Welcome to this report on the debates held at the 12th annual Helsinki Chemicals Forum. For the first time in its history, the forum was held virtually due to the ongoing Covid-19 pandemic.

This year, more than 200 delegates from more than 30 countries participated in the virtual Forum discussion on five main themes, including the ongoing negotiations for a post-2020 global chemicals framework, the ambitions of the EU chemicals strategy for sustainability and developments on safer substitution.

The Helsinki thinktank promoted the case for the safe administration of chemicals while taking stock of the diverse political landscape and the hurdles to preserving human health and the environment.

Setting the scene, the Forum began by examining the status of the ongoing negotiations for a post-2020 global chemicals framework, and the targets and measures needed to advance and track progress towards the sound management of chemicals and waste, both nationally and globally.

This was followed by panel two, where views were shared on the growing focus on green chemicals policies, particularly the strategies set under the EU’s Green Deal, and what such a policy should consist of.

Delving deeper into the EU’s chemicals strategy for sustainability, Chemical Watch’s science editor, Andrew Turley, held a high-level debate on the strategy’s ambitions with the European Commission’s environment commissioner, Virginijus Sinkevičius, director general of Cefic, Marco Mensink, and secretary general of the European Environmental Bureau (EEB), Jeremy Wates.

Returning to the panel format, panel three explored transparency and risk communication, examining the challenges of traceability of chemicals of concern and its importance in creating market trust.

Panel four focused on the barriers and solutions to incentivising research and development and the adoption of safer alternatives, which is a key challenge for industry. Experts also considered how to speed up safer substitution.

The event’s final panel debate focused on one well-known sector that is facing considerable challenges, but has also accumulated much experience in addressing chemical-related issues and developing innovative solutions – the textiles sector.

This report, prepared by independent intelligence and insight provider Chemical Watch, intends to be a balanced and accessible reflection of two days of debate as a means to further understanding. We have not taken sides or judged comments on their accuracy, veracity or fairness.

This is not a formal report because the annual Forum is not an official session and its conclusions do not represent a consensus. Instead, the report offers a reference point for policy makers, companies, academics and others – presenting the voice of the people in the (virtual) room at this important global gathering.

The final pages of the report comprise an unedited selection of questions and observations that were posted on the Forum’s virtual platform during the event to capture insights from the delegates.

Leigh Stringer, Managing Editor Europe, Chemical Watch
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What is Chemical Watch?

Chemical Watch is the leading global provider of independent intelligence and insight for product safety professionals managing chemicals.

We help businesses across value chains stay ahead of the dynamic chemicals management agenda by providing access to in-depth knowledge, tools and a network of experts.

Our aim is to empower our members to transform product safety management and unlock the full value of regulatory compliance within their business by providing:

• A one-stop intelligence source: independent global news, insight and analysis to inform product safety decisions.

• Access to the world’s largest and most influential community of product safety professionals managing chemicals.

• An extensive calendar of events featuring expertise from across our global business and regulatory network.

• Interactive and flexible eLearning, training and webinars to boost individual and team expertise and continuously develop their skills.

• Resources and support to raise the level of chemicals safety awareness in companies and improve compliance across departments to drive product stewardship.

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The EU’s vision for a more sustainable, safer society has gained pace in recent years under the umbrella of its Green Deal, a set of policy initiatives to address health, environmental, societal and economic concerns arising from the global climate and ecological crises.

"They all involve chemicals," Commissioner Virginijus Sinkevičius said.

But the Commission is also very aware of the dangers.

"There are areas where alarm bells are ringing, and we urgently need to act," such as persistent chemicals or endocrine disruptors.

Its chemicals strategy for sustainability, published in October last year, sets out a plan of action to drive the substitution of the most harmful chemicals, and the development of safe and sustainable chemicals for the green and digital transition.

The policy initiatives and planned measures under the strategy are bold and ambitious. The Commissioner lauded the aspiration of the strategy but acknowledged that it may seem “a lot to ask”.

However, it is necessary, he said, because European citizens – including the most vulnerable – are still too exposed to very harmful chemicals, particularly through consumer products.

Increasing the level of health and environmental protection, changing the shape of the industry, making it more sustainable, climate-neutral, circular and toxic-free “is the world we are determined to deliver,” he added.
But perhaps more importantly, the strategy allows the EU to play a leading role on the global stage – as it has done with REACH – to champion high standards, and to promote them around the world.

The Commissioner stressed the need for a global approach. “It’s very important to help all our partners step up their sustainability efforts,” and to ensure consistency by ensuring, for example, that chemicals banned in the EU aren’t produced for export.

The engine room

While the chemicals strategy has been the focus this year, the EU’s flagship REACH and CLP regulations will continue to drive this toxic-free vision through the assessment, classification and regulatory measures imposed to protect people and the environment from the most hazardous chemicals. Echa recently published its five-year report reviewing the effectiveness of the regulations.

The agency’s executive director, Bjorn Hansen, said that in order to determine if the regulations are ‘working’ it was important to look at whether the original objectives are being met. The answer to this, he said, is no, despite good progress being made.

“Considering the expectations back [when REACH and CLP were being established] we’ve still got a long way to go.”

There is a particular need for better communication of chemicals information along the supply chain, which is “not as smooth as we’d wanted by this point in time”.

Holding up this progress is the lack of efficient tools that support standardisation, harmonisation and digitalisation of information along the supply chain to ensure safe use of chemicals.

The other barrier is the interaction between REACH and CLP, and other legislation.

“Until there is a seamless implementation of the obligations – for example in the workplace, coming from employment legislation, worker protection legislation and REACH and CLP – there will be inefficiencies in the system and inefficiencies, of course, lead to less protection.”

However, while improvement is required and inefficiencies need to be addressed, REACH is contributing to the reduction in risks and the substitution of substances, just from a chemical entering the REACH candidate list.

With the experience and progress made through REACH and CLP, Echa is ready to contribute to the EU’s ambitions of the chemicals strategy, particularly around grouping and the concept of essential use.

Dr Hansen said that, with the new higher ambition of the chemicals strategy, more needs to be done to improve the systems that implement REACH and CLP – something that the strategy plans to tackle – and address the inefficiencies. But overall, “we are in a good state to take on these new challenges”.

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Forthcoming ICCM5: what needs to be agreed for an ambitious beyond 2020 global chemicals framework?

Context

The Covid-19 pandemic has forced a delay of the fifth International Conference on Chemicals Management (ICCM5), where delegates were set to agree on the UN's post-2020 chemicals management framework's structure and scope. Despite this, stakeholders have been negotiating virtually on the targets, indicators and elements that can push the world towards the sound management of chemicals globally – a goal that the second Global Chemicals Outlook report concluded was not achieved by 2020 as originally set out.

Panelists:

Servet Gören, Director International Affairs Cefic and industry representative at Saicm bureau of ICCA

Alexandra Caterbow, Co-director, HEJSupport

Per Ängquist, General Director; Kemi, Sweden

Judith Torres, Officer of International Environmental Affairs, National Environmental Directorate, Uruguay and co-chair of the intersessional process considering the Strategic Approach and the sound management of chemicals and waste beyond 2020

Jing Zhao, SCC agency, Ministry of Ecology and Environment, China
Global status

- Published in 2019, the UN’s second Global Chemicals Outlook (GCOII) report concluded that the sound management of chemicals would not be achieved by 2020 – a goal set in 2006 under the Strategic Approach to International Chemicals Management (Saicm)

- Ongoing restrictions due to the Covid-19 pandemic have led to the postponement of the ICCM5, where a post-2020 global chemicals framework is to be agreed

- However, progress has been made with ongoing engagement among stakeholders of the current voluntary framework, Saicm

- The four working groups, established to advance the negotiations, have finalised their work

- The outcomes of these working groups note that, while significant progress has been achieved on the specific and concrete issues under discussion, further development is needed to build greater understanding and prepare delegates for negotiations that will take place at ICCM5

- Stakeholders are discussing what needs to be agreed at ICCM5 to address the shortcomings identified by the working groups and the GCOII, including the targets and indicators that should be adopted to track progress both nationally and globally

- In addition, they are looking at the role regions, with advanced chemicals management systems – such as the EU – can play in helping less developed countries achieve a higher standard of protection by 2030

Focusing efforts

- There is a need to increase meaningful collaboration among Saicm stakeholders that have a targeted end purpose to their work, and foster real progress on the ground

- Implementation of the UN’s Globally Harmonised System (GHS) of classification and labelling of chemicals is a key element to safe chemicals management globally – partnership between Unitar, OECD, ILO and ICCA is driving much of this work

- The global chemicals industry is coordinating capacity building projects in key regions around the world, ie Asean and Latin America

- Not all countries are in a position to set up basic regulatory systems, therefore more effort on capacity building is needed

- There is a need to maximise the value of existing chemicals data

- There is also a need to identify and address what is stopping those countries in the developing world with little capacity to set up chemical regulatory systems, from accessing data already accumulated by the likes of the EU, North America and Japan

- Governments and industry have to step in if we do not want to continue discussing the same issues – business as usual is not an option

- Pollution – including chemical pollution – has been identified at the international level as the third major environmental crises, alongside climate change and biodiversity loss

- We need a ‘beyond 2020’ Saicm process and framework that supports the highest health and environmental standards for chemicals of concern

- This framework should address chemicals in products, endocrine disrupting chemicals (EDCs), highly hazardous pesticides and others

- Challenges and barriers to achieving sound chemicals management globally include a lack of information about chemical ingredients and products along the lifecycle and supply chains, lack of political will, strict regulations and funding, and chemicals are still not a mainstream health and environmental issue

- NGOs say slow progress is being made to minimise risk, despite solutions already available, such as grouping assessments and increased supply chain transparency

- Many stakeholders say sufficient financing is needed for a beyond 2020 framework, with NGOs proposing this is in line with the polluter pays principle, where industry internalises the cost

- Effective implementation in all countries is a must for a beyond 2020 framework – with all countries having implementation plans, ideally legally binding, at the national level – as is mandatory reporting
• Targets should be ambitious and indicators meaningful, easy to monitor and should function as a baseline for ongoing work

• Developed regions, such as the EU and North America, should ensure their policies do not negatively affect other countries and regions

• A new Saicm should not just be a discussion forum but a global instrument to fully address the problems associated with chemicals and waste

• Some problems, such as the spread of hazardous chemicals via air and water, can only be addressed by international cooperation because chemical exposure routes do not respect borders

• Trade patterns continue to change, which bring new challenges, such as the rise in e-commerce, making private consumers importers

• Global cooperation on the generation of data on the impacts of chemicals on human health and the environment would save resources for all countries

• Many countries still lack basic legal and institutional systems to manage chemicals safely

• A global framework should include a target that ensures all countries have basic legislation in place

• We need legislation that requires producers of chemicals to generate and provide data and information on the chemicals they manufacture and intend to place on the market

• We need sufficient information on chemicals in products

• We must also address chemicals that warrant global action

• There is a need to strengthen the science-policy interface, which is being strongly pushed during the beyond 2020 negotiations

• The size, and continued growth, of the chemicals market requires a significant increase in effort to manage the risks of substances of concern, in terms of regulatory measures and corporate policies.
Green chemical policy: what tools and concepts should be used?

Context

Bans, restrictions and other risk management measures are instruments to address chemicals of concern. But, with the green agenda gaining traction, regulatory authorities must now ensure policies consider and take into account all health and environmental aspects of chemicals throughout their lifecycle. The EU's Green Deal is attempting a more holistic approach using various policies that address chemicals, particularly its proposed safe and sustainable by design chemicals concept. But what constitutes an effective 'green' chemicals policy?

Moderator: Otto Linher, Senior Expert of the REACH Unit, DG GROW, European Commission

Panelists:

- **Steven van de Broeck**, Cefic Director for REACH and Chemicals Policy
- **Tala Henry**, Deputy Director, Office of Pollution Prevention and Toxics, US EPA
- **Tatiana Santos**, Policy Manager, Chemicals and Nanotechnology, European Environmental Bureau (EEB)
- **Henrik Søren Larsen**, Head of Department, Drinking water and Chemicals, Ministry of Environment of Denmark
- **Oliver Bisazza**, Director General Industrial Policies, Medtech Europe
A common understanding

• The EU’s chemicals strategy for sustainability is a ‘game changer’ with the ambition to move the bloc to a toxic-free environment and contribute towards other goals such as a clean circular economy and climate neutrality.

• Safe and sustainable by design, proposed under the EU chemicals strategy, must incorporate a holistic view i.e. not just GHG emissions, safety or circular economy, it’s about all of these issues together.

• It is critical to achieve a common understanding of what is meant by safe and sustainable by design.

• Some in the chemicals industry have been working on ideas for this definition, but it is important for all stakeholders to agree on this concept to ensure it achieves EU objectives.

• The US has implemented green chemistry and pollution prevention policies, such as its Safer Choice programme.

The bigger picture

• NGOs in the EU are pushing for the precautionary principle and polluter pays principle to be fully implemented.

• EU regulators and NGOs back the generic risk approach, as outlined in the EU’s chemicals strategy for sustainability. This, they say, is the most appropriate approach to ensure a high level of protection and should be extended to all consumer and professional goods.

• Certain regulatory proposals – for example restrictions of larger groups of chemicals within short time frames – pose particular challenges for some important industries and products, such as the medical equipment sector.

• But the essential use concept could alleviate concerns and ensure access to vital products, such as life saving medical products. Essential uses could be allowed but with a strict time limit and austere conditions of use.

• Assessing groups of chemicals, instead of one by one, is critical to effectively manage chemicals.

• To speed up the regulatory process, we need to simplify and streamline regulatory procedures.

• Green chemicals policies must better protect children, vulnerable groups and workers against the harms caused by hazardous chemicals.

• In the EU, ‘no data, no market’ must become a reality by improving information requirements and therefore eliminating gaps in knowledge.

• With appropriate data and assessment tools, we can identify chemicals of concern, communicate their hazards and adopt the appropriate measures.

• Products on the market must be safe, no matter their origin.

• Safe and sustainable by design chemicals will support the EU’s broader circular economy and other environmental ambitions, as well as the UN’s Sustainable Development Goals (SDGs).
How ambitious is the new EU chemicals strategy?

**Context**

The EU chemicals strategy for sustainability has been hailed as a bold and ambitious framework that lays the groundwork for a transition to the safer management of chemicals. Like REACH and other EU chemicals policies before it, the strategy could set the agenda for effective chemicals management around the world. But what are the challenges and the barriers to achieving its objectives of better protection for citizens and the environment and boosting innovation for safe and sustainable chemicals?

**Moderator:** Andrew Turley, Science Editor, Chemical Watch

**Panelists:**

- Virginijus Sinkevičius, Environment Commissioner of the European Commission
- Jeremy Wates, Secretary General of EEB
- Marco Mensink, Director General of Cefic
Ambition and implementation

- As the UN’s Global Chemicals Outlook II anticipates, production, sales and consumption of chemicals will double or even triple in the coming decades.

- With around 100,000 manmade chemicals placed on the market over the decades, the challenge to effectively and safely manage them is enormous – we have a lot of catching up to do.

- Only ~500 have been extensively assessed with regard to hazard and exposure, with 10,000-30,000 having had varying degrees of assessment.

- NGOs say we don’t know yet whether the vast majority of these (~70%) are safe or not.

- However, stakeholders broadly consider that the chemicals strategy for sustainability strikes the right balance by combining an ambition for increased protection while promoting an innovation agenda for safe and sustainable chemicals at the same time. This allows industry to remain competitive and make plans for the future.

- The long-term goal is important. Society must become sustainable, climate-neutral, circular and toxic-free by 2030. Chemicals are needed to achieve these objectives.

- But some NGOs say the strategy is not ambitious enough for where we want to get to – a toxic-free environment.

- Industry does not only need a chemicals strategy for sustainability but also a strategy for the chemicals industry to comply and cope with the ambitious package of measures.

- Effective implementation of the strategy proposals will be key to achieving its ambition.

- The strategy’s support for innovation is vital because there will be an increase in regulatory pressure on certain chemicals and, for some, alternatives are not yet available.

- The EU chemicals industry understands that restrictions, authorisations and the essential use concept will come into play through the strategy. Industry will need the support of the authorities to ensure it is investing in the right innovation and staying competitive compared with the US, China and other chemical suppliers that are not “limited by the same regulation”.

- Enforcement at the borders and of imported products/materials is also essential because EU alternatives may be more costly than what the rest of the world may supply.

- The strategy must put a stop to the double standard of chemicals that are banned in the EU still being made there and exported.

- Further commitments are needed around the polluter pays principle – some NGOs say the principle is not sufficiently visible in the strategy.

- This could be addressed with the revision of REACH, where companies investing in safe and sustainable chemicals are rewarded and those contributing to the health and environmental burden of chemicals are penalised.

- The ambitions and vision of the strategy must not be diluted through ‘paralysis by analysis’.

Autonomy and global encouragement

- Sustainability is the only viable path for the future and this is valid for all sectors of the economy, including the chemicals industry and its downstream sectors.

- Coherence in the regulatory processes will give direction and secure long-term investment.

- Brands in the cosmetics, textiles and other sectors are committing to lead the change towards safe and toxic-free products and fully support the aims of the strategy.

- Stimulating the safe and sustainable by design concept will boost innovation and create a new market for EU industry.

- Boosting innovation and the competitiveness of EU industry is a key objective of the strategy.

- The strategy will help strengthen the EU’s strategic autonomy, the resilience of value chains and diversify sustainable sourcing of those chemicals that are crucial for the EU.

- The EU chemicals industry is not fully convinced the strategy will make it more competitive globally, because...
the US, China and others did not follow REACH and may not follow the EU's new ambitions

• However, whether adopted by others or not, REACH has been a global pioneer in regulating chemicals

• EU must lead the way but to fully ensure competitiveness across the world, we need a stronger global regulatory framework

• A global approach may not be realistic, or take considerable time to agree, and therefore it is important to apply a strict import policy to stop hazardous chemicals and products entering the region

• The Commission wants to bring the rest of the world along with it in achieving its objectives under the chemicals strategy and broader Green Deal

• The biggest wins will come from the identification of hazardous properties of new hazard classes, which will help with the regulation of endocrine disruptors and very persistent substances

• This will help meet one of the strategy's main objectives, which is to ensure consumer products do not contain the most harmful substances, such as carcinogens and reprotoxins

• The long-term ambitions of the strategy can be helped by being far more predictive, potentially through artificial intelligence and digitalisation forecasting the hazard classes of chemicals

• Investing in the digital design of new molecules, predictive toxicology and clearly identifying the next generation of products is where the biggest gains will come. The debate on the essential use concept is fundamental too: who decides what's essential or not? It's a political decision, and opinions might differ around the world

• Industry is concerned that removing chemicals simply because of hazard may be too simple an approach, but NGOs support generic hazard-focused assessments

• If the strategy supports investment in alternatives in the EU then all stakeholders will benefit
Transparency and risk communication: the challenges of communicating hazards and risks of chemicals

Context

Disclosure and communication of information on chemicals is vitally important for the efficient regulation of and protecting against chemicals of concern. Traceability of chemicals of concern along the value chain is an important element in creating market trust while complying with existing legal requirements. But disclosure and communication of information along the value chain and to consumers and waste operators is still not good enough. What are the challenges in communicating on potential risks of chemicals in products and what’s holding back full material disclosure?

Moderator: Jukka Malm, Deputy Executive Director, Echa

Panelists:

- Apolline Roger, Law & policy advisor, ClientEarth
- Julian Schenten, Darmstadt University of Applied Science, sofia – Society for Institutional Analysis
- Pelle Moos, Team Leader Safety and Health, Beuc
- Violaine Verougstraete, Chemicals Management Director, Eurometaux
- Mirva Kipinoinen, Director of Communications, Finnish Safety and Chemicals Agency Tukes
More or less

• Many organisations dealing with chemicals management issues are adhering to the principle of transparency.

• There are a variety of ways to implement this, and there are equally differing views on how much information should be disclosed.

• Transparency and disclosure need to be balanced with other principles such as protection of confidential business information.

• A key debate continues on whether more and more information on chemicals should be provided to the public and how it should be accessed and used.

• The digital age is opening up greater possibilities for making information available about chemicals safety.

• However, the modern communication landscape, such as social media platforms, also presents new challenges, such as increasing mistrust in science-based decisions.

Communication challenge

• Describing and communicating complex chemical risks is a challenging task but it is important to ensure that professionals and consumers use and dispose of products and chemicals safely, as well as recover and recycle them to contribute to a circular economy.

• Effective communication requires a common vision that sets priorities and clearly identifies the audience and its needs.

• Communication has to improve given consumer concern about chemicals in products, with, for example, four out of five Europeans surveyed expressing this and nine out of ten Swedish consumers wanting more information on chemicals in products.

• Empowering consumers with information means they can contribute to the green and digital transition through their purchasing choices.

• Transparency and consumer demands will drive innovation in safer alternatives and greener technologies.

• But improved transparency, while being urgent and necessary, should not shift the responsibility of avoiding exposure to consumers.

• NGOs want the EU’s chemicals strategy to strengthen the right-to-know measure under REACH (Article 33.2), which has experienced poor compliance from industry.

• Industry groups agree that enforcement of existing requirements should be further improved and facilitated.

• The concept of ‘controlled full material disclosure’ is possible where information is provided to the right audience at the right time, for example, to waste operators at the end of a product’s life, as well as to consumers on how to dispose of products in order to facilitate collection, sorting and recovery.

• This concept enables full disclosure of materials and chemical compositions throughout the value chain but controls which, when and by whom the information is accessed.

• Digital technology, such as blockchain and digital passports, are being piloted across industry.

• Full material disclosure enables better control of products, their chemical composition, their potential risks, as well as a move towards more sustainable chemistry.

• Cross-sectoral solutions, endorsed by the Proactive Alliance initiative, are enhancing effectiveness and efficiency of information sharing along the value chains.

• Cooperation with suppliers is key to traceability and transparency.

• Traceability must be applied consistently and exemptions should be avoided because this could compromise the overall objective of transparency.

• New audiences want more information on chemicals, for example, the investment community.
Broader transparency

- Public authorities should also provide transparency, particularly on regulatory studies, information related to potential exposure, and compliance and enforcement

- Confidential business information has been misused by some to avoid transparency and disclosure

- Engagement with all stakeholders – from supply chain actors to consumers – is important to understand how information should be and is consumed by different audiences. This will inform better transparency

- Safety information has to be declared on the products themselves because that is the easiest, most accessible way for the consumer to gain the information and act upon it

- Digital tools can help provide information but it must be acknowledged that not everyone has the digital skills or equipment to receive this

- Company product claims will also come under the spotlight with the EU’s policy measures, which means industry must ensure that what it is communicating is not misleading

- Traceability can bring companies great advantages and the negative aspects around cost and CBI should not be overemphasised

- Traceability and disclosure should not be limited to substances of very high concern – knowing all chemical compositions is important to achieving circular economy objectives

- Internet sales present a large, complex, rapidly growing transparency challenge, with some stakeholders describing a ‘wild west’ in terms of compliance

- To build trust in science–policy decisions, we need more examples of transparency in action and those examples should relate to everyday life

- The EU General Food Law reform introduced new measures for transparency and more information became available as a result – there may be lessons that the chemicals community can learn from

- Current IT solutions for traceability focus on intentionally present chemicals, but information about chemicals that may be unintentionally present is also needed – such solutions will need development
Safer substitution: how can we better incentivise a transition to alternatives?

Context

Transitioning to safer alternatives is a key objective for chemical management policies, both regulatory and corporate strategies. A number of challenges and barriers are associated with the development, assessment and practical adoption of alternatives. Developing an enabling environment that supports and speeds up the transition to safer chemicals is imperative, not only for chemical-related goals, but also for broader sustainability objectives.

Panelists:

- **Anne-Sofie Bäckar**, Executive Director, ChemSec
- **Paul Ellis**, Head of Sustainable Chemicals Management, Kingfisher
- **Joel Tickner**, Professor Lowell University and Executive Director of the Green Chemistry and Commerce Council
- **Peter van der Zandt**, Director Risk Management, Echa
- **Elke Van Asbroeck**, Owner and Managing Director, Apeiron-Team
Assessment and adoption

- A number of tools are available to help companies assess alternatives, such as the OECD's Substitution and Alternatives Assessment Toolbox and Guidance on Key Considerations for the Identification and Selection of Safer Chemical Alternatives, Echa’s guidance on analysis of alternatives and Germany's Subsport portal

- But the development and assessment of alternatives is not enough – supporting the adoption phase of safer alternatives must also be a key consideration

- If challenges around reformulating, changing manufacturing practices, ensuring adequate performance of alternatives, are not considered, then an alternative is not adoptable

- Support involves bringing together supply chain actors to demonstrate and understand the technical needs to adopt alternatives

- Transitioning to safer alternatives needs good policy with clear and consistent signals for the market. Drivers can come from regulatory frameworks as well as retailer requirements

- But drivers must be supported by sufficient and sustained funding and the appropriate infrastructure to enable the adoption of alternatives

- In the EU, REACH restrictions and authorisation do trigger substitution, with some market-leading companies moving ahead of regulation in line with their progressive sustainability roadmaps

- But companies in the EU have reported that they saw little financial gain or competitive advantage when substituting

- The EU's safe and sustainable by design concept, proposed under the chemicals strategy for sustainability, will drive development and adoption of safer chemistry

- When assessing alternatives we must also weigh the investment required to substitute substances, against the benefits the same investment could bring to other environmental, health or societal problems

An incentivising environment

- Regulation drives substitution and authorities can provide tools, but it is still for the manufacturers and users to find or develop the appropriate alternatives

- But some retailers believe that REACH applies restrictions and other regulatory measures, but does not offer sufficient guidance to downstream users on alternatives

- Retailers source products and are not necessarily involved or have input into the manufacturing process

- There is a lack of financial incentives to support research and development and adoption of safer alternatives

- There is a reluctance from many manufacturers to change formulations as well as a lack of transparency from suppliers

- Regulations must require full ingredient disclosure to advance the transition to safer alternatives

- Anticipation of regulations is driving innovation and substitution, for example, through substances being added to the REACH candidate list

- Some NGOs say man-made hazardous chemicals are a commercial risk and can negatively impact a company’s reputation if poorly managed

- Front-runners and leading companies should be awarded for their progressive moves to safer substitutes, while laggards disadvantaged

- A key debate towards achieving safer substitution is determining the elements that should be included in the definition of ‘sustainable chemistry’ and the safe and sustainable by design concept

- Major retailers are sourcing and buying greener products because they see them as having greater growth in the market
Spotlight on textiles: lessons learned from a well-known sector

Context

Addressing chemicals of concern is an ongoing challenge for all sectors. Few, however, have had as much experience in dealing with this as the textiles industry. Textiles production is a chemical intensive process and the issues associated with human exposure and releases into the environment have been well documented over the last few decades. NGOs and consumer groups are putting pressure on governments and companies to make significant changes. In light of these challenges, both regulatory authorities and the sector itself have brought chemicals management to the forefront of the industry’s agenda.

Panelists:

- **Moderator: Leigh Stringer**, Global Business Editor, Chemical Watch

- **Frank Michel**, Executive Director, ZDHC Foundation

- **Christina Jönsson**, Vice President, RISE Research Institute of Sweden

- **Ana-Maria Blass-Rico**, Administrator, REACH Unit, DG Grow, European Commission

- **Manfred Santen**, Toxics Campaigner, Greenpeace

- **Kristen Kern**, Manager of Supply Chains and Sustainability Initiatives, American Apparel & Footwear Association
Experience and action

• The textiles industry is of global importance, providing high levels of employment, foreign exchange revenue and products essential to human welfare. Chemicals are essential to the production of textiles

• However, the world is producing and consuming more textiles than ever before. And some estimates suggest the average consumer now buys 60% more clothing than they did 15 years ago

• Globally, it has been estimated that around 56m tonnes of clothing are bought each year, and this is expected to rise to more than 90m tonnes by 2030 and 160m tonnes by 2050

• This increase in production brings with it health and environmental issues, particularly those associated with waste and pollution

• In considering the ambitions of a circular economy, it is estimated that globally 92m tonnes of textiles waste is created each year

• The issue of chemical use and exposure to humans and the environment from textiles and its waste has long been in focus, largely because it is a major consumer-facing sector

• The current ‘fast fashion’ business model - where affordable clothing is mass produced but not intended for long-term wear - is not sustainable. There are too many textiles in the world now

• A first step has been the push for transparency and the need to understand what’s in the textiles industry’s waste discharge

• Many products are produced in China and other parts of Asia, but many brands are based in the EU, the US and elsewhere. Therefore policies of disclosure and the right to know should be adopted all over the world

• Significant progress has been achieved in the management of chemicals in the sector, with much of the drive coming from Greenpeace’s Detox campaign

• Industry has responded with the likes of the Zero Discharge of Hazardous Chemicals (ZDHC)

• Hazardous chemicals are being removed or replaced and the industry is collaborating and aligning to take on the challenge this presents

Challenges remain

• Some chemicals of concern are still proving a challenge to replace because of the lack of available alternatives that offer the same performance

• Safe products should be the goal of all companies. Reputable companies need a regulatory sphere that encourages an even playing field and rules out laggard companies.

• Industry favours regulation supported by peer-reviewed and credible data

• The regulation of chemicals in textiles products has increased, particularly in the EU. The launch of its strategy for sustainable textiles aims to boost competitiveness and innovation to ensure that the textiles industry recovers from the Covid-19 crisis in a sustainable way

• Regulation in the US is also picking up pace, with many states such as Washington and California recently adopting broad consumer product laws

• The industry wants to move away from multiple regulatory obligations and numerous customer requirements, to one aligned global framework

• Restricted substances lists (RSLs) and manufacturing restricted substances lists (MRSLs), as well as other tools and guidance, provided by industry groups such as the ZDHC, the American Apparel and Footwear Association and Sustainable Apparel Coalition, are helping companies in their efforts to safer chemistry and products

• The debate continues around how to achieve progress, either through encouraging leading companies to move ahead and create competition around progressive chemicals management or moving the entire sector along together

• It is hoped companies that have resources to conduct R&D in alternatives will use them to pave the way for other companies that may not have equivalent resources
• Regulations are also needed to incentivise industry progress, particularly around alternatives, and for this to work regulators need input from the sector

• Collaboration between industry, regulators, NGOs and academia is needed to develop workable solutions and policies

• Regulation has one significant limitation, which is that it stops at the border. Industry must address chemical-related issues globally to enable meaningful change

• There is still a lack of resources within some regulatory authorities and companies to enforce and comply with regulations

• Regulation must also consider the differences within the sector, for example, the larger companies that have the capacity and resources to effectively address chemicals of concern and regulations, compared to smaller firms that do not

• One concern is organisations that are not engaging in chemicals management – this presents a risk to achieving a level-playing field and a barrier to achieving collective progress
The Writing on the Wall

An unedited selection of comments and questions raised on the virtual platform chat function

Panel 1 – Forthcoming ICCM 5: Sound Management of Chemicals and Waste Beyond 2020

Does HEJ deal with wildlife as well?

So HEJ should look more at developing countries with no enforcement.

Hello everyone! This is x from India, Owing to the pandemic there is huge pile waste especially related to PPE, diagnostic waste, etc. Do we have an exclusive waste management in post pandemic world?

x from India makes an important point about the huge amounts of waste created from PPE in the pandemic. Will any speakers address the issue of managing this waste post-pandemic?

Fair and equitable data sharing cost rules have taken some time and work to establish in the EU. How could this be done for global actions?

Agree that is a big global issue now, perhaps worst in India.

As a follow up, how can the Polluter Pays Principle be enforced across national and regional boundaries in a globalised market

Huge amounts of waste created from PPE is also an issue in Europe – but we still do not know what the impact will be. Unfortunately, better management of this waste is not considered as a priority...

Some have called for countries and regions to adopt global restrictions that stop those with substantial resources exporting chemicals they believe are too dangerous to use domestically to countries with weaker risk management systems – do the panelists agree that restrictions should be adopted? Is a global restriction on this practice needed?

Agree, unfortunately, regulations stop at the border

We are facing high more exposure to pesticides as compared to the developed world.

Will the EU’s chemicals strategy for sustainability encourage further ambition at the global level, and particularly the ambitions of Saicm post-2020?

What is the main difference between the regular and the simple permit procedures?

Some important issues like pesticides, lead, etc. pollution in wetlands are so important globally that we need more to be covered under SAICM.

You may wish to see: https://www.unep.org/resources/making-peace-nature

The linkage between chemicals and waste and other environmental issues such as loss of biodiversity and climate change is a key element to progress in the agenda

We are losing big populations of migratory birds in wetlands due to pesticides, lead, mercury pollution

Surely we need more globally wide work to protect biodiversity against toxic compounds.

Thanks, we are now discussing these issues under SAICM but need more attention.

Considering 100s of toxic chemicals in plastics/ microplastics in the aquatic system, it always scares me about some synergistic effects and so disaster in the near future!

Any comments from the panel members regarding the problem posed by micro plastics? Do we have any mechanism to address this emerging issue.

Agree 100%! Currently, we waste much too much of waste...

What distinguishes chemicals from waste is time. At some point in time, every substance, mixture, product will become waste. The only long-term solution is to treat waste as a resource and supporting a circular economy.

Panel 2 - Green chemicals policy

As stated, sustainability covers a lot of factors. When looking at an overall assessment or looking at alternatives there might be conflicting factors requiring weighting of one over another when coming to a final conclusion. How could this be done, as it could be politically sensitive?
Microplastics are an interesting situation. Over history we have often found the hazards of a substance due to epidemiological observations and then had to assess exposure to understand risk. With microplastics we know a decent amount about exposure but the hazard is still to be fully elucidated. This is probably a sign that risk management is going in the right direction as we should be able to control risks much more proactively (and have already started!).

There is a good deal of discussions about predictive toxicology more about human and we need more for environmental issues.

The TRI is a great tool! This also links to the Aarhus Convention and the work on access to environmental data.

Is there a link between e.g. Safer Choice programme and Hazard Assesments under REACH e.g. regarding endocrine disruption, persistency, etc.

The problem with using "grouping" to speed up restrictions is that it is even harder to know the consequences of those restrictions. Whilst the chemical risk be clear, the consequences of a ban will not be. There may be many cases important to society to not result in substantive risk to humans or environment. Industry needs time to identify impact of a fast group restriction before it is finalised. The bigger the group, the harder it is to do.

We need more work to be done on regulations of EDCs, Pfas.

What is a "chemical of concern"? We have SVHCs and "hazardous" substances well defined in regulations but not this term.

Chemicals of Concern are usually considered to be those that would be a problem for recycling and waste management – it is a subset of "hazardous" but more extensive that "SVHC.

There are already EU-REACH-like regulations in many East Asian countries and this should be expanded to as many ME countries as possible

Since the EU is promoting GHS implementation in all parts of the world (as we heard in the first session), why not regulate ED, PBT, PMT first under REACH, while introducing the new hazard categories in GHS in parallel and thus avoid CLP moving away from GHS??? This way, you regulate them (avoid "wating a decade") and you also maintain global alignment of CLP and GHS as advocated by the EU (at least in the past).

A question for x: could you give examples of medical products that effectively disappeared from the market due to regulatory processes and higher chemical requirements?

The importance of the introduction of the new hazard classes into the CLP (and later GHS) has been reiterated in two panels today. However, on some occasions the perspective taken seems to be REACH-centric, as classification can have very different regulatory outcomes under REACH, crop protection, and pharmaceutical regulations. Are the impacts arising from this properly taken into account? Are we moving away from risk-based to hazard-based approach overall, and what are the consequences?

Is there a future for Authorisation? Or would it make sense to continue developing Restriction as a single process, which could incorporate a simple process for identifying Essential Uses?

But this building block is not agreed in GHS

In the case of essential uses like medical technology which are subject to regulated re-design processes that can take many years, would it make more sense to focus on a faster/simpler process for implementing additional environmental control and containment measures?

Introducing new hazard classes has exactly the advantage that CLP is used cross sectoral which is why targeting these chemicals under REACH alone will not lead to a uniform approach to hazard identification. The risk need to be taken care of – including specific needs for different sectors – under each sector legislation. On authorisation in future: probably still needed to assess whether use still essential and there is (still) no alternatives?

Let me give a try on authorisation and restriction: I think we have good reason to be proud of what we achieved in the EU. But I also take x message on delays very seriously (as well as I take the messages from industry in delays of authorisation very seriously). Hence no doubt that we need to be faster and less lost in detail. In my view merging the two systems and allowing for bigger and more generic restrictions is important – as important as the need for bigger and more generic derogations, to make the restrictions feasible and reasonable. Individual authorisation should remain possible but less the rule than it is under the current authorisation system.
Pre-recorded session - How ambitious is the new EU Chemicals Strategy

What issues regarding nanomaterials should have been included in the Strategy and why?

The concrete announcement is the revision of the nanomaterials definition. But let’s be serious: nanomaterials are not the most hazardous substances, and mainly an issue for worker protections (and maybe for very few other uses where there might be inhalation).

Regulatory Risk Management Option analysis should be further promoted and refined in my view. What is valid for one substance to manage the risks, is not for the other. We should also not forget about the unintended consequences of regulatory measures. Getting an exemption may be necessary to protect essential uses, but it may not solve the problem if the market breaks away due to a wider restriction.

Unintended consequences of regulatory action can only be avoided by – in broad terms – openness about uses. And that openness is a delicate balance for many companies. – risk of regulation vs. keeping business information confidential as long as possible.

Panel 3 - Transparency & risk communication

In 2012 ECHA conduct a Study on the Communication of Information to the General Public. It will be useful to conduct a new study and check the current level of awareness in Europe.


On the ECHA website, you could find Guidance on the communication of information on the risks and safe use of chemicals. It was drafted in 2010 so it might need some update, however, the basic elements of effective risk communication are well covered.

Some Asian countries have labelling schemes in place now (e.g. Thailand) but they are to avoid fraudulent use of "nano" as a marketing term NOT as a warning.

Hello, how can blockchain technologies guarantee that the information is accessible, readable by authorities (for enforcement purposes), the public (in application of its right to know) and the whole supply chain (including downstream users and SMEs)? Won’t it make the information less readable/accessible without the digital tools (blockchain) to access this information? thank you

Agree blockchain is far more powerful and effective in conveying the right information on chemical composition than any declarations in databases (like SCIP). It would have to work globally as well: we have so many imported goods that will have to be recycled in Europe in the future...Is this a dream or can it be a reality soon? Also blockchain can be useful for enforcement (checking restricted chemicals in imported goods to increase consumer safety) ?

Traceability and transparency are the key strengths of Blockchain and that is what we aim for not? Moreover it may reduce the administrative burden while ensuring the information can be made accessible. Seems a most interesting data exchange pathway to further explore.

FMD truly practical in all product sectors including electronics, automotive and aerospace. Are there any case studies proving the practicality of this in high complexity product sectors with multinational supply chains?

It is a pity that the ECHA Risk Communication Network does not meet regularly. It was a very good forum to exchange information, inspire each other to carry out information campaigns, and it significantly helped in fulfilling the obligations imposed on the Member States under Article 123 of REACH to inform the general public about the risks arising from substances where this is considered necessary for the protection of human health or the environment.

What are the likely costs involved in following all these suggestions/ And who will bear the costs?

Providing detailed info for consumers -which will require consumer education before the info can be understood

Which recyclers have committed to using data from the ECHA database for waste separation?

Has anyone considered the environmental costs of Blockchain solutions before suggesting them for product traceability uses?
Will the general public have a better understanding of hazard/risk/exposure in the post-Covid-19 world? What can the chemicals community learn from risk communication during the pandemic?

Are these solutions compatible with the use of internet sales (e.g. Amazon) and consumer to consumer sales (e.g. eBay)?

Don't we need to make a difference between digital passport needs and info for industrial use and those for final consumer use? The aims and the way how the info is provided should be different, not?

@x: to which risk communication during the pandemic you refer to? And by whom?

I would expect that at a certain point in time products will have an additional value at end of life if they have a materials passport. This as a result of the concept that waste is a valuable resource. By itself this could be a driver.

What is the benefit of full material disclosure for consumers compared to reporting obligations under REACH?

A bit outside the scope of the discussion, but an interesting initiative by a food chain (Coop, Sweden). By scanning a product's barcode with our mobile app, you get sustainability declarations on more than 10,000 of our products. You can scan the product directly in the store or at home in the refrigerator. The Declaration of Sustainability assesses how much or how little a product affects the climate, the environment and society based on ten different areas. For example. the risk of adverse effects on biodiversity or poor working conditions during production. Information that many consumers want but which is difficult to find. As a first aid for you who want to eat more sustainably.

Useful to know. These examples from other areas can enrich our thinking also for chemicals management solutions.

@x: Your point is relevant also for creating trust in science based management of chemicals. Indeed, how to build & maintain trust, especially where people seem to have less and less tolerance of complexity and uncertainty.

@x: I can not provide you with a list of waste recyclers but we continue our efforts to understand the needs of various potential users of SCIP data. Public dissemination of SCIP data is scheduled to start later this year.

@x on ECHA Risk Communication Network and Guidance. We are now engaging with Communication specialists of member states competent authorities where risk comms aspects are on the agenda. In my recollection the guidance is rather general and the principles have not changed. But we may review the guidance with a view of new challenges in the areas.

Dear x, I believe that it will be beneficial for all MS to learn from the experience of those countries "where risk comms aspects are on the agenda". All MS are obliged to inform the general public about the risks arising from chemicals.

Panel 4 - safer substitution

Safe and sustainable by design: would that include a balanced assessment of substitution benefits/impacts for chemicals management, climate and circularity over the lifetime of a substance and its use? Such an holistic approach seems recommendable to prevent regrettable substitution from a sustainability viewpoint! What are what the panel members’ views on that need for holistic view? safer substitution panel.

When assessing alternatives, does the panel think the guidance given by ECHA for applicants for authorisation is the gold standard or can it be amended to reflect new thoughts regarding sustainability?

Is there an academic journal that focuses on research on substitution to allow industry to easily follow cutting edge work?

To my knowledge: Current Opinion in green and sustainable Chemistry from Elsevier.

@x, sharing complete composition is for manufacturers often means sharing information on IP. Manufacturers invested a lot of time and money on the development of these products. How can manufacturers knowledge be protected?

Integrated Environmental Assessment and Management – ieam - as well as Green Chemistry Letters and Reviews have articles. The Association for the Advancement of Alternatives Assessment – saferalternatives.org is trying to get more articles published in ieam and to build the field of practice.

We cannot state so generically that “hazardous chemicals” should not be recycled, not? Would we promote a world where we do not recycle batteries? Sure striving for safer chemicals is justified but some hazardous chemicals will remain needed even for environmental reasons (eg catalysts). They should be risk controlled and recycled to promote
clean air and green deal goals.

Yes, there is a need to have safer alternatives available for the industry to replace (in time) the very hazardous and dangerous substances. BUT according to my opinion the focus at the moment, is too much or only on questioning that a substance is toxic, very toxic OR NOT. Perhaps we need to raise the question different or also, is the substance safe to use during the different manufacturing processes, is it safe for the consumers and is it sustainable ... all this ask time, effort for all involved parties. Who can help with this challenge without interfering the present business? Because nobody is ready to go back 30-40 years, meaning to stop the technology. Let's think together with the industry. This is a remark.

Is it realistic that we can recycle roof covering rubber into a rubber suitable for chewing gum or would it be smarter to expect that we can recycle this in new roof covers?

Biocidal products are essential to human health. However many display hazards to the environment by their nature meaning it is difficult to substitute with a non-toxic alternative. However, changes in use can lead to lower exposure and hence less risk (e.g. encapsulation in nanoparticles to slow release and reduce loss through run-off). How does the panel feel about this approach to reducing risk?

The significant regulatory costs to introduce a new biocide to the market makes it difficult to introduce alternative substances to the market in the EU. How can this barrier be reduced?

@x: to what extent have Kingfisher’s customers been willing to pay for the (higher price) of greener products? Have you researched this?

Do the speakers feel that public confidence in chemical safety in retail products has improved since REACH/ ECHA was established and other recent regulations were introduced over the last decade?

@x, has the cost of recycling been accounted for in your market analysis, and how might we make sure that recycled materials can compete with virgin materials? Are quality standards part of an answer, and what about regulation requiring recycled material content in new products?

Very good point. Substitution takes place at the DU together with suppliers and customers! = functional substitution.

@x, recycle of roof covering into a rubber suitable for chewing gum is upcycling. This is not realistic now. Next the rubber used for roof covering and for chewing gum is based on a different polymer.

I think there is a need to distinguish between sustainability and acceptability of the substitution, what do you think?

@x: shouldn’t natural resources be added to the list of 3 items you mentioned on SSBD? e.g. move to bio-based feedstock can make a big change but probably need to watch impact on natural resources (remember the biodiesel issue). Unless we see it as part of circularity

@x, if this initiative will not be done in a structured way (different steps) and with the cooperation of the industry itself (from multi-nationals to SMEs etc) You will push the chemical industry to other regions/countries who will think of this. In other words, a loss that EU don’t want to have.

Many times the alternative is not benign. Still, is it better to from CrVI to CrIII better than doing nothing, ditto for TCE to PERC, BPA to BPS, DEHP to DIHP etc... ?

@x very correct the rubber for chewing gums the one you use in tyres. Point is that in order to make a tyre one needs reactive chemicals. The chance that you find alternatives which has no hazard in any foreseeable timeframe is slim. In the mean time it make sense to recycle tyres. So the dogma not to recycle hazardous chemicals is simply harmful today if we want to maximise resources.

In reply to x. Does Ecolabelling drive substitution and consumer behaviour?

Could providing evidence of an alternative biocide being safer and more sustainable than existing ones trigger a quicker, less complex regulatory assessment process?

@x: Investing million of euros to replace TCE to PERC, eliminating only marginal risk, while the same investment could bring a huge benefit to society globally, is not only a waste of resources, but – in my personal opinion – it is an egoistic attitude of Europe.

Panel 5 - Spotlight on textiles

Some countries like Bangladesh have significant levels of employment and foreign exchange from the manufacture of textiles and clothing. What appropriate policies do the panel members think can be implemented to offer meaningful assistance to countries such as Bangladesh??
Good question x. The Covid-19 pandemic demonstrated the problem painfully. Sales dropped significantly, women in Bangladesh lost their job and were pushed into prostitution. How can we match the reduced consumption and increased reuse with leaving no one behind in our global economy? Any ideas of solutions?

So much textile production takes place in non-US and non-EU countries. How involved are governments, industry, and other stakeholders from developing countries in the campaigns and public consultations for regulations that we are discussing? Are there efforts underway to engage them more?