Welcome to this report of the debates held at the seventh annual Helsinki Chemicals Forum. This year’s event attracted 201 delegates from around 40 countries.

The 2015 Forum discussion on five key themes focused on examining the journey of stakeholders towards achieving the World Summit on Sustainable Development 2020 goal to minimise the adverse effects of man-made chemicals on human health and the environment.

Ahead of the fourth International Conference on Chemicals Management in Geneva in September 2015, the Helsinki thinktank discussed candidly what we have achieved, the challenges that remain, what is working, what is not and just how aligned are all stakeholders in their ambitions for sound chemicals management?

This report is prepared by independent news service Chemical Watch, and aims to be a balanced and accessible reflection of two days of debate in order to further understanding. We have not taken sides, or judged comments on their accuracy, veracity or fairness. This is not a formal report because this annual forum is not an official session, its participants are not experts on all the topics discussed and its conclusions do not represent a consensus.

Instead, this report offers a reference point for policymakers, companies, academics and others - presenting the voice of the people in the room about the important topics discussed.

On the last pages of the report we give an unedited selection of virtual comments and questions posted on the Forum message wall to ensure that audience views are reflected.

Mamta Patel, Director and Co-Founder, Chemical Watch
Leigh Stringer, Global Business Editor, Chemical Watch
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Helsinki Chemicals Forum contacts

Helsinki Chemicals Forum
www.helsinkicf.eu

Chemicals Forum Association
Messuaukio 1, 00521 Helsinki, Finland

Mr Hannu Vornamo
Secretary General
+ 358 40 500 4785
hannu.vornamo@elisanet.fi

Ms Teija Armanto
Communications Officer
+358 50 376 0804
teija.armanto@messukeskus.com

Ms Ida Ågren
Project Assistant
+358 40 450 3181
ida.agren@messukeskus.com

Chemical Watch contacts

Mamta Patel
Director, Co-Founder
+44 (0) 203 603 2110
mamta@chemicalwatch.com

Leigh Stringer
Global Business Editor
+44 (0) 203 603 2119
leigh@chemicalwatch.com
2020 goal

HCF Panel Debate 1: Thinking beyond 2020 – Saicm and the future for global chemicals risk management

Panellists:
Moderator: Bjorn Hansen (DG Environment, European Commission) Panel: Michael Lulei (Verband der Chemischen Industrie, Germany); Greg Skelton (American Chemistry Council); David Azoulay (Center for International Law).

Context:
With the fourth International Conference on Chemicals Management (ICCM4) being held this year, panellists and delegates took stock of where we are on the journey to achieving Saicm’s 2020 goals, the Conventions that are supporting it and how to progress beyond it.

The Debate

What’s been done?
» International conventions have banned some of the worst chemicals of concern
» Many countries, including those in the EU, have made a lot of progress with chemicals risk management and regulation
» Saicm has encouraged partnerships and the sharing of best practices
» Chemicals management is being included in discussions on the UN’s Sustainable Development Goals (SDGs)
» The OECD’s chemicals management tools are being widely used

What’s still needed?
» To identify the basic needs for sound chemicals management and better allocation of resources to meet them
» Support countries that lack the basic capacity to manage chemicals safely
» A clearer message that chemicals safety is fundamental to a country’s sound development and global trade prospects, as well as avoiding hidden health costs
» All of industry needs to be involved in Saicm’s work, not just the chemicals industry
» Find a way to measure the success of international activities
» Develop a global standard for safety data sheets (SDSs) for all exported hazardous chemicals
» Regulation must be sufficient at a national level to achieve international success
» Exchange of existing knowledge and increasing capacity building
» The information and experiences gathered in the EU on chemicals management should be made available worldwide through a substance information navigator

Where are we now?
» Saicm’s 2020 goal of sound chemicals management will not be fully achieved
» Conventions are slow, expensive and sometimes ineffective
» There are significant inefficiencies at an international level
» Benefits of managing chemicals – and costs of inaction – are becoming more evident to industry, countries and regions
» Chemicals are a solution provider for a sustainable future
» There is no, one-size-fits-all regulatory system
» EU still playing leader role in international chemicals policy, but this is sometimes questioned

Mood in the room – key take home messages
» Substantial progress has been made, but the 2020 goal will not be fully achieved
» There is a clear case for the economic benefits resulting from sound chemicals management
» Improving global data sharing would accelerate progress
» Basic capacity building in countries that have no means to manage chemicals safety should be a top priority
GHS

HCF Panel Debate 2: Globally Harmonised System (GHS) on Classification and Labelling – how can we get there faster?

Panellists:
Moderator: Bob Diderich (OECD); Panel: Edmund C Baird (US Department of Labor); Uta Jensen-Korte (European Association of Chemical Distributors); Yuri Saito (UN Institute for Training and Research); Gunilla Ericsson (Echa)

Context:
To date, 67 countries have adopted, or are in the process of adopting, GHS. This means there is still a long way to go before the system is truly global or harmonised – so what are the factors holding it back and how can we speed up the process?

The Debate

Benefits
- GHS is benefiting – in addition to other groups – the workplace in terms of better communication, particularly with labelling/pictograms
- C&L is the bedrock of any chemical safety management system
- Facilitates international trade
- Forces systematic collection of data and dissemination of information
- The practical impacts of GHS outweigh those of all chemical conventions
- OECD’s eChemPortal being used with new version soon to be launched
- Harmonisation across borders and sectors – the same criteria for industry
- Cost saving in the long run (cost of inaction)

Challenges
- GHS still a low priority on many national agendas
- GHS has not been adopted by all relevant US agencies
- Developing a multi-sector/ multi-stakeholder approach
- Legal implications of C&L (may) differ in different regions

Ways to speed up progress
- Collaboration between countries
- Developing a global list of classified chemicals – pilot project underway
- Better coordination and information exchange between industries
- More countries need to adopt and implement GHS
- Further training and guidance on how to successfully implement GHS are needed
- More human and financial resources should be invested in public and private sector
- Stop updating the GHS purple book to allow industry to effectively implement the book

Mood in the room – key take home messages
- In the last seven years many countries have implemented GHS and many more are preparing to do so – the momentum is gaining
- Still, even within countries, including the US, there is fragmented implementation due to differing agency priorities.
- GHS implementation needs to be recognised as something that governments and all sectors of industry need to work on
- The idea of a global list of harmonised chemical classifications is very appealing, but it will take a long time to achieve and it may have legal implications in certain countries that need to be considered
Chemicals in products

HCF Panel Debate 3: Chemicals in Products – how to improve communication in the supply chain

Panellists:
Moderator: Mamta Patel (Chemical Watch); Panel: Claus Jorgensen (Danish Consumer Council); Elliot F. Kaye (US Consumer Product Safety Commission); Erika Kunz (Clariant); Christel Musset (Echa); Mark Rossi (Clean Production Action)

Context:
As consumers, the issue of chemicals in products affects us all and is as complex, dynamic, global and impactful as climate change. The volume of products increases exponentially and geographically, which brings with them new chemicals – some hazardous and some not properly managed. How can communication tackle the “chemical intensification” of the economy?

The Debate

Issues

» Growing demand for transparency from the public
» Developing effective supply chain communication is complex across different regions, legislations and practices
» Focus should not be on banning one substance at a time – more holistic approach needed
» Hazard versus risk still a debate around the importance of knowing chemicals in products – should focus be on chemicals or exposure?
» Non-EU suppliers find it difficult to understand EU REACH-led framework and tools
» Consumer and NGO pressure is sometimes forcing companies to take action
» Market pressures can have drastic effects on companies’ product sales
» Harmonisation of tools has positive economic effects for business, but SMEs insufficiently aware
» Lack of coordination between agencies within and between countries to enforce product safety

Recommendations

» Retailers have the ability to affect the market place and create change
» Understanding chemicals in products requires use of well populated chemicals databases to identify chemicals of concern
» Need for more product testing and knowing all of the chemicals in your products
» Business opportunities and benefits can come from effective communication, which drives transparency and trust … a key element of sustainable business
» Classification and labelling, safety data sheets are key tools in enabling downstream users to use chemicals safely
» More proactive companies are coming forward to lead best practice
» Common standard for measuring chemicals management would help companies to engage
» Mutual recognition of product inspection results between countries would help

Mood in the room – key take home messages

» The drivers to force companies to account for the safety of the chemicals in their products are increasing, not least consumer awareness
» The supplier-customer relationship is far more effective at achieving substitution of chemicals that pose unnecessary risks than regulation
» REACH has initiated the development of many useful supply chain tools and these now need to be deployed by all sectors
» Enforcement needs to be improved within and at borders
» Companies that are proactive in anticipating chemicals of concern avoid unnecessary costs and achieve market opportunities
Substitution

HCF Panel Debate 4: Avoiding regrettable substitution – what are the best practices in alternatives assessment?

Panellists:
Moderator: Jake Sanderson (Environment Canada); Panel: Anne-Sofie Andersson (ChemSec); Eeva Leinala (OECD); Mike Rasenberg (Echa); Joel Tickner (University of Massachusetts, US)

Context:
There are lots of pressures for chemical de-selection driven by regulatory, consumer and customer needs. But the complexities of the substitution process can lead to regrettable substitutions. The panel discussed action-oriented ways to address this and future needs.

The Debate

Considerations
- Alternatives assessment is still an emerging and arguably stand-alone field with methods and multiple tools available
- Role of substitution lies with both industry and government
- Action is the goal of alternatives assessment – access to assessment information is key, but the information should also be actionable
- Knowledge gaps can be tackled through robust toxicological datasets; iterative processes and a interdisciplinary approach
- Costs of substitution still a barrier for downstream users
- Green chemistry still not a common consideration of product design

Recommendations
- Government role must be to support SMEs and set the right environment for assessment
- Need for frameworks that guide informed substitution, such as the National Academies Alternatives Framework
- Both hazard and exposure are important considerations in substitution decision-making, but use information is often missing
- The substitution process must be flexible and not burdensome if uptake is to increase
- Substitution must be seen as an innovation challenge to drive industry uptake
- Need for education – chemists are not being trained in green chemistry; product designers are not trained in the environment and toxicologists are not trained about prevention
- Wider factors, such as energy and resource efficiency, should be considered when carrying out alternatives assessments
- Chemical functions, or loss thereof, when considering alternatives should be measured on a case-by-case basis

Mood in the room – key take home messages
- Alternatives assessment is emerging as a new field of study with its own methodology and tools
- Pressure to substitute hazardous chemicals is coming from regulatory, customer and NGO needs
- Substitution simply on a hazard basis can lead to unintended consequences for downstream users
- Substitution of unwanted chemicals needs to be factored in more strongly at product design stage alongside wider effects such as energy efficiency and recyclability
- Substitution should be seen not as a compliance issue but as a market opportunity
Green chemistry

HCF Panel Debate 5: Green chemistry and engineering – a fundamental breakthrough?

Panellists:
Moderator: Jack de Bruijn (Echa); Panel: Erwin Annys (European Chemical Industry Council); François Monnet (Solvay); Rodney Townsend (Royal Society of Chemistry, UK); Michael Warhurst (CHEM Trust)

Context:
Green chemistry offers industry and society a number of opportunities, but barriers to it becoming mainstream still exist, such as its very definition not being widely understood. Wider issues, such as resource efficiency, are commonly debated within the green chemistry discussion – but how can it become a mainstream environmental solution, like the circular economy and energy efficiency?

The Debate

Issues
» 12 principles of green chemistry need to be updated in order to better integrate a systems-thinking approach
» Green chemistry is not the same as green chemicals – use of renewable feedstocks does not intrinsically mean less hazardous chemicals are used
» Green chemistry is appreciated as a significant part of the sustainability agenda but must involve a holistic approach
» Green chemistry needs to be more clearly a part of the mainstream green product/circular economy agenda
» Keeping pace with the development of new chemistries, innovations, increasing sophistication of detection methods and the changing market
» Regulation must encourage, not discourage innovation
» Consumers should be educated about the aims of green chemistry – they must see the benefits otherwise sustainable products that incorporate green chemistries will not become a success in the market
» Need for new modelling technologies; to use current technologies intelligently and a need to use a combination of current measuring capabilities
» Designing products to achieve optimum efficiencies is already part of daily life in chemical companies – but new factors such as use of renewable feedstocks need to be factored in.

Barriers
» Interaction is lacking between research and development, regulators and the policies that are in place
» Chemists, chemical engineers and systems engineers need to work more closely instead of in silos
» Available tools are insufficient and cannot keep up with the rate of innovation
» Modelling will never by itself have the ability to label a substance wholly safe, but can tell what is clearly dangerous

Mood in the room – key take home messages
» There is confusion between green chemistry and green chemicals
» The 12 principles of green chemistry need to be updated
» At times products are released onto the marketplace before the risks are fully understood, for example some nanomaterials
» There needs to be closer working between chemists, chemical engineers, process and systems engineers, along the supply chain as a whole
» Green chemistry needs to be fundamentally part of green/circular economy planning
Panel 1 – 2020 goal

» A lot of possibilities to better coordinate actions, tools and even datasets through the OECD. However the American government on many aspect prefers to act on their own way especially for using common available tools. Could Greg elaborate on this?
» #ChemicalsForum what does the panel think about the role of Govt and Private Sector in chemical response and supply chain safety by 2020
» Chemical risk management is a journey, it’s never ready, important to have framework for continuous progress globally
#ChemicalsForum
» American Chemistry Council: “Need for mutual recognition in the chemical field”. Race to the bottom? #ChemicalsForum #dkgreen #swegreen
» Re treaty thicket – time for a framework convention?
» Should the goal be reset if it cannot be reached?
» One of the most simple next steps to help safe use worldwide would be to have a global commitment that all chemicals exported to any country have an SDS in line with the agreed GHS standard. Can we move on this?
» Do all panelist agree on more global data sharing?
» Cloning legislation is preferred. If we have tens of variants of REACH or ROHS, product manufacturers face impossible task to comply! Just see what happens in the US state level in boom in childcare product bills introduced
» Which part of REACH is “too sophisticated” for the South?

Panel 2 – GHS

» What are the benefits we already see coming from GHS implementation across the world?
» Why is it so difficult and slow even in the US to get GHS implemanted across different sectors (environment, consumers)? Not implementing the environmental hazards create a big gap compared to other jurisdictions.
» In 2017 it will be 25 years since the Rio Earth Summit called for GHS, in that time trade in global products has risen exponentially. How should success be measured in 2017?
» A potential challenge of a global inventory of classification are differences in legal implications of classifications. Will these considerations be addressed in the OECD pilots? Do classifications have an effect on liability claims in the US?
» Many Responsible Care companies already provide UN GHS-format SDSs in those countries that do not have any regulation in place, but the challenge remains to get the fundamental awareness and training to users of chemicals that they can utilize the data coming from exporters.
» Is bitwise implementation of GHS better than nothing, or is perfect the enemy of the good?

Panel 3 – Chemicals in products

» In EU we have a lot of elements for supply chain communication. EsCom, Use descriptors etc. But chemicals are traded across regions and outside EU suppliers have a hard time to understand the EU frame, which is a huge barrier for EU chemicals trade. How do we bring the communication into more globally understandable and standardized format?
» Question to Mark Rossi…Exposure enables to assess risk and the mere presence of a hazardous chemical in a product does not necessarily mean it involves unmanageable risks. How does Clean Production Action deal with this risk element, taking into account that addressing hazard only can prove misleading and can lead to unwanted/ineffective substitution.
» Do we know if Article 33 REACH (consumer right to know) is working or not?
» Is it safe to say that if the US and EU are having issues with supply chains that products that fail criteria end up in emerging countries who have focus on other problems, and essentially import most of these products. Can you comment on that aspect of possibility of dumping of products that are rejected in other countries
» Are sanctions in national law for noncompliance of Article 33 REACH in place and working?
» Compared to other global issues, such as climate change and the waste issue, chemicals management receives a fraction of the attention, yet it could be argued that it is just as important and interlinked – what’s holding back awareness and how can companies communicate the significance of this global issue?
Panel 4 – Avoiding regrettable substitution

» In some sectors, such as the apparel sector, companies are starting to work with ‘positive lists’ of chemicals when designing their products, so to avoid chemicals that offer potential compliance and other regulatory and legal problems down the line. Are you seeing an uptake in this amongst companies, particularly retailers?

» Excellent summary from Joel! Isn’t REACH authorisation pushing the substitution a bit too much for just getting rid of authorisation chemicals, forgetting the action-oriented” holistic view?

» Who defines which chemical substances are allegedly “unwanted”? It seems that SIN list and others are driven by target numbers and ideology, not necessarily by materialized HSE concerns. Can this be further elaborated by the panel discussion?

» Question: would better results for substitution be achieved by regulating more the articles ie End of the supply chain than the chemical manufacturing?

» What about the time factor? This is critical in avoiding regrettable substitution – need to leave enough time to test and develop suitable alternatives that will provide EH&S functional and economic viability. A rushed alternative solution using a little researched chemical may ultimately prove more harmful than controlled use or the original, better researched chemical, the risks of which are known and can be managed.

» Looking at the hazards when deciding on which substances need to be substituted or authorized without proper look on the real RISK leads more likely to regrettable substitution where eg important processing aids etc. become regulated impacting the whole downstream chain (quality, functionality, efficient use of raw materials, etc) and not addressing the real exposure risks at consumers/end-users

» Should loss of intended function be one of the alternatives considered? How can regulation force businesses to include this option (eg no red Lego blocks)

» The discussion is very focused on hazard and risk comparisons. Should an alternatives assessment not address other aspects as well such as energy and natural resource use, effects on waste stages etc?

Panel 5 – Green chemistry

» While regulatory and market policies can support “demand” for green chemistry, what is the role of supportive policies that support “supply”? – r&d, adoption, and scale of green chemistry solutions? Who is responsible for developing/implementing these?

Why do so few company sustainability reports include the issue of designing out chemical hazards (and risks) form their products? It is too often seen as a separate “compliance” issue

» Is green chemistry part of the chemical industry’s sustainability initiative, Together for Sustainability? There is little mention of green chemistry and it seems to focus more on process efficiency (such as energy and water efficiency). Shouldn’t green chemistry be a significant focus of this initiative?

» Why is it that existing chemistry is deemed by definition to be not green and that all chemistry should be replaced with green alternatives?

» Nice talks but if “ignorance is a choice” how should we interpret the fact the Echa database only contains hazard data on a handful of Nanomaterials whereas they are increasingly marketed in rapidly increasing variety of applications?