COMMUNITY OF PRACTICE ON CHEMICALS IN PRODUCTS

Organized by the SAICM Secretariat and the University of Cape Town

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Discussion digest

Topic of Discussion: Assessment of alternatives

A safer alternative is defined by the Organization for Economic Co-operation and Development (OECD) as a "chemical, product, or technology that is preferable, in terms of both hazard and potential for exposure to humans and the environment, than the existing option". The focus of this discussion was on the assessment of alternatives in the Chemicals in Products world. In this discussion, the OECD presented the "Guidance on Key Considerations for the Identification and Selection of Safer chemical Alternatives". This guidance was presented together with the European Union's REACH Authorisation process, which helps to ensure that the risks from Substances of Very High Concern (SVHC) are properly controlled and that these substances are progressively replaced by suitable alternative substances or technologies that are economically and technically viable, whilst still ensuring the good functioning of the EU internal market. Finally, some suggested steps to take in identifying products with safer chemicals were presented by a member of the Clean Production Action team -a non-profit US organization.

To view the PowerPoint presentation from this discussion, click here.

ABOUT THE PRESENTERS

Dr Eeva Leinala is the Principal Administrator for Programmes on Risk Management, Good Laboratory Practices and Mutual Acceptance of Data at the Organization for Economic Co-operation and Development (OECD). Eeva collaborates with OECD member countries and stakeholders to advance approaches for risk reduction of chemicals, including substitution and sustainable chemistry, as well as leading the programme on Good Laboratory Practices and Mutual Acceptance of Data. Previously, Eeva led the Hazard Assessment Programme at the OECD and before the OECD, Eeva worked in chemical management at Health Canada for 12 years. Eeva holds a PhD in biochemistry from Queen's University in Canada. eeva.leinala@oecd.org, www.oecd.org/chemicalsafety.

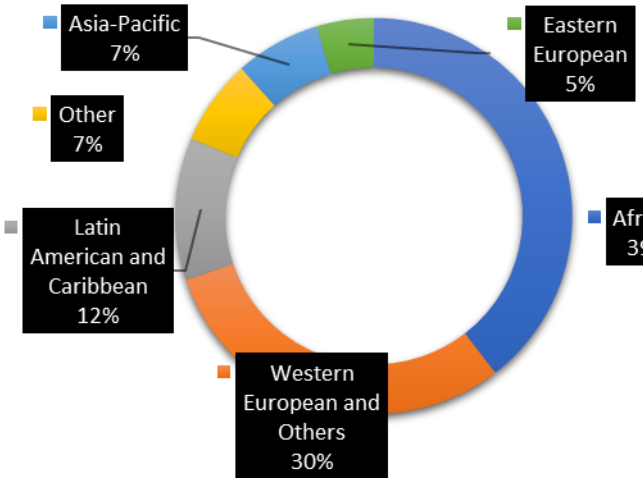
Monique Pillet works for the European Chemicals Agency (ECHA) in the Risk Management unit. Her key tasks are related to the handling of applications for authorisation dossiers under the REACH regulation and the coordination of the agency's work to support the substitution of hazardous substances. Monique also coordinates the collaboration between the Agency and the European IPPC bureau on the Industrial Emissions Directive and the review of Best Available Techniques Reference (BREF) documents. Before joining ECHA, Monique worked as an environmental manager in the chrome plating sector in Finland. Earlier she worked in the oil and gas sector in Switzerland and Singapore. Monique holds an MSc degree in environmental geology from the University of Geneva, Switzerland.

Mark S. Rossi (PhD, Executive Director, Clean Production Action) has decades of experience creating solutions for safer chemicals and sustainable materials. Part of the Clean Production Action team since 2004, he began as Research Director and Co-Director, before rising to Executive Director in 2016. Mark is a member of the Massachusetts Toxics Use Reduction Act Advisory Committee and recipient of the US EPA Region I's Environmental Merit Award and the National Pollution Prevention Roundtable's P2 Ambassador Award. He is a leader with the unique ability to bring together diverse groups and achieve innovative outcomes. Mark co-created Greenscreen for Safer Chemicals founded BizNGO Working Group for Safer Chemicals & Sustainable Materials and co-founded the Chemical Footprint Project. His PhD is in Environmental Policy from the Massachusetts Institute of Technology (MIT).

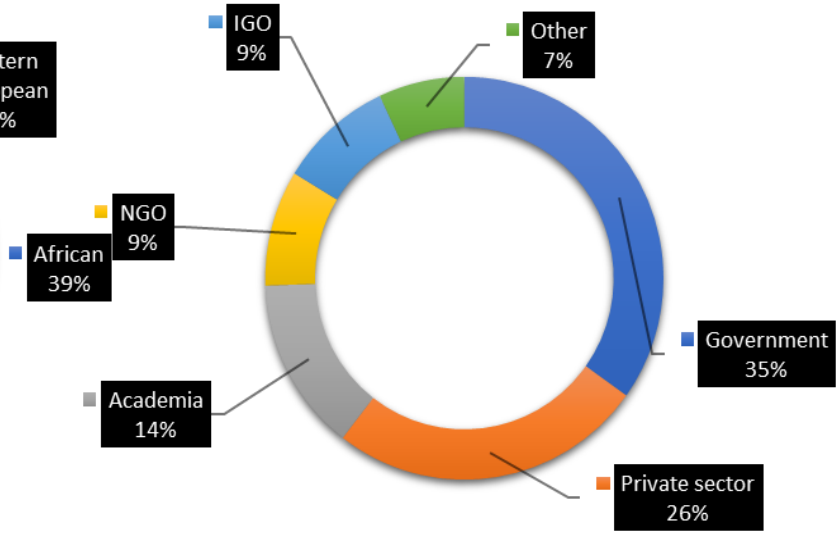
2022 DISCUSSION 3 ATTENDANCE BREAKDOWN

TOTAL ATTENDEES FOR 2022 DISCUSSION 3: 43
Male – 53 %
Female – 44%
Unknown – 2%

Regional Representation



Sector Representation



Key:
IGO – Intergovernmental organisation
NGO – Non-governmental organisation

Chemicals in Products Community of Practice 2022 Discussion 3
Summary and looking ahead

This discussion covered the assessment of alternatives and was presented by experts at the European Chemicals Agency (ECHA), the Organisation for Economic Co-operation and Development (OECD) and Clean Production Action. These experts shared their thoughts and experiences around the assessment of alternatives and led the discussion with a diverse group of stakeholders.

When asked whether guidance and tools for substitution and alternatives assessment were accessible and usable by the practitioners, the respondents stated that **they are not accessible by the practitioners**, and some added that **it is "rare to find such programs in developing countries"**. Only tools related to pesticide management and guides to support risk assessment for chemicals are used as substitutes for guidance documents. Participants from countries like Malawi, Tanzania, and South Africa stated that **they have programs in place to support the substitution and selection of safer chemicals**. On the other hand, participants from Eswatini, Iran and Guyana stated the contrary. There were 50**%** of the respondents indicated that **additional information** on the **technical feasibility of alternatives** and **technical support** was needed to further support for substitution.

Concerning the analysis of alternatives under the REACH authorisation, respondents stated that **ECHA's resources** were **beneficial** to the analysis of alternatives when using guidance about analysis of alternatives, substitution to safer chemicals etc. Some respondents stated that they use ECHA's information to look for **alternatives for flame retardants and other chemicals in products.** The respondents from Tanzania stated that they were not aware of ECHA's resources, and some added that not all stakeholders are aware of these resources and how to access them.

Participants were asked to mention what the obstacles were when assessing alternatives. Respondents from Guyana, Malawi, USA, Japan, Brazil, South Africa, Iran, and Tanzania stated that their challenges included **the lack of technical knowledge, guides, and tools available in the Portuguese language; consumers' consciousness; lack of facilities for conducting tests/analysis; and a lack of government support**. The respondents from Iran, Tanzania, South Africa, the USA And Eswatini added that they would like to have **more information** on the **analysis of alternatives**, the **sustainability of suggested alternatives**, and **deciding which framework to use,** to arrive at the best possible alternative that can be used.

To ensure sustainability in the production and use of chemicals in supply chains in their countries, respondents stated that they mostly rely on:

- Chemicals Database like ECHAs REACH.
- Asking for information from importers on listed ingredients.
- Products information.
- chemical inventory status.

Tools to assess the hazards/toxicity of chemicals were identified as:

- Predictive toxicology.
- Replicated toxicity testing in form of replicated bioassays.
- GHS label.
- Social media.
- SDS plus Cheminfo.
- Usage of tracking systems for chemicals of high concern (current and future legislation).

There is a need to **increase access to guidance documents** on alternatives developed by organisations like OECD and ECHA to **low- and middle-income countries (LMICs)**, to continue to **share information** from the private sector, and to encourage and engage in **capacity building of practitioners.**

ANNEX

DETAILED SUMMARY OF DISCUSSION:

Disclaimer: The information in this digest represents the opinions of members participating from different stakeholder groups expressed during the discussion. The views expressed in this document do not necessarily represent the opinion or the stated policy of the United Nations Environment Programme, the SAICM Secretariat, the GEF or UCT, nor does citing trade names or commercial processes constitute an endorsement.

THE DISCUSSION WAS STRUCTURED AROUND THREE QUESTIONS AND THE KEY DISCUSSION INPUTS FROM PARTICIPANTS ARE PRESENTED UNDER EACH QUESTION:

Q1. Are guidance and tools for substitution and alternatives assessment accessible and usable by the practitioner (i.e., the one considering the safer chemical question, whether industry, government, or another stakeholder)? If not, how can the situation be improved?

COUNTRIES	PARTICIPANT'S RESPONSES
BRASIL (PRIVATE)	- There are few guide documents to support risk assessment for chemicals, especially with a focus on operations and laboratories. However, no tools or guides are available to assess alternatives to chemicals in products. - A National Chemical Management Plan will be a helpful tool to communicate the relevance of this issue and create a "fair playfield". Although this will help, this solution will require further actions such as its enforcement among the manufacturers, and financial and technical support to the Small and Medium Enterprises (SMEs).
GUYANA (GOVERNMENT)	- Some tools are available as the pesticides management toolkit used by the pesticide's authority. - For toxic chemicals, this is lacking, hence only the label and Safety Data Sheets (SDSs) are used.
IRAN (ACADEMIA)	- It is rare to find such programs in developing countries though new ideas are rising but no regular programs. - Some attempts to support LMICs with safer chemicals programs were made but with little success following the OECD programs on safer chemicals and other related programs. - There should be more communications and cooperation between chemicals (including pesticide) manufacturing countries eg., the EU and developing countries. - A pertinent issue is how will this be possible when EU countries are exporting Highly Hazardous Pesticides to developing countries.
TANZANIA (GOVERNMENT)	- Yes, the tools are accessible and used for finding information regarding chemicals. - It is uncertain whether there are guidelines and tools for substitution and alternative assessment in Tanzania.
USA (PRIVATE)	- Yes, adequate tools are available, although they may differ in what order evaluations of suitability are made and the emphasis put on various elements, e.g., performance versus hazard.
RESPONSE FROM BLOG	- In some organizations and various sister companies, a regulatory compliance tool was developed where raw materials are screened for any Substances of Very High Concern (SVHCs)/ regulations for prohibited substances/ phase out (e.g., PCBs) before purchasing. - If any of these materials contain SVHCs, they cannot be purchased by the company. - ECHA's data is extremely useful in conducting such assessments.

Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data.

Poll 1: Does your government have programs in place to support substitution and safer chemical selection? (N=10) [Open ended].

Governments <u>with programs</u> in place

Malawi

- Yes, substitution to safer alternatives including the promotion of Biopesticides for chemicals in agricultural use.

South Africa

- There is a regulation for hazardous chemical substances, but it is not clear how much is included about alternatives as it focuses on safe handling.

Others

- Yes, at the state rather than the federal level.
- In some medical products such as Mercury used by dentists, there are programs to support its substitution.

Tanzania

- There are programs in place.
- Yes, but they are general and not specific.

Poll 1 Cont. Does your government have programs in place to support substitution and safer chemical selection? (Insert the name of your country) [Open-ended].

Governments with <u>no</u> programs in place

Eswatini

- There is no proof of whether there are safer chemicals advertised in Eswatini.

Iran

- There is no regular approved program; Iran has been trying to have a program for years using scientific and academic institutions, although Iran is a member of nearly all related UN conventions like the BRS conventions.

Guyana

- This topic is now on the table but for specific products e.g., lead in paint.

South Africa

- There are no programs in place.

Poll 2: What is needed by the industry to further support substitution? (N=14) [Multiple choice]

- Financial support: 0%, n=0
- More information on chemical properties (hazard, exposure): 0%, n=0
- Other (Please specify in the chat) 14%, n=2
- Technical Support (Guidance, frameworks): 36%, n=5
- More information on the technical feasibility of alternatives: 50%, n=7

USA (Private)

- There needs to be disclosure and information of all the chemicals in products.

Q2. Have you already consulted/used the information available on the ECHA website related to the analysis of alternatives and substitution? If not, why not? If yes, what did you find most useful?

COUNTRIES		PARTICIPANT'S RESPONSES
BRASIL (PRIVATE)	-	Yes, the information extracted from the guidance assisted in the analysis of alternatives. The "Guidance on safer alternatives" was very relevant for the analysis.
	-	The ECHA information was used.
GUYANA (GOVERNMENT)	-	Yes, they come in handy when looking for alternatives for flame retardants that have POPs and so advise the importers.
IRAN (ACADEMIA)	-	ECHA is always a great source of information with a wide variety of information that is impossible to go through everything.
JAPAN (PRIVATE)	-	ECHA's database and disclosure are leading this field but often it takes a hazard-based approach.
MALAWI (GOVERNMENT)	-	No, just getting updated now that the list is also available on ECHA.
	-	This is new information as the only alternatives published include the PAN UK "List of safer alternatives".
TANZANIA (PRIVATE)	-	Yes, in Tanzania, ECHA is one of the useful sources of information used as a reference.
	-	The challenge is that not all stakeholders are aware of this source and know how to access the information.
TANZANIA (GOVERNMENT)	-	Yes, it is a useful network for stakeholders to share experiences on alternatives.
	-	The ECHA resources are not known.
USA (PRIVATE)	-	No, but only because other guidance have proven adequate.
ZIMBABWE (GOVERNMENT)	-	Yes, some information for analysis of alternatives.
	-	Yes, for analysis of alternatives for UCT assignments.
RESPONSE FROM BLOG	-	The most useful information on ECHA for my line of work has been Information on Chemicals Info cards; dossiers to look at scientific properties; Candidate List of SVHC for Authorisation.

Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data.

Poll 3: What do you consider the most challenging when assessing alternatives? (N=10) [Open ended]

Guyana

- The industry/ importers don't have access to the information that the regulators have.

Malawi

- Adoption of alternatives by the users takes time, even when safer alternatives are provided, demand for restricted or substituted products remains a challenge.

USA

- Finding an agreement with regulators or NGOs regarding which alternatives provide performance that will be acceptable to the end user.

Japan

- Consumers' consciousness.

Brazil

- The lack of technical knowledge, and the absence of translated guides documents and tools in the Portuguese language. They would be beneficial to professionals to manage chemicals and analysis of alternatives in relevant countries.

South Africa

- Lack of facilities for conducting tests/analysis and lack of government support.
- A challenge would be the willingness of producers and importers to assess alternatives and opt for using them.

Iran

- Unavailability in developing countries.

Tanzania

- Technical information is rarely available.

Others

- The technical and economic part

Poll 4: What would you like to have more information on? (N=7) [Open ended].

Iran

- Alternatives to HHP.
- The cooperation between ECHA and developing countries including the **Middle East and North Africa** (MENA).

Tanzania

- Information on Analysis of Alternatives.

South Africa

- The sustainability of suggested alternatives.
- How to use the information on an alternative for regulatory decisions and what content should be in legislation to register alternatives quickly.
- A clear process on how to access new information regarding the new alternatives.

USA

- Adequate information and guidance exist; the challenge is deciding which framework to use and confirming that it helps to arrive at the best alternative.

Eswatini

- Biopesticides as alternatives.

Q3. Are there case studies of proven technology solutions to support sustainability in the production and use of chemicals in supply chains?	
COUNTRIES	**PARTICIPANT'S RESPONSES**
GUYANA (GOVERNMENT)	- It is only during the registration cycle that chemicals listed in various conventions are checked and are part of the Chemicals being reviewed. - Importers are asked if it's a listed ingredient to avoid import and seek alternatives.
JAPAN (PRIVATE)	- Labelling on the packaging, and exposure level should be considered for consumers' consciousness.
MALAWI (GOVERNMENT)	- Reliance mostly on Chemicals Database like ECHA's REACH authorisation.
TANZANIA (GOVERNMENT)	- There is no proof that this is done in Tanzania, finding products with safer chemicals.
USA (PRIVATE)	- Most products provide information on what they don't contain, rather than what they contain, like having statements such as they contain "safer chemical X".
SOUTH AFRICA (ACADEMIA**)**	- It is not certain that this is done in South Africa as chemicals in products are not reviewed but just chemicals per se.
RESPONSE FROM BLOG	- Products with no substances of very high concern, chemical inventory status of a country to determine any component of the product that is restricted or prohibited. -

Poll 5: How do you identify chemicals of high concern to human health or the environment? (N=8) [Open ended].

Iran

- The first step would be to do a Meta-analysis to see what information is accessible on a global level, and then do a replicated toxicity testing as replicated bioassays, etc.
- In South Africa using the GHS labelling and hazard labelling would be one of the ways to identify a highly hazardous product. This relies on consumers understanding this labelling system and being able to read the label ingredients.

Others

- The SDS sheets are a good starting point; this will inform further research on health or environmental effects.
- Science-based advice and my personal experiences.
- Using toxicological information presented in the label and SDS.
- Through the lists provided by international organizations like FAO/WHO.

South Africa

- Through labelling and SDS.

Guyana

- By reviewing the SDSs for chemicals listed on various conventions.

Responses from the chat:

- Information on labels is not disclosed enough to provide informed decisions.

Poll 6: What tools do you use to assess the hazards/toxicity of chemicals? (N=6) [Open ended].

Iran

- Using new technologies like predictive toxicology, etc.!
- Replicated toxicity testing in form of replicated bioassays, etc. also using new technologies like predictive toxicology, etc.

Others

- GHS label, Face book and Twitter.
- SDS plus Cheminfo.
- GHS tool & WHO classification of pesticide.
- Not sure.

Guyana

- GHS labels, WHO toxicity classification.

Responses from the chat

IRAN (ACADEMIA)
- Replicated bioassays e.g., to assess acute toxicity on different biota.

BRASIL (PRIVATE)
- Use information from what happens in Europe and the US regarding legislation, assessments and work done by governments, companies, and NGOs as a primary reference to drive discussions and actions to identify and select alternatives in Brazil.

TANZANIA (GOVERNMENT):
- It is not certain whether safer chemicals are identified in Tanzania.

BRAZIL (PRIVATE)
- Use tracking systems for chemicals of high concern (current and future legislation), and based on that, prioritize which chemicals should be further analysed (reports, dossiers, assessments etc).
- Brazil is interested in starting to use tools to assess safer chemicals.

COMMENTS FROM PRESENTERS:
- There are about 30 or so of the lists but others do exist in the guidance document. There is an eChemPortal where one can search a chemical and find information, including GHS classification information in countries (if it has been considered).
- ECHA has an intro training on the analysis of alternatives, a link is available on the slides.

Helpful resources:

- Alternatives assessment and substitution of harmful chemicals: https://www.oecd.org/chemicalsafety/risk-management/substitution-of-hazardous-chemicals.htm
  Substitution to safer chemicals
  https://echa.europa.eu/substitution-to-safer-chemicals

- Online introductory training on analysis of alternatives to hazardous substances
  https://echa.europa.eu/online-training-on-analysis-of-alternatives
- Selected examples of analysis of alternatives in REACH applications for authorisation (also CSR, SEA and SP) https://echa.europa.eu/applying-for-authorisation/start-preparing-your-application/examples-of-assessment-reports-in-applications-for-authorisation

- Guidance on the preparation of applications for authorisation (including the Analysis of Alternatives(AoAs)) https://echa.europa.eu/documents/10162/13643/authorisation_application_en.pdf/8f8fdb30-707b-4b2f-946f-f4405c64cdc7
- All Applications for Authorisation (AfAs) received so far, with their AoAs (and other assessment reports) https://echa.europa.eu/applications-for-authorisation-previous-consultations
- BizNGO Chemical Alternatives Assessment Protocol https://www.bizngo.org/alternatives- assessment/chemical-alternatives-assessment-protocol
- California Candidate Chemicals List – https://dtsc.ca.gov/scp/candidate-chemicals-list/
- Chemical Footprint Project Chemicals of High Concern Reference list -- https://www.chemicalfootprint.org/assess/survey-resources-2
- ChemSec SIN List https://sinlist.chemsec.org/
- Health Product Declarations https://hpdrepository.hpd-collaborative.org
- GreenScreen for Safer Chemicals, hazard assessment methodology https://www.greenscreenchemicals.org/assess/assess-gs-details
- GreenScreen Certified, product certifications https://www.greenscreenchemicals.org/certified
- GreenScreen List Translator https://www.greenscreenchemicals.org/learn/greenscreen-list-translator
- Principles for Chemical Ingredient Disclosure https://www.bizngo.org/public-policies/principles-for- chemical-ingredient-disclosure
- Principles for Safer Chemicals https://bizngo.org/safer-chemicals/principles-for-safer-chemicals

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CiP CoP: The Secretariat of the Strategic Approach to International Chemicals Management (SAICM) and the Environmental Health Division at the University of Cape Town (UCT) created this Community of Practice (CoP) to foster online discussions and address key issues on Chemicals in Products (CiP) among stakeholders from governments, international organizations, industry, academia and civil society.

This CoP is contributing to the SAICM/GEF project on Emerging Chemicals Policy Issues Knowledge Management Component. This activity is supported by the Global Environment Facility (GEF) project ID: 9771 on *Global Best Practices on Emerging Chemical Policy Issues of Concern under the Strategic Approach to International Chemicals Management (SAICM).*

If you have any questions or require clarification on this initiative, please contact the SAICM Secretariat at saicm.chemicals@un.org or UCT at uctcops@outlook.com.

Join the CiPs CoP at: https://saicmknowledge.org/community