content of a vast range of products is confidential or unknown even to retailers. While the majority of these chemicals are likely harmless, there are also many that could pose a risk to human health and the environment.

WHY MORE INFORMATION IS ESSENTIAL

There are a number of reasons why we need better information on our consumption patterns and content of chemical products and articles:

To promote a non-toxic environment and a circular economy

With the EU striving towards a circular economy and to achieve a non-toxic environment, it is important that we know which articles or components contain chemicals that are potentially hazardous. The European Commission recognised this in their communication addressing the interface between chemical, product, and waste legislation.

Many substances that are banned or identified as being of Very High Concern (SVHCs) by the EU, continue to circulate in so-

Why is so little known?

Legal demands varies for different products. There is a distinction made between chemical products, chemicals or mixtures of chemicals, and articles, defined by their shape rather than composition. In general, more information must be disclosed for chemical products such as paints, detergents, personal care products, pesticides and pharmaceuticals, than articles. Different legislation applies depending on the intended use of chemical products. For articles, such as furniture, clothes, electronics, less stringent regulations apply.

Most articles do not need to be accompanied by a list of ingredients. There are exceptions for food-contact materials, toys, batteries, medical equipment, and certain electrical and electronic equipment for which specific regulation of chemical content exists, restricting the use of certain substances.

The main chemical substances regulation in EU, REACH, focuses mainly on chemical products, but covers articles in some aspects. Actors along the entire supply chain are obliged by REACH to pass on information about chemicals in articles, including imported articles. However, this information is limited to substances of very high concern (SVHCs, as defined by REACH) at concentrations above 0.1 percent on a mass basis. Even for these substances, downstream professionals only need to be notified of the presence and name of these compounds.

There is no legal requirement for suppliers and manufacturers to pass along information regarding chemicals that are not one of the currently 191 substances defined as SVHC under REACH. Companies and retailers that do require chemical information from their suppliers most often acquire this indirectly in the form of a restricted substance list. This means that they provide the supplier with a list of chemicals that should not be in their products above certain concentrations and the supplier, in turn, has to ensure that this is the case.

In addition to a lack of legal demands, complex supply chains with multiple sub-suppliers from different countries make it difficult to get chemical information transferred along the entire supply chain. Articles can consist of thousands of components, each of which can contain a wide range of materials and chemicals.

As a result, many companies and retailers often do not know which chemicals their products contain. At most, they know which ones their products do not contain.

The need for companies to protect confidential business information is another issue that explains why so little is known about chemicals in articles.

ciety via recycled materials. Currently the likelihood of identified hazardous substances occurring in recycled materials is high because many of them have been produced in large amounts for a very long time. Yet it is not often known in which products these chemicals have been used.

Providing information on chemical content to waste handling companies would make it possible to exclude materials or articles that contain hazardous substances from the recycling stream.

To facilitate preparedness for changes in legislation

The identification and regulation of chemicals as SVHCs is a slow process and currently only 191 chemicals have been listed as such. In contrast, the SIN list by Chemsec, the international chemical secretariat, which identifies chemicals as SVHCs using the same criteria as under REACH, currently contains 919 chemicals. The SIN list indicates that many more chemicals could be identified as substances of concern in the future and, thus, potentially be subject to further restrictions. Even more chemicals will be identified as SVHCs if the criteria to define SVHCs are updated in light of improved scientific understanding of chemical exposure and toxicity.

Today, when a new chemical is identified as SVHC under REACH, companies and retailers have to go to their supply chain to ask if that chemical is present in their articles. However, if companies had complete information on chemical content, they would be better prepared for new chemical regulations and it would help them to proactively phase out substances from their supply chains that are likely to be listed as new SVHCs.

To enable informed decision making

Voluntary actions to phase out substances that are not yet regulated at the EU level require knowledge about the presence of all chemicals in articles, i.e. not just those currently regulated. To give an example, a recent study reported that carpets currently sold in Europe contain over 59 substances identified as potentially hazardous when screened against various authoritative chemical hazard lists, including multiple mutagens, carcinogens, endocrine disruptors, and chemicals toxic for reproduction9. Only ten of these substances were listed as SVHCs, meaning that they have to be reported to downstream professionals. Because retailers selling the carpets and professionals working with them have no legal right to be informed, they are likely not aware of the presence of the 49 remaining chemicals, making incentives to work proactively to phase out unwanted chemicals weak.

Under REACH Article 33, consumers are legally entitled to know if any SVHCs are present in an article of interest, but only if they specifically ask for the information and are willing to wait 45 days to get a reply. Few consumers use this right and even fewer are willing to wait that long.

Thus, companies and consumers that want to avoid potentially hazardous chemicals, such as those on the SIN list that are not yet regulated, have no possibility of doing so.

To develop chemical monitoring in the marine environment

Information on emissions from everyday articles constitutes an important piece of the puzzle to map substance flows to the marine environment. We need to know where and how chemicals are emitted in order to prioritise which chemicals to monitor and develop cost-efficient measures to reduce these emissions.

It is desirable to further develop methods to identify chemicals that have a high probability of being found in elevated levels in the environment and wildlife. An important piece of information currently lacking in such estimations is information on diffuse chemical emissions from articles, which can only be quantified if more information on chemical content in articles becomes avail-

More information will help define the chemical status of the Baltic Sea

Consumer articles is a potentially large source for chemicals found in the Baltic Sea. Yet a majority of the chemical content for consumer articles is unknown.

Lack of information makes it more difficult to estimate flow as well as prioritise the monitoring and regulation of chemicals.

For chemical products e.g. mixtures of chemicals such as paints, detergents and personal care products, legal demands require that all or some of the chemical content of the product is specified, depending on type of product.

Increased access to information makes it easier to estimate flow and helps prioritise monitoring and regulation.

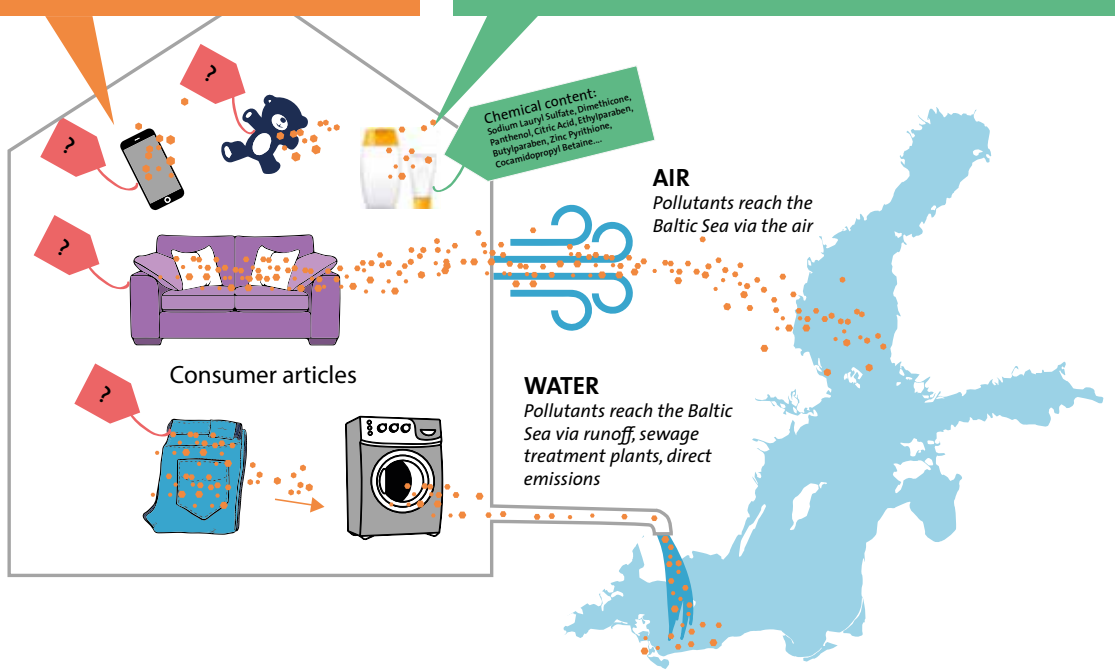

Illustration: Robert Kautsky/Azote

Photo: Hans Kautsky/Azote

able. Having such information could also assist in developing programmes of measures and in updating the current list of 48 priority substances or substance groups under the Water and Marine Strategy Framework Directives (WFD and MSFD). The list of substances to monitor needs constant updates to include all substances that contribute significantly to any negative impact arising from the current chemical contamination of the marine ecosystem.

To increase transparency while safeguarding confidential business information

It is often argued that detailed information about the chemical composition of articles cannot be shared because of business confidentiality concerns, however, there are industry-wide initiatives that address this issue.

One such initiative is the international material data system (IMDS), which encompasses the entire supply chain for the automobile industry and allows suppliers to label up to 10 percent of the mass of their products as confidential as long as they do not contain any restricted substances. Suppliers can also choose with which parties in the supply chain they share their information.

Another way of dealing with confidentiality is by working with third-party organisations that collect data from suppliers and then inform relevant stakeholders if the supplier complies with chemical regulations. Non-disclosure agreements between the supplier and the third party make sure that confidentiality is maintained.

To address global challenges

The globalised market means that Europe faces difficulties in controlling chemicals that enter via imports. To a large extent, articles imported to the EU fall under the same legislation as those produced in the EU, with importers being responsible for the products complying with EU legislation. However, a recent report by the European chemicals agency (ECHA) has found that the control of imported goods is insufficient and that products imported from abroad have a higher occurrence of non-compliance with EU chemical regulation than products produced in the EU.

Products purchased privately directly from non-EU suppliers fall outside of EU legislation because the consumers themselves are considered to be the importers. It is therefore possible that such products contain chemicals that have been restricted for use in the EU.

The importance of better information about chemicals in consumer products is acknowledged at international level. The global Strategic Approach to International Chemicals Management (SAICM), which has goals set for 2020, cites increased transparency of chemicals in products as one of eight major emerging policy issues. Additionally, Sweden launched the Alliance for High Ambition on chemicals and waste in July 2018 with the aim of reaching global agreement on sustainable chemical management.

FURTHER READING

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BALTIC EYE – BRIDGING THE GAP BETWEEN SCIENCE AND POLICY

This policy brief is produced by Baltic Eye, a part of the Baltic Sea Centre at Stockholm University.

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We analyse and synthesise scientific research on the Baltic Sea and communicate it to stakeholders in the decision-making process.

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