Division of Environmental Health | UCT

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Sweden
Sverige

UCT CHEMICAL NETWORK DISCUSSION

2024
DIGEST COMPILATION

UCT CHEMICAL NETWORK 2024 DIGEST COMPILATION

CONTENTS

Acknowledgement: Financial assistance from the Swedish International Development Cooperation Agency (SIDA) has been arranged by the Swedish Chemicals Agency (KemI)

Introduction to the UCT Chemical Network

The Division of Environmental Health (DEH) in the School of Public Health at the University of Cape Town (UCT) launched the Chemical Network in 2020. The aim was to facilitate the sharing of knowledge and collectively problem solve through an online Community of Practice with global stakeholders from different regions and sectors (e.g., government, NGO, academia, industry).

This document is a compilation of the discussion digests produced during the year. The discussions are not webinars but rather provide members an opportunity through chats and polls to discuss and identify risk reduction and prevention measures, as well as emerging issues linked to the sound management of chemicals and waste. Global experts are invited to lead the discussions with short presentations sharing the latest data and information on a topic. A key focus of the network is to build the capacity of low- and middle-income countries (LMICs), to regulate, prevent and reduce health risks related to chemicals and waste for their country circumstances. The digests are a summary of participant responses to questions and polls posed throughout each discussion, as well as relevant resources and a few key highlights from the presentations.

Member Statistics

At the end of 2024, the UCT Chemical Network had an overall active membership of 341 people, 42 of whom joined in 2024. Members represent various sectors including government, academia, non-governmental organisations, intergovernmental organisations, and industry. More than half of members represent the government sector, and just over two thirds are from Africa.

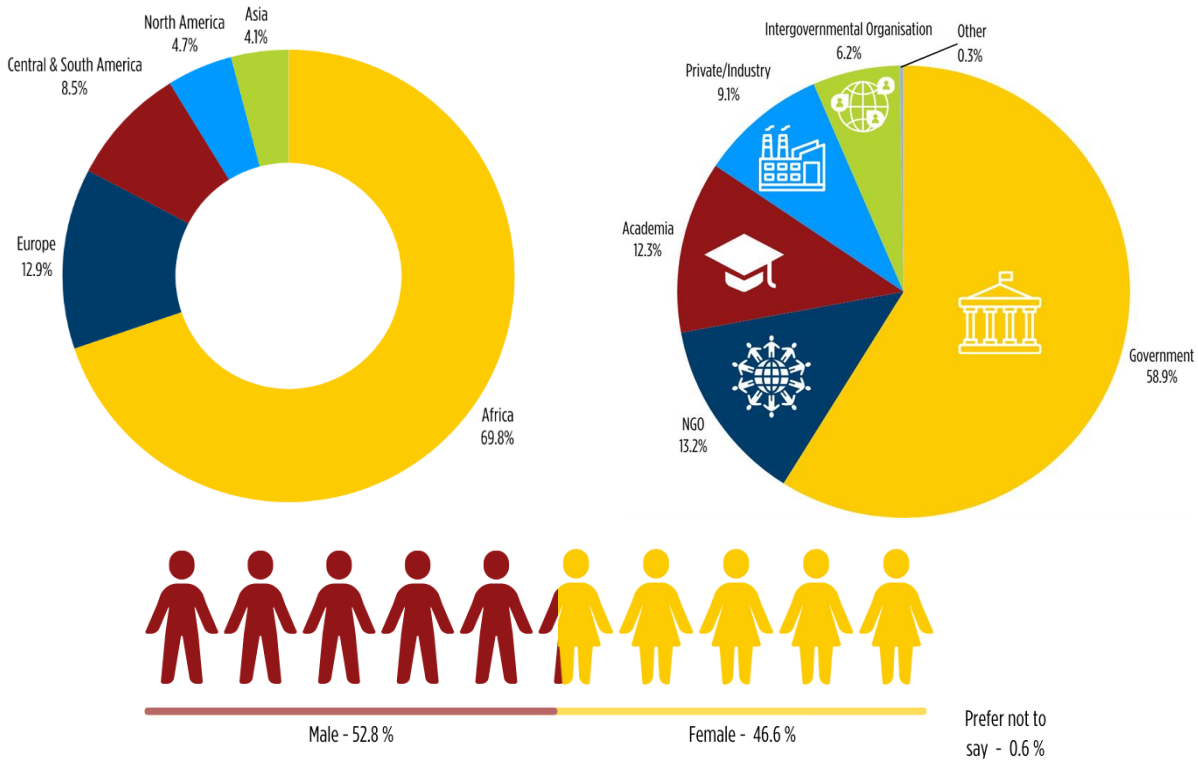


TABLE 1: Chemical Network Membership Breakdown as of December 2024 (n = 341)

Category	*Sub-Category*	*%*
Gender	Female	46,6
	Male	52,8
	Other/not specified	0,6
Sector	Government	58,9
	Non-Governmental Organisation	13,2
	Academia	12,3
	Intergovernmental Organisation	6,2
	Industry/Private sector	9,1
	Other	0,3
Region	Africa	69,8
	Europe	12,9
	Central & South America	8,5
	North America	4,7
	Asia	4,1

Discussion Schedule of 2024

The UCT Chemical Network hosted 5 online discussions between February and November 2024, and summary digests were produced and disseminated after each discussion. This document is a compilation of these digests. To view the different digests from 2024, refer to the table of contents. For all other documents, previous discussion digests, recordings, and slides, and previous CN newsletter issues, visit the UCT Environmental Health Projects website here.

TABLE 2: Chemical Network Discussion Schedule of 2024

#	*DATE*	*TITLE*	*PRESENTERS*	# *ATTENDED*
1	08 Feb	Domestic Financing of Chemicals and Waste Management	**Ule Johansson** (Keml) **Annika Hilgert** (Stockholm Environmental Institute) **Rico Euripidou** (groundWork)	88
2	28 Mar	Chemicals in Plastics	**Ece Koc Martin** (The European Chemical Industry Council) **Dorothy Otieno** (Centre for Environmental Justice and Development, Kenya)	51
3	13 Jun	Mercury in Skin-Lightening Products: Risks, Challenges, Perceptions, and Solutions	**Elena Lymberidi-Settimo** (Zero Mercury Working Group / European Environmental Bureau) **Ntseke Makutoane** (Department of Environmental Health, Lesotho) **Michael Bender** (Zero Mercury Working Group / Mercury Policy Project)	72
4	12 Aug	Identifying and Addressing the Impacts of the Interlinkages of Chemicals and Climate Change	**Prof Hanna-Andrea Rother** (University of Cape Town) **Prof Raquel Duarte-Davidson** (UKHSA) **Dr Haydn Cole** (UKHSA) **Dr Tom Gaulton** (UKHSA)	83
5	14 Nov	Finding Sustainable Approaches to Communicating Chemical Risks	**Prof Hanna-Andrea Rother** (University of Cape Town) **Dr Nosiku Sipilanyambe Munyinda** (University of Zambia, JMPM) **Ellie Roger** (University of Edinburgh, Centre for Pesticide Suicide Prevention)	71

DISCUSSION DIGEST
Domestic Financing of Chemicals and Waste Management

Issue: 1 of 2024
Date: **08 February 2024**

Many countries, particularly low- and middle-income countries (LMICs), face barriers such as limited funds and resources to achieve the sound management of chemicals and waste. The University of Cape Town's (UCT) Division of Environmental Health published a policy brief to guide LMICs in effective and sustainable financing. The UCT Chemical Network (CN) held a discussion on the 8th of February 2024, titled '*Domestic Financing of Chemicals and Waste* Management'. This was presented by **Ule Johansson** of the Swedish Chemicals Agency (KemI), **Annika Hilgert** of the Stockholm Environmental Institute (SEI), and **Rico Euripidou** of groundWork. Click to view: the PowerPoint presentation, discussion recording, and previous CN discussions and newsletters.

KEY MESSAGES

The sound management of chemicals and waste requires **sufficient long-term funding**, but the **responsibility for this should not fall solely upon governments**. It is also important to consider the **types of activities** that need to be financed.

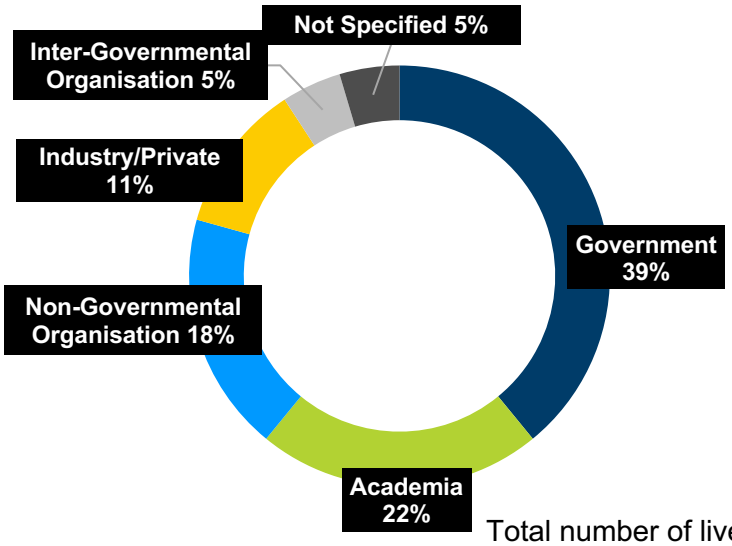
Ule Johansson presented an example of sustainable funding from Sweden. KemI was established in 1986 with the idea being that **funding of chemicals management should be fee-based**, with fees payable for all chemicals regardless of whether or not they are hazardous. The system has been running well since then, despite initial protests from the private sector, paying for 50% of the running of KemI, with the other half coming from taxpayers.

Annika Hilgert discussed two case studies looking at financing mechanisms. The Vietnamese government collects revenue from Payments for Ecosystem Services (PES), referring to payment for use of benefits that humans derive from the natural environment. The revenue is allocated to maintain and protect relevant ecosystems, 10% of which is **earmarked for the administration and operation of this fund**. To apply this in context, **chemical companies could be identified as users of ecosystem services** such as clean water and nutrient-cycling land services. In Kenya, 50% of **import licence revenue** for pesticides is allocated to the Agrochemicals Association of Kenya for product stewardship and training for responsible pesticide use. The other 50% is allocated to the Pest Controls Product Board. This system has been successful despite some challenges, in part due to **continuous stakeholder consultation** during regulation development.

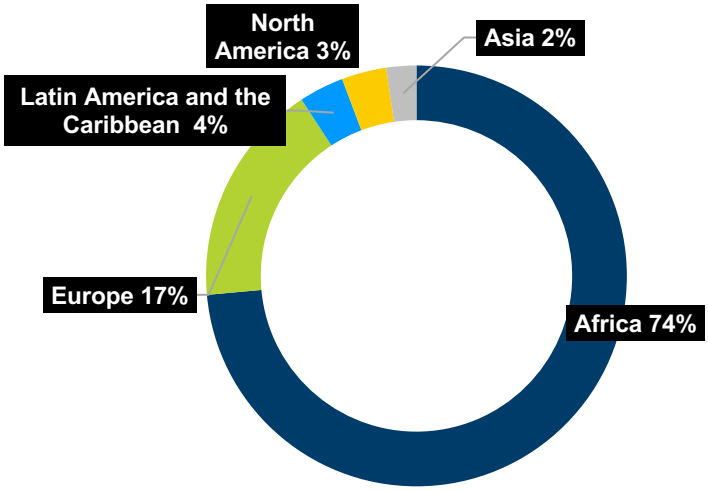
Rico Euripidou discussed **practical steps**, especially useful for LMICs. The **responsibility of safe chemicals management is distributed across many government ministries and many different pieces of legislation, requiring good coordination**. This can be achieved through social capital, contributions from different ministries, and the inclusion of multiple stakeholders (e.g. Civil Service Organisations, Non-Governmental Organisations (NGOs), academia, and industry). The idea is that a multistakeholder multisectoral approach makes it possible to achieve safe chemicals management.

ATTENDANCE BREAKDOWN

Sector



Region



Total number of live participants = 87
Total number of participants who posted their responses prior = 7

ABOUT THE PRESENTERS

Ule Johansson has a background as a lawyer and trained police officer. Over the past 33 years, Ule has held different positions at the Swedish Chemicals Agency (KemI): five years as a legal advisor, 8 years as head of division, and has worked as an expert in development cooperation for the past 21 years. He has spent the latter years supporting governments in building institutional capacity, e.g. drafting legislation, organising institutions, training inspectors, developing communication tools, building systems for bans and restrictions, etc.

Annika Hilgert is a Research Associate at the Stockholm Environment Institute (SEI) as part of the Development, Policy, and Finance team. She works with the SEI Finance for Sustainable Development Programme as well as the Swedish Development Research Network (SweDev). Annika holds a Bachelor of Arts in Politics and International Studies from the University of Cambridge and a Master of Science in Political Science from Stockholm University.

Rico Euripidou works as a Chemicals and Campaign Coordinator at groundWork, Friends of the Earth South Africa. groundWork is a non-profit environmental justice organisation working primarily in South Africa and seeks to improve the quality of life of vulnerable people. Rico supports campaign staff in the strategic alignment of groundWork's six campaigns (Climate & Energy Justice, Coal, Environmental Health, Waste, Environmental Justice School, and Global Green and Healthy Hospitals). He has been with groundWork since 2005. His interests are on issues of energy, chemicals policy, climate change and public health, all of which are closely interrelated.

CONTRIBUTIONS FROM PARTICIPANTS

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 Swedish Chemicals Agency (KemI) or DEH UCT, nor does citing trade names or commercial processes constitute an endorsement

The key discussion points raised by participants are presented under each question. Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data but rather provide a snapshot of participants' views.

QUESTION 1
What is the purpose of "sustainable" financing of chemicals and waste management?

- Getting funds to cover chemical management costs in such a way that it will remain functional and last as long as states are there
- To ensure long-term stewardship and collective responsibility in governing and managing use of pesticides as well as their safe disposal
- To ensure the ongoing or continuous funding of chemical and chemical waste management, independent from temporary sources
- Decision-makers ensure a steady inflow of money, be it from government or private sources
- To allocate financial resources in a way that supports environmentally sound practices and long-term planning
- To ensure availability and continuous sources of funds to manage chemicals and waste
- Predictable and sufficient funds to manage the entire chemical life cycle
- To increase sustainable, predictable, adequate, and accessible financing for chemicals and waste management
- Ensures reliable, predictable, and secure sources of finance to cover the government costs for efficient control of chemicals and waste due to the activities of importers and producers of chemicals
- Sustainable financing enables regulatory bodies to reach their full potential, for the sake of the health of the population and the environment

POLL 1: What are the minimum government services, connected to chemical and waste management, that need to be funded?

- Monitoring and surveillance
- Emergency response and preparedness
- Research and innovation
- Secure stores for obsolete chemicals and pesticides
- Disposal protocols
- Clean up supervisions
- Training programmes
- Public awareness
- Industry supervision
- Legislation/legal frameworks, regulatory oversight, enforcement, defining roles of players
- Processing registration applications
- Recycling and collection of hazardous waste products
- Regulation and licensing of chemicals used in the country
- Monitoring exposures
- Research and development of safer alternatives
- Setting up the EPR system to collect finances
- Ensure environmentally sound management of chemicals and waste throughout their lifecycle to prevent contamination of people, food, and the environment
- Hazard and risk assessments
- Inspections of producers and importers
- Formulating training and awareness schemes for chemical risks
- Health care services like poison centres

POLL 2: Who should be responsible for domestic financing of chemicals and waste management?

Industry/private sector	16
Individuals/consumers	2
Government (environment)	5
Government (finance)	3
Government (health)	1
Government (other - specify in chat)	2
Intergovernmental Organisations (e.g. UNEP)	1
External Funding Sources (e.g. Kemi)	2

QUESTION 2
How can national institutions and agencies responsible for overseeing and managing chemicals and wastes be sustainably financed?

Through Industry

- Sustainable financing should include a quantification of the external costs for the use of sectoral chemicals, e.g. in the agriculture sector - the costs to mitigate obsolete stockpiles, used container management, monitoring of the receiving environment, cost of running Poisons Centres, etc. These quantified costs should be levied on the agrochemicals industry
- Extended Producer Responsibility
- Environmental levies or impact fees and penalties (although, penalties are not considered to be sustainable)
- Licensing fees for the import and trade of all pesticides and toxic chemicals into the country. Most Southern African Development Community (SADC) countries have import fees for pesticides
- Chemical manufacturers should be expected to pay for regulation (including policing) because this concerns the health of the environment and, by extension, public health
- A cost-recovery fee system, where the government requires a fee for a service rendered, including the cost of inspections and assessments during applications
- Fiscal measures like taxes on chemicals with a negative impact on the environment and health

From Government

- Government budget allocations/subvention
- Financing measures can only be enacted once the country has a strong legislation which covers the entire lifecycle of pesticides and toxic chemicals
- Enforce the “polluter pays principle”

General

- Ring-fencing/earmarking of fees from licensing, penalties, and taxes
- International aid and grants
- In Europe, it is now mandatory to have a supervision body financed by a portion of the EPR fee

POLL 1: How can national institutions and agencies that are responsible for overseeing and managing chemicals and wastes be financed in your country?

- Taxes, incentives, EPR programmes
- National revenues
- Precautionary principle
- Polluter pays principle
- Fees
- Fines
- Taxation of producers and consumers
- A levy for chemical manufacturers
- Allocation in the national budget
- Kenya: government allocation and industry players. Other funds from donors/producers
- Mauritius: the polluter pays principle is currently being considered
- Malawi: fees charged for various services offered by the institutions e.g. import permits
- Public-private partnerships
- Grants and international funding
- Ethiopia: taxes, EPR, service fees, penalties
- Licensing

- Treasury ring-fencing for respective mandatory designated institution and agency
- Incentives like tax rebate or exemption of percentage of tax
- Taxes to address specific chemicals and waste problems, e.g. obsolete stockpiles, used containers management, etc.
- EPR and the adherence to the Global Biodiversity Framework linking biodiversity (loss) to chemicals
- External financing
- Linking and taxing environmental contamination e.g. water pollution, with specific activities such as agriculture (nitrate fertiliser pollution)
- Establishment of a fund, e.g. Norwegian Retailer's Emergency Fund, with tax cuts for contributions from the private sector
- Gabon: agencies in charge of control collecting taxes
- Malawi: penalties, e.g. fines, are imposed on companies for failure to submit monthly stock returns to a regulator, failure to display a licence
- Mauritius: new legislation has been introduced to foster a circular economy. Waste Management Regulation in Mauritius: https://bemrecycling.com/environmental-regulations-in-mauritius/

POLL 2: What are good or successful examples of domestic sustainable financing for institutions for chemicals and waste management in your country?

- Alien and invasive species clearing (AIS-Alien and Invasive Species Regulations) (which uses chemicals) linked to PES
- A tax levy for disposal of waste for big manufacturers; a levy for all manufactured and imported chemicals
- Iran: from the national oil/ petrochemical industries
- Registration fees
- Carbon tax revenue: South Africa has implemented a carbon tax to incentivise companies to reduce their carbon emissions.
- South Africa: EPR schemes are currently being implemented for the first time for four sectors, including E-waste, plastics, and packaging
- Ethiopia: registration fees
- Malawi: fees have been the main and successful source of financing chemical and waste management. These are collected through chargeable services imposed on chemical companies
- Tanzania: fees and taxes
- Burkina Faso: the "Fonds pour l'Environnement et le Développement Durable" (FEDD) to support environmental initiatives, including chemicals and waste management. The fund is financed through a combination of government contributions, environmental taxes, and fees collected from industries
- Import taxes
- Zimbabwe: licensing requirements and fees for each stage of the chemical lifecycle e.g. import, use, storage, sale, and disposal. Civil penalties introduced as opposed to conventional penalties
- Malawi: national budgets constitute a minor contribution and are not always successful as they vary every year due to the country's needs on government budgets

QUESTION 3

What are examples of national multi-stakeholder, multi-sectoral committees that manage chemicals in your country? Provide details of who sits on the committee, their responsibilities, and include your country in your response.

Uganda

- Ministry of Agriculture, Animal Industry and Fisheries, department of chemical certification, National Drug Authority

Zimbabwe

- The National Environmental Council (NEC), consisting of permanent secretaries of key ministries, industry experts, Civic Society Organisations (CSOs), private sector representatives and academia, was established in terms of the Environmental Management Act [CAP20:27]. The NEC gives policy advice to the Minister of Environment on chemicals management, amongst a host of other key environmental issues. The

Business Council for Sustainable Development Zimbabwe is a private-sector initiative that incorporates chemical issues from its constituents, who are also from a number of sectors

Malawi

- There are several committees housed in different ministries, departments, and agencies that are responsible for managing chemicals

Guyana

- There is a Multisectoral Committee including the Pesticides Board, the Environmental Protection Agency, customs, and trade administration
- The regulatory body of Guyana is managed by a board of directors and falls under the Ministry of Agriculture. The members of the board include representatives from customs (responsible for managing the import and export of items in and out of Guyana)

Senegal

- The National Commission for Chemicals Management is a multisectoral, multidisciplinary advisory body serving as an interface between the state and grassroots communities

Tanzania

- Chemical Technical Committees in authorities that regulate chemical issues, but private sectors are not invited. However, in the Bureau of Standards, the private sector (industry) is invited
- National Environmental Advisory Committee under the National Environment Act of Tanzania. This includes Ministries of Agriculture, Environment, Health, Industry, and Transport, Commissioner for Energy, local government, government chemists, etc.

Zambia

- Zambia Environmental management Agency (ZEMA)
- National Pesticide Registration committee that has a mandate to approve chemicals registration. The committee include Ministries of Health and Agriculture and academia

Kenya

- Multisectoral Committee on Sound Management of Chemicals. This committee lacks funding. It is domiciled at the Ministry of Environment and draws membership from different sectors where chemicals are used. These include ministries of environment, health, water, agriculture, and trade, NGOs, private sector and academia

India

- No multistakeholder committee as such, but different ministries do work in collaboration. Relevant agencies include Ministries of Environment, Health and Agriculture

Mauritius

- Control of pesticides and chemical use: Pesticide Control Board under the aegis of the Ministry of Agroindustry
- There is a Solid Waste Management Division under the Ministry of Environment to look after solid waste, including hazardous wastes

Uganda

- The Agricultural Chemicals Board is backed by the Agricultural Chemicals Control Act of 2007

Sweden

- There has to be a lead in multistakeholder committees. KemI heads a toxicology advisory board with members from agencies and academia. The task is to quickly identify substances that might be problematic and initiate early action

Armenia

- There is experience of multistakeholder platforms for specific issues/projects, but there is no permanent platform to build upon and discuss issues on regular basis

Cameroon

- MINADER (Ministère de l'Agriculture et du Développement Rural) is the institution in charge of pest control
- National Pesticide Management Commission, however, there is a lack of collaboration, cohesion, and involvement on the part of the various stakeholders

South Africa

- The National and Multistakeholder Committee on Chemicals Management. Various government departments sit on these committees, with various focus points such as (but not limited to) promoting dialogue between members and stakeholders regarding the handling, storage, transport and distribution of chemicals and promoting industries' advocacy initiatives when responding to government regulatory changes
- More participation of the Ministry of Health, local authorities, NGOs and other Civil Service Organisations is needed.

Local councils could educate communities at district level, and the Ministry of Commerce, Trade and Industry could help a lot especially at border areas. National Committees should involve more stakeholders working together

POLL 1: Do you think a multistakeholder platform to support sustainable financing of chemicals and waste management could be set up in your country?

Yes	17
No	1
Don't Know	1
It Already Exists	3

POLL 2: What are the barriers to establishing such a multi-stakeholder, multi-sectoral structure for safe chemicals management?

- Lack of adequate funding
- Competing interests to be the lead agency
- Mak sure it has legal status
- Knowledge and awareness
- Silo mentality and lack of cooperative governance culture
- Fragmentation of responsibilities, lack of coordination and cooperation
- Limited resources and capacity
- Resistance to change
- Political and regulatory challenges
- Data and information gaps
- Absence of legal frameworks related to chemicals and waste
- Our experience is that there has to be a lead in multi-stakeholder committees
- Well-trained staff to provide policy and technical direction
- Shortage of professionals in the field
- Lack of communication between stakeholders
- Unavailability of government officials
- Lack of passion for the cause
- Lack of political will and will of stakeholders
- Lack of an enabling environment
- The mandate of stakeholders is sometimes different and may create conflicting interests
- Lack of cooperation between different sectors, in fact this is a long-term problem in many developing countries due to bad infrastructure
- Lack of willingness to cooperate between private and public (government) sectors
- Lack of commitment to engage on regular basis
- Private sector sees it as mostly the government's responsibility
- Lack of relevant scientific expertise in government representatives

RESOURCES

- UCT Policy Brief: Domestic Financing of Chemicals and Waste Management: Focus on Low- and Middle-Income Countries. 2023. https://health.uct.ac.za/environmental-health-projects/download/policy-brief-domestic-financing-chemicals-and-waste-management
- KemI Guidance: Sustainable financing of institutional capacity for chemicals control. 2020. https://www.kemi.se/download/18.39a6b9eb175a977d0432ec4/1607448291663/Guidance-1.pdf
- Strategic Approach to Chemicals Management. Review of cost recovery mechanisms and other economic instruments for financing of the sound management of chemicals and waste. 2021. https://www.saicm.org/Portals/12/documents/meetings/VirtualWG/Finance/Updated%20review-cost-recovery-economic-instruments-financing-smcw.pdf
- UNEP Guidance: On the Development of Legal and Institutional Infrastructures and Measures for Recovering Costs of National Administration for Sound Management of Chemicals. 2015. https://www.unep.org/resources/report/lira-guidance
- Key Elements of a National Programme for Chemicals Management and Safety. https://cwm.unitar.org/publications/publications/cw/inp/key_elements.pdf
- The World Health Organization Chemicals Road Map: Case studies on the implementation of the WHO Chemicals Road Map. https://www.who.int/teams/environment-climate-change-and-health/chemical-safety-and-health/chemicals-road-map/case-studies

Chemical Network: The Chemical Network is a non-partisan online forum established by the Division of Environmental Health (DEH) at the University of Cape Town's (UCT) School of Public Health. It was established as part of a knowledge management and sharing project supported by the Swedish Chemicals Authority (KemI).

This forum has been produced with financial assistance from Sweden, through the Swedish International Development Cooperation Agency (SIDA), which has been arranged by the Swedish Chemicals Agency (KemI). The views herein shall not be taken to reflect the official opinion of SIDA or the Swedish Chemicals Agency.

If you have any questions or require clarification on this initiative, please contact UCT at **chemicallistserver@gmail.com.** If you are not already a member, join the Chemical Network at: **http://eepurl.com/hf9nwf**

DISCUSSION DIGEST
Chemicals in Plastics

Issue: 2 of 2024
Date: **28 March 2024**

The UCT Chemical Network (CN) held a discussion on the 28th of March 2024 titled 'Chemicals in Plastics'. This was presented by **Dorothy Otieno** of the Centre for Environmental Justice and Development, Kenya (CEJAD) and **Ece Koc Martin** of the European Chemical Industry Council (Cefic). Click to view: the PowerPoint presentation, discussion recording, and newsletter.

KEY MESSAGES

Over **16 000 different chemical additives are found in plastic products**, and currently, over **3 200 of these are considered concerning to human health** (UNEP 2023), with thousands more not yet tested. Many of these **harmful chemicals persist after recycling**, introducing health concerns from recycled plastic products (UNEP 2023).

Dorothy presented research from a CEJAD project in Kenya, where hazardous chemicals from plastics such as brominated flame retardants (which are POPs – persistent organic pollutants) were tested for in products such as clothing and everyday items (including toys, utensils, hair accessories, and office equipment), as well as food chain contamination. The aim was to "**reduce and eliminate the production, trade, and use of toxic "non-circular" plastics**". Non-circular plastics refer to those plastics products which contain hazardous chemicals, and should therefore not be recycled, hence the goal to **reduce their presence in or remove them from the market**.

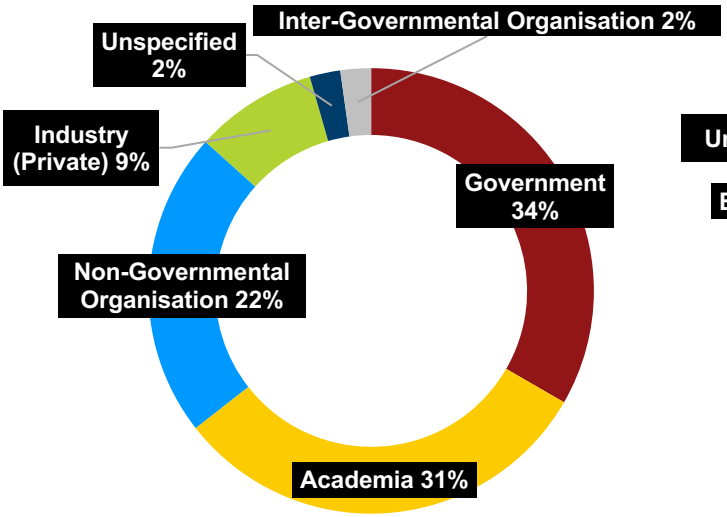
The study found **hazardous POPs in consumer products** that are used every day, **indicating regular exposure**, especially concerning women and children. The study also found **harmful POPs in eggs**, which was an **indicator of food chain contamination**, despite some of these chemicals being listed under the Stockholm Convention for elimination. **Clothing such as jackets and raincoats were found to contain harmful POPs**, raising **concerns about products imported into low- and middle-income countries** (LMICs).

Ece explained that **information on chemicals in plastics is not often shared optimally** and could be unavailable to regulators, consumers, and waste managers. This **lack of information** could **hamper risk assessments** and **impact recycling and product safety**. The International Council of Chemicals Associations has developed a complementary initiative to the UNEP database, with a **database project of chemical additives**, to **increase transparency and support chemical management capacity-building** and advocate and provide tools to regulators to use risk-based regulations.

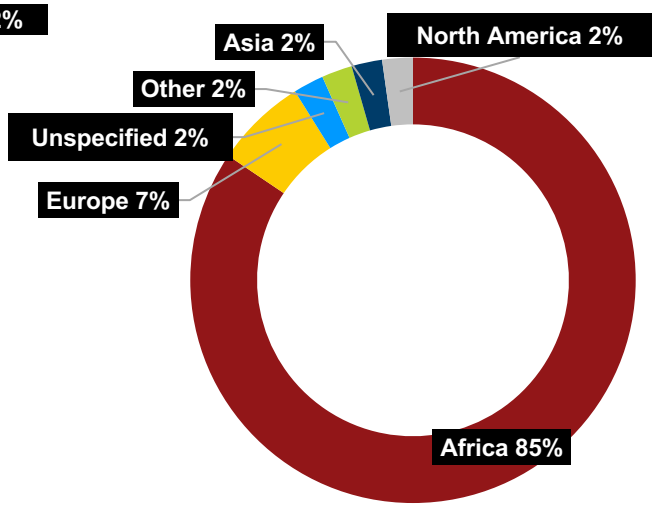
Ece also elaborated that **many countries do not have regulatory frameworks**, and while some countries do, many do not apply them well. The global chemical industry devotes significant resources to **building capacity worldwide to develop, implement, and improve effective chemical management programmes** in different regions.

ATTENDANCE BREAKDOWN

Sector



Region



Total number of live participants = 45
Total number of participants who posted their responses prior = 5

ABOUT THE PRESENTERS

Ece Koc Martin has a PhD in Polymer Science, obtained from Eindhoven Technical University. She worked for several years at DuPont de Nemours as a Polymer Scientist and Luxembourg-based cosmetic enterprise as a research and design manager. She is currently a product stewardship manager at Cefic, the European Chemical Industry Council.

Dorothy Adhiambo Otieno is an environmental scientist, specialising in environmental law, with experience in tackling environmental pollution and addressing waste management challenges. She is currently the programme officer at the Centre for Environment Justice and Development where she leads the Plastics and Waste Management Programme. Over the last 6 years, she has advocated for the implementation of zero-waste principles and a toxics-free circular economy at the national, regional, and international governance levels. She has supported communities impacted by plastic pollution i.e., coastal communities and waste pickers, to organise and call for their environmental and social justice against exposure to toxic chemicals. She is the national coordinator of the Kenya Critical Care Registry Project, which aims to improve critical care in the country.

CONTRIBUTIONS FROM PARTICIPANTS

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The key discussion points raised by participants are presented under each question. Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data but rather provide a snapshot of participants' views.

QUESTION 1
How is industry addressing transparency in your country in relation to disclosing hazard-related additives used in plastics?

Guyana

- The Pesticides and Toxic Chemicals Control Board (PTCCB) works closely with international conventions and monitors the new development of plastic products with hazardous additives. This knowledge is transferred to local bodies with measures in place to prevent import of these plastics. If this knowledge is not available and the plastics do not fall under tariff codes governed by the PTCCB, it is possible that these plastics with potentially hazardous additives could go unnoticed and enter the market

Ghana

- There are regulations regarding plastics, but knowledge of these additives are not known

Zambia

- A regulatory framework that requires disclosure

Uganda

- Industry feels insecure with the information, and there is a need for more awareness to build trust and increase transparency
- National standards prescribe temperature limits for food grade plastic packaging

South Africa

- The Department of Forestry, Fisheries and the Environment (DFFE) oversees regulations related to chemicals and hazardous substances. However, there is no evidence that companies must disclose any potentially hazardous additive in plastic
- There are many online platforms which import "cheap plastic" products. These are often not labelled and have no information on their composition or where they were manufactured
- Transparency is poor in South Africa. It is a challenging area, considering South Africa has many poor communities and a high unemployment rate, so people tend to settle for seemingly harmless cheap products

Lesotho

- No regulatory body concerning chemicals therefore no specific ways or disclosed actions when dealing with plastics

Zimbabwe

- Not much
- Ingredients are listed on packaging but there is no legal requirement for this

Malawi

- Measures are in place, though not specific for chemicals in plastics
- Laws and available standards from regulatory bodies, e.g. Malawi Bureau of Standards (MBS), such as labelling with standard symbols depicting hazards of the chemicals on the labels and providing material safety data sheets of the products to relevant buyers/users so they are aware of the hazards

Nigeria

- Presently, through its national regulatory agency, formulating regulations on plastics to include standards for chemicals in plastics
- Industry is yet to adopt the disclosure requirement for hazardous additives

Guinea-Bissau

- No regulations

Namibia

- No regulations

Benin

- There are regulations but capacity-building is needed

POLL QUESTIONS

Poll 1: Are there regulations in your country that require industry to deal with hazard-related additives used in plastic?

Yes	2
No	6
Don't Know	3

Poll 2: Provide examples of regulations in your countries or the barriers to why there are no regulations. Include your country in your response

- Benin: none yet
- Lack of political will to know what hazardous chemicals are in plastics
- Ethiopia: none
- Zambia: there has been no research and testing facilities to support the problem. There is need for a legal review to inform the decision
- Zimbabwe: none
- Madagascar: there is a regulation but no application
- Ethiopia: there is a hazardous waste management regulation but it is general, not specific to plastics
- A lot of countries do not have chemicals management regulations
- Burkina Faso: Law no. 017-2014/AN on the prohibition of the production, importation, commercialisation, and distribution of non-biodegradable plastic packaging and bags
- Lesotho: the most prominent barrier is the lack of a regulatory framework aligned with chemicals. Additionally, there are no research centres that could focus on chemicals that may be present in plastics
- Uganda: the National Environment Act restricts circularity in hazardous waste, and limits industries to specific plastics categories but no detail on toxic content
- Gabon: there are regulations but a lack of enforcement
- Some countries do not know which chemicals are produced or entering the country
- Countries' technical capacity needs to be enhanced to develop such law
- The Agricultural Chemical Industry Association (ACIA) in Zimbabwe should finance the management system

QUESTION 2

For countries without domestic chemical management systems, how can industry develop and implement plastics chemical management programmes? For countries with management systems, what improvements are needed and why?

Countries With

Guyana

- More can be done to work with international bodies that have the resources and capabilities to identify hazardous additives in plastics and to have this information shared with the local customs authority to prevent importing these products
- The regulatory body can also work closely with the standards authority to require that importers submit detailed breakdowns of the properties of the plastics they want to import before a license can be given

South Africa

- An integrated approach should be used, considering the entire lifecycle of plastics
- Consumer associations should be tasked with driving initiatives. The Consumer Goods Council of South Africa represents the main retailers and has the capacity to establish relevant workgroups and drive industry change

- Industry can contribute to the financing of prevention and remediation of harmful effects from their plastic products' chemical additives

Zimbabwe

- The government has received support from UNEP to develop a legal framework for chemicals in products
- Since industry has expertise and funding, there should be a science-industry-policy framework where industry can share information on chemical hazards and also fund research and development

Malawi

- Proactively implement international best practices for reducing chemical hazards from plastics e.g. proper disposal
- Undertake research to develop new materials that substitute hazardous chemicals in plastics

General

- Industries have a big role in providing information that could help put systems in place
- Most developing countries that have chemical management systems can still do more with support from development partners towards awareness-raising, research into hazardous additives, and providing general transparent consumer information to mitigate harm
- It is hard for industry to put in place systems and plastic management. There is need for industry to provide information on the additives in plastic through research and funding programs for awareness

<u>Countries Without</u>

Burkina Faso

- Industry can develop plastics chemical management programmes by aligning with international standards. They should perform risk assessments, prioritise the use of safer chemicals, and ensure proper waste management.
- Building partnerships for knowledge sharing and training is essential, as is participating in global initiatives like the Strategic Approach to International Chemicals Management (SAICM) to ensure effective and sustainable chemical management in the plastics industry

General

- A starting point would be a multidisciplinary committee including industry to develop a chemical policy

POLL QUESTIONS

Poll 1: In your country, what are the plastic chemical/additive management systems in place or needed? Include your country in your response

- Ghana: the only concern that has been raised on additives is the rate at which these chemicals could degrade. There is the need to go further into the health implications
- Ethiopia: there is the industrial chemical registration system, but it needs to identify the additives used in plastics
- Zambia: there are no regulations for plastic/additives in plastic. However, there are hazardous waste management regulations that regulate waste containing, contaminated with, or consisting of hazardous materials
- Jamaica: There are no publicly stated management systems in place for chemicals/additives, and they are not mentioned in legislation or national standards
- Lesotho: there was an initiative, "No Plastic Wednesday". Shops were requested not provide plastics for buyers every Wednesday, but this stopped as it was not well-received by the general public

Poll 2: Who should finance plastic chemical/additive management systems in your country? Include your country in your response

- Zambia: producers should be financing through the Extended Producer Responsibility (EPR)
- Jamaica: plastic producers should finance all control and exposure measure systems structured through mandatory government taxes

- The polluter pays. Our law is mandating the industry to implement buy-back and recycling mechanisms for plastics
- South Africa: industry, through taxes and EPR programmes
- As we are a net importer, import duties may also be an option (a lot of our chemicals attract 0% duty)
- Polluter Pays
- Ethiopia: the government, industry and importers especially through EPR systems
- Polluter pays in Ghana
- Jamaica: plastic producers should do comprehensive finances for control, exposure mitigation and testing through mandatory government taxes
- Lesotho: industry and government
- The Association of Chemical Industries in Zimbabwe should finance the management systems
- The government in collaboration with manufacturers (RSA)
- Kenya: industry, the EPR regulation is tasking ALL producers to be responsible for all that they produce
- Uganda: it should be the industry and importers
- The input manufacturer should be made responsible as well

QUESTION 3
What research activities are ongoing or needed in your country to identify chemicals in plastics?

Guyana
- More research is needed locally
- Regulatory bodies mostly depend on research of developed countries and the guidance of international conventions which deal with chemicals in plastic

Zimbabwe
- A baseline survey is needed to determine the current production levels of plastics. There is a potentially worrying booming industry on plastic production especially for household products
- Research areas would include conducting a chemicals inventory and risk assessments for the chemicals identified to inform the chemicals policy
- Toxicovigilance is also very important to identify the burden of disease from exposure

France
- A few studies and tests are being conducted, some linked to EPR (buildings, cars, electronics) to identify chemicals of concern and improve treatment organisation, with a strong focus on per- and polyfluorinated substances lately

South Africa
- Lifecycle assessment of plastics, exposure assessment and biomonitoring and evaluation of migration potential (how chemicals migrate into food, water, etc.)
- Investigate the composition of cheap plastic products sold online and imported from other countries

Uganda
- Industries are reserved and secretive about their formulations, and the country lacks capacity

Ghana
- The Federal Drugs Authority in Ghana needs to investigate and research more into plastic containers containing foods on sale before giving certification to businesspeople. Nothing of this sort is being done
- Increasing consumption of electronics with its attendant high levels of E-waste has made the management of E-waste in Ghana a societal challenge that requires a new sociotechnical solution
- More research evidence to advocate and educate

Burkina Faso
- Studies are needed on the types of plastics in use and consumer behaviour (non-compliance to regulations)
- Environmental impact assessments and policy evaluations are essential to understand the implications of plastic pollution and to develop sustainable alternatives
- Increased public awareness and education can drive the transition towards a more sustainable management of plastics

Nigeria

- More research on chemicals in plastics is needed
- Some work was carried out on Brominated Flame Retardants (BFRs) in different media, not necessarily in plastics, but more support is needed for more research
- Largely depends on data on chemicals in products from developed countries and the countries of export
- Activities beneficial to identifying non-circular plastics would involve laboratory-based tests on plastics, exposure assessments and safety data sheets

Malawi

- Research activities needed include screening of hazardous chemicals/additives in plastics and assessing the country's capacity to manage chemicals in plastics e.g. laws, policies and infrastructure

Lesotho

POLL QUESTIONS

Poll 1: Are chemicals in plastic products tested for in your country?

Yes	3
No	5
Don't Know	3

Poll 2: What are some of the hazardous chemicals found in recycled products in your country? Include your country in your response

- Brominated flame retardants
- Ethiopia: phthalates, bisphenol A
- Zimbabwe: plastic softeners
- Uganda: no concluded findings

RESOURCES

- Ochieng G., Otieno DA, Kecha A, et al. POPs in Plastic Products and Chicken Eggs from Kenya in the Light of the Basel and Stockholm Conventions. September 2023. https://www.researchgate.net/publication/373874902_POPs_in_Plastic_Products_and_Chicken_Eggs_from_Kenya_in_the_Light_of_the_Basel_and_Stockholm_Conventions
- United Nations Environment Programme. Chemicals in Plastics: a Technical Report. May 2023. https://www.unep.org/resources/report/chemicals-plastics-technical-report
- International Pollutants Elimination Network (IPEN). IPEN Plastics Treaty Platform. https://ipen.org/documents/ipen-plastics-treaty-platform
- Centre for Environmental Justice and Development, Kenya & Heinrich Boll Stiftung. Policy Brief: Regulation of hazardous chemicals in plastic products is urgently needed in Kenya. June 2023. https://cejadkenya.org/wp-content/uploads/2024/02/CEJAD-HBF-Policy-Report.pdf
- PlastChem. State of the science on plastic chemicals. 2024. https://plastchem-project.org/
- IPEN. Toxics in Our Clothing. https://ipen.org/documents/toxics-our-clothing

Chemical Network: The Chemical Network is a non-partisan online forum established by the Division of Environmental Health (DEH) at the University of Cape Town's (UCT) School of Public Health. It was established as part of a knowledge management and sharing project supported by the Swedish Chemicals Authority (KemI).

This forum has been produced with financial assistance from Sweden, through the Swedish International Development Cooperation Agency (SIDA), which has been arranged by the Swedish Chemicals Agency (KemI). The views herein shall not be taken to reflect the official opinion of SIDA or the Swedish Chemicals Agency.

If you have any questions or require clarification on this initiative, please contact UCT at **chemicallistserver@gmail.com**. If you are not already a member, join the Chemical Network at: **http://eepurl.com/hf9nwf**

DISCUSSION DIGEST

Issue: 3 of 2024
Date: **13 June 2024**

Mercury in Skin-Lightening Products: Risks, Challenges, Perceptions, and Solutions

The UCT Chemical Network (CN) held a discussion on the 13th of June 2024 titled 'Mercury in Skin-Lightening Products: Risks, Challenges, Perceptions, and Solutions'. This was presented by **Elena Lymberidi-Settimo** (Zero Mercury Working Group / European Environmental Bureau), **Ntseke Makutoane** (Department of Environmental Health, Lesotho), and **Michael Bender** (Zero Mercury Working Group / Mercury Policy Project). Click to view: the PowerPoint presentation, discussion recording, and newsletter.

KEY MESSAGES

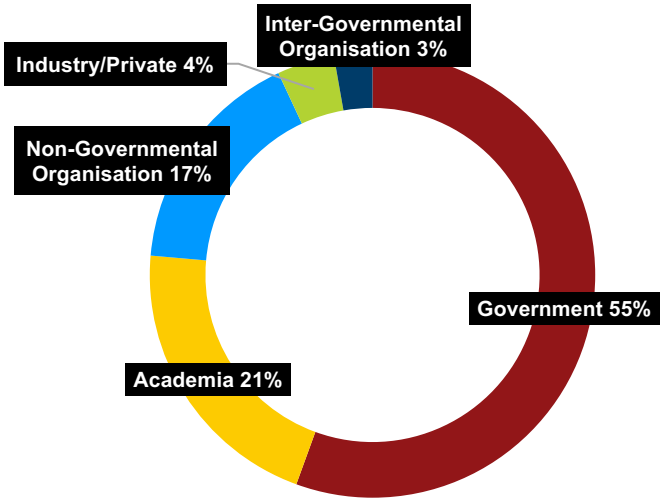
Skin-lightening products (SLPs) are **used all over the world**, a symbol of society grappling with **internalised racism and colourism**. Mercury is added to SLPs as it is inexpensive and rapidly causes lightening of skin. However, it is toxic and can be absorbed by the skin and the lungs. Mercury-containing SLPs therefore **pose significant health risks**, e.g. skin, eye, and kidney damage, and neurological toxicity; the World Health Organization (WHO) therefore recommends their phaseout. The Minamata Convention, adopted in 2013, **bans the manufacture and trade of cosmetics containing over 1 part per million (ppm) of mercury (Hg) by 2020 and all cosmetics containing mercury by 2025**. The Zero Mercury Working Group (ZMWG) **tested thousands of products** for mercury since 2017, including products sold in markets and on online platforms, and found **a very high number with very high mercury levels**.

Toxic online trade continues, with other regulatory challenges including **misleading packaging, advertising, untraceable products, and smuggling**. Key actions to combat these include i**mplementing a zero-tolerance for all mercury-containing cosmetics**, banning **advertising**, and banning **import, export, trade, and manufacture** of mercury-containing cosmetics. Strategies include **interagency collaboration**, **global and regional coordination**, and promoting a reduction in supply and demand. Countries and civil society organisations should consider where they have **regulatory gaps**, identify challenges associated with those gaps, determine where **capacity-building** is necessary, and apply effective **enforcement**. Mercury compounds are not currently regulated under the Minamata Convention although there is a provision/avenue available to do so.

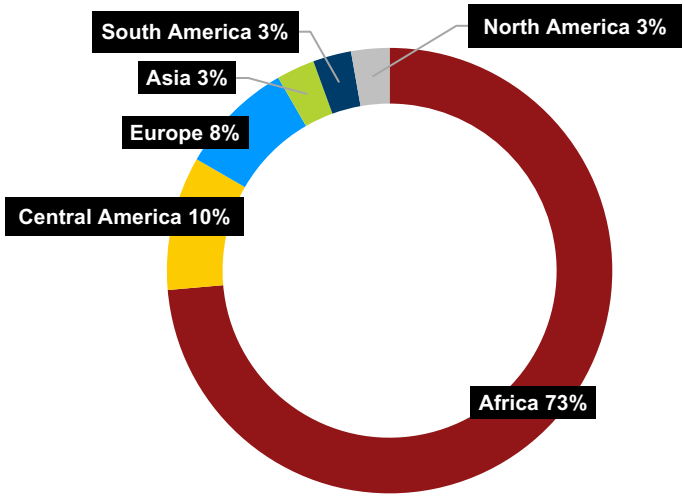
A case study conducted in Lesotho interviewed 100 women, finding that 52% of these women use SLPs. SLPs are **easily accessible and affordable** to them, with the top 3 places of purchase being street vendors, supermarkets and pharmacies. The top reported motives were to **lighten their complexion, reduce blemishes, and to look more beautiful**, with a perception that lighter skin-tones make women more beautiful to men. Despite their awareness of health risks from SLP use, **the perceived social benefits of SLP use outweigh the perceived susceptibility to adverse outcomes.** This study highlighted the need for affordable skin care services to address SLP use at the basic level of education with targeted campaigns and the need to apply the Minamata Convention and enforce regulations.

ATTENDANCE BREAKDOWN

Sector



Region



Total number of live participants = 72
Total number of participants who posted their responses prior = 3

ABOUT THE PRESENTERS

Elena Lymberidi-Settimo is the policy manager for the Zero Mercury Campaign (ZMC) at the European Environmental Bureau and the co-founder and international co-coordinator of the Zero Mercury Working Group (ZMWG), an international coalition of more than 110 non-government organisations (NGOs) from over 55 countries. Elena has over twenty years' experience working at European Union and global United Nations (UN) levels, assisting NGOs and governments to enact numerous mercury reduction policies, including adoption of mercury export and product bans, and supporting the development and implementation of the Minamata Convention. She co-leads the Zero Mercury Skin Lightening Cream Campaign and has co-authored several recent reports exposing the illegal production, trade and sales of high mercury skin lighteners. She is also the co-lead of the products area of the UN Environmental Programme (UNEP) Global Mercury Partnership. Elena has a degree in chemistry (University of Athens, Greece), a Master of Science in business strategy and environmental management (University of Bradford, UK), and a Master of Business Administration (Solvay/Vrije Universiteit Brussel, Belgium).

Ntseke Makutoane is a senior health inspector in the Government of Lesotho, serving as a pollution control manager under the Department of Environmental Health. He has a Master of Public Health from the University of Cape Town, with an environmental health focus. Ntseke has over 10 years of experience in environmental health, management, and health campaign coordination. He is also a Young African Leaders Initiative alumni who obtained an international certificate of occupational hygiene (IcertOHTA) from the Occupational Health Training Association. He is passionate about environmental health, as a public health discipline, as well as occupational hygiene.

Michael Bender is co-lead of the UNEP Global Mercury Partnership product area, director of the Mercury Policy Project and international co-coordinator of the Zero Mercury Working Group, a coalition of over 110 NGOs from more than 55 countries working to reduce the global use, release, trade and exposure to mercury. He also helps lead the Zero Mercury Skin Lightening Campaign and since 2019 has co-authored several recent reports exposing the production, trade, sales and advertising of mercury-added skin lighteners. Michael has over thirty years experience working on programmes and policies to reduce mercury pollution and exposure.

CONTRIBUTIONS FROM PARTICIPANTS

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 Swedish Chemicals Agency (KemI) or DEH UCT, nor does citing trade names or commercial processes constitute an endorsement

The key discussion points raised by participants are presented under each question. Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data but rather provide a snapshot of participants' views.

QUESTION 1
What are the concerns/issues with mercury-added skin-lightening products in your country or the organisation you work for? Include your country/organisation in your response.

Guyana
- There is not much control over skin-lightening products which might contain mercury, compounded by the contents of these products not being fully declared

South Africa
- Smuggling/illegal importation of mercury-based cosmetics
- Limited enforcement capacity
- Not many people are aware of the health risks involved in skin-lightening products, e.g. in small or rural communities
- Sharing these products in unlabelled containers
- E-commerce platforms sell cosmetic products with ingredient labels written in a foreign language
- These products are sold at a cheap price by street vendors

Uganda
- According to the standards, mercury is prohibited in cosmetics products
- If a poisonous chemical is found through testing, the product is subject to destruction and legal action taken against the perpetrator. However, there are many skin-lightening products that may have entered the country illegally

Iran
- There are concerns around the presence of mercury in skin-whitening products

Burkina Faso
- A lack of strict regulations and enforcement to control the presence of mercury

Senegal
- No control over imports
- Skin-lightening is a big problem in Senegal
- A lot of people mix products at home and sell them at the market, so it is unclear exactly what chemicals are being used
- Limited awareness around product contents and their dangers

Gabon
- There is a legal ban on the sale of lightening products on Gabonese territory, in cooperation with other countries such as Sri Lanka and Jamaica to eliminate these dangerous cosmetic products. However, these harmful products are still available at market stalls

Tanzania
- Many people got permanent skin damage in Tanzania before SLPs were banned

The Philippines
- Enforcement has always been the challenge
- Prohibited products are still available despite a ban
- Market monitoring continues to raise concern

Lesotho
- A lot of people, mainly in the rural areas of Lesotho, have cultural beliefs in the use of elemental mercury
- A lot of mercury-containing skin-lightening creams are widely available and are not monitored

Kenya
- Skin-lightening creams have been a challenge
- Online shopping stores are difficult to monitor as the products are not displayed in physical stores

Madagascar
- Lack of knowledge about mercury-containing products
- Health problems and environmental damage
- People may waste money on mercury-containing products

Malawi
- Regulations for mercury poisoning are not specific, however, we have the Malawi Bureau of Standards which enforces standards on mercury-containing products

Cameroon
- Almost all beauty products contain mercury because the market is so satisfied with lightening products
- Action des Femmes pour une Planète Bio (AFEPB) had initiated an identification and awareness campaign, which was aborted due to a lack of funds

Environmental Management Agency, Zimbabwe
- The concern is over illegal imports from neighbouring countries. SLPs are illegally imported through passenger terminals as opposed to freight sections and proliferate in the informal sector

The Pollution Control Association of Liberia
- Awareness and persistent education of the public are needed. A robust coordination mechanism is also needed to tackle this problem

National Registers
- **Iran**: none
- **Liberia**: unknown
- **Senegal**: unknown
- **Uganda**: none
- **Zimbabwe**: none
- **Cameroon**: none
- **Namibia**: none
- **Zambia**: none
- **Malawi**: none
- **South Africa**: mercury poisoning is a notifiable condition
- **Kenya** has a database of skin-lightening creams maintained by the Kenya Bureau of Standards

POLL QUESTIONS

Poll 1. Have you, or anyone you are aware of, experienced any adverse health effects from using skin-lightening products?

Yes	5
No	9
Don't Know	0

Poll 2. Does your country have a national register for mercury poisonings from skin-lightening products?

Yes	6
No	10
Don't Know	3

QUESTION 2
Why do people use skin-lightening products? Give specific examples of motivation factors.

- The pressure of white beauty standards, colourism, and racism drives the demand for skin-bleaching products
- Sociocultural and economic factors - societal pressures to conform to beauty standards and the belief that lighter skin tones can lead to better socioeconomic opportunities

- People believe lighter skin is associated with beauty and success, and are under the impression that they will be better accepted by society if they have lighter skin
- To have smooth and healthy-looking skin, to be beautiful, and obtain social favours in society such as marriage and good jobs
- Removal of dark patches
- People are influenced by Hollywood stars or influencers whom they admire and want to resemble
- It becomes fashionable to lighten skin or remove blemishes because people feel their skin must be perfect
- Some may be entrapped in using them as stopping them can result in the skin barrier breaking or a darker skin tone as these products may burn the user

POLL QUESTIONS

Poll 1. Where are people buying these products from?

Local markets	7
Street vendors	9
Online	5
Cosmetic shops	8
Pharmacy	5
Other (specify in the chat)	0

Poll 2. Are mercury-containing skin-lightening products allowed in your country?

Yes	4
No	6
Don't Know	0

Poll 3. Is there legislation restricting mercury-added skin-lightening products in your country/the country you work in? Include your country in your response

- Zambia: the legislations is yet to be put in place for manufacturing, importation or distribution
- Ethiopia: the cosmetics and sanitary directive issued by the Ethiopian Food and Drug Administration (FDA) allows thiomersal and phenyl mercuric salt up to 70ppm for eye make-up
- Several states in the US: California, Illinois, Minnesota, New York and New York City
- Iran: while there is evidence of global efforts to restrict mercury-added skin-lightening products, specific information about legislation in Iran is scarce
- Senegal: no legislation restricting mercury-added skin-lightening products. I think we have a project but nothing about legislation on this issue
- Gabon: the sale of lightening products is prohibited

QUESTION 3

How is your country planning/working on overcoming the challenges of banning mercury-added skin lightening products? Include the challenge and your country in your answer.

Guyana

- Regulators are working closely with customs and other standards bodies to ensure proper control measures are in place to monitor imports, and more work is planned to educate the public on the dangers of using these products
- The challenge is that many skin-lightening products might contain mercury, but are not listed on the label, so users assume they are safe

Zambia

- The Gold project has raised a lot of awareness
- Zambia is a signatory to Minamata, though the ban of products with mercury levels exceeding 1 ppm has not been put into effect

Lesotho

- Lesotho is a signatory to the Minamata Convention
- Primary mercury mines are prohibited

Burkina Faso

- The challenge in banning mercury-added skin-lightening products is related to the lack of specific regulation. To overcome this challenge, the country is taking proactive steps. Burkina Faso and Botswana proposed an amendment to Annex A, Parts I and II of the Minamata Convention on Mercury at the 2023 Conference of the Parties (COP), on behalf of the Africa region. This amendment aims to determine a date after which the production, import or export of cosmetic products containing mercury will no longer be authorised. According to the Ministry of Environment, a deadline of 2025 has been set for its entry into force and Burkina Faso also plans to develop strategies to discourage the advertising, display and marketing of cosmetic products containing mercury
- Through the Specific International Programme (SIP) project, awareness-raising has been conducted with the general public, including an interview on the dangers of mercury-containing cosmetics
- The current approach is to carry out a number of awareness-raising campaigns to discourage people from using these products and also to ban product advertising

Zimbabwe

- Zimbabwe is working through the Medicines Control Authority of Zimbabwe to screen all imports. Problematic entry points are known and manned either on a full-time or ad-hoc basis
- South Africa is a signatory to the Minamata Convention and, therefore, also bans the sale of products with a mercury (Hg) level of > 1ppm. There does seem to be a push to ban all skin-lightening lotions with any detectable levels of Hg. The challenge is enforcing this and ensuring that these products are not being illegally sold or imported

Gabon

- The challenge is authorities struggle to enforce the law banning the sale of these products. This would undoubtedly be because of porous borders, lack of trained personnel (customs officers), etc.

Madagascar

- Madagascar is a signatory to the Minamata Convention. The Ministry of Environment and Sustainable Development has already begun campaigns to educate the public about the Minamata Convention and the dangers of mercury, but enforcement of the convention can be challenging
- Link to our database where you can see the products with high mercury - https://www.zeromercury.org/projects/mercury-added-skin-lightening-creams-campaign-database/

South Africa

- Challenges include lack of enforcement of regulations
- The recent draft of National Regulations for the Management of Mercury in South Africa published for public comment prohibits the import of cosmetics with mercury content above 1 part per million (ppm) and the phase-out date is 2025 April 01, supporting the Minamata Convention on Mercury
- There is a regulation that bans mercury in cosmetics, which was proposed for review but never finalised. The country should look at finalising the regulations and consider proposed control measures as per these presentations
- The challenge is the limited capacity to finalise these regulations

Senegal

- Senegal ratified the Minamata Convention and has Mercury Initial Assessments and an action. These approaches could help domestication of the convention and the process of regulation

Tanzania

- There is strict legislation to control mercury in skin-lightening products

Iran

- Several steps have been taken including implementing regulations prohibiting the production, import, and sale of these products, conducting awareness-raising campaigns to educate the public about the dangers of mercury exposure, and working with retailers to ensure compliance

POLL QUESTIONS

Poll 1. List opportunities/national measures the Minamata Convention needs to support nationally to ensure reduction & elimination of mercury-added cosmetics

- Customs training, lab testing support, and awareness campaigns
- Enforcement of bans
- Public awareness
- Reclamation of contaminated environments
- Ethiopia: technical training, awareness for policymakers, legal frameworks
- Many countries ratified the Minamata Convention. The domestication of the convention may help to regulate mercury in skin-lightening products
- State or country bans to provide inspection and enforcement authority
- Registries of known products for public awareness and mandated product withdrawal by all sellers
- Good awareness-raising materials for all stakeholders in the skin-lightening cream value chain would be very useful
- Lesotho: international mercury ban
- South Africa: Support required is cosmetics legislation development, field samplings, screening tools and user manuals, and guidelines/manuals on control measures

Poll 2. Is there support in your country for a national sales and advertising ban of these products?

Yes	3
No	7
Don't Know	3

RESOURCES

- Zero Mercury Working Group (ZMWG). Mercury-Added Skin-Lightening Creams Campaign. https://www.zeromercury.org/mercury-added-skin-lightening-creams-campaign/
- ZMWG. Online Marketing of Toxic Skin Lighteners. October 2023. https://www.zeromercury.org/wp-content/uploads/2023/10/ZMWG-SLP-Oct-2023-Full-Report.pdf
- Environmental Investigation Agency. Report: Mercury in Retrograde. October 2023. https://us.eia.org/report/mercury-in-retrograde/
- World Health Organization. Mercury in skin lightening products. 3 Nov 2019. https://www.who.int/publications/i/item/WHO-CED-PHE-EPE-19.13
- ZMWG. Draft Report: Overcoming the Challenges of Banning Manufacture and Trade of Mercury Added Skin Lightening Products under the Minamata Convention. 10 June 2024 https://drive.google.com/file/d/1zlRaAc808YkbL5tnBWYk9vXqfQU9w8MI/view?usp=sharing
- ZMWG. Report: Enforcement measures to restrict high mercury cosmetic products under the Minamata Convention. Nov 2019. https://www.zeromercury.org/wp-content/uploads/2019/11/Enforcement-measures-to-restrict-high-mercury-cosmetic-products-under-the-Minamata-Convention.pdf
- National Resources Defense Council. Feasibility of conducting a global inventory of mercury compound supply, use and trade. March 2023. https://www.nrdc.org/sites/default/files/2023-10/mercury-compounds-inventory-feasibility-study-202303.pdf
- Minamata Convention on Mercury Conference of the Parties 5 (COP5). Decision on mercury compounds. Nov 2023. https://minamataconvention.org/en/documents/study-global-supply-production-trade-and-use-mercury-compounds
- Minamata COP5 Decision on cosmetics. Nov 2023. https://minamataconvention.org/en/documents/preparation-report-cosmetics-listed-part-i-annex-minamata-convention-mercury
- Minamata Convention Invitation to submit information by 30 June 2024. March 2024. https://minamataconvention.org/en/news/invitation-submit-information-regarding-mercury-added-cosmetics-pursuant-cop-decision-mc-55

- ZMWG Posters on the impact of mercury-containing skin-lightening products on health https://www.zeromercury.org/wp-content/uploads/2023/03/4.Dermatologists-Poster-English-PRINT.pdf (English), https://www.zeromercury.org/wp-content/uploads/2023/03/4.Dermatologists-Poster-Francaise-PRINT.pdf (French)
- ZMWG Posters on the impact of mercury-containing skin-lightening products on pregnant women: https://www.zeromercury.org/wp-content/uploads/2023/03/3.Dermatologists-Poster-pregnant-woman-English.pdf (English), https://www.zeromercury.org/wp-content/uploads/2023/03/3.Dermatologists-Poster-pregnant-woman-francaise.pdf (French)
- Global Mercury Partnership knowledge hub on eliminating skin-lightening. https://www.unep.org/mercuryfreecosmetics
- UNEP: Tackling Mercury Pollution and Racial Discrimination Jointly. https://www.unep.org/globalmercurypartnership/news/editorial/tackling-mercury-pollution-and-racial-discrimination-jointly

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DISCUSSION DIGEST

Issue: 4 of 2024
Date: 21 August 2024

Identifying and Addressing the Impacts of the Interlinkages of Chemicals and Climate Change

The UCT Chemical Network (CN) held a discussion on the 21st of August 2024, titled 'Identifying and Addressing the Impacts of the Interlinkages of Chemicals and Climate Change'. This was presented by Prof Hanna-Andrea Rother (UCT), Prof Raquel Duarte-Davidson (United Kingdom Health Security Agency – UKHSA), Dr Haydn Cole (UKHSA), and Dr Tom Gaulton (UKHSA). Click to view: the PowerPoint presentation, discussion recording, and newsletter.

KEY MESSAGES

Chemicals and climate change impact each other and human health through **complex pathways**. Aspects of the life cycle of chemicals (including manufacture, packaging, distribution, byproducts, and use) contribute significantly to greenhouse gas (GHG) emissions and are, therefore, a cause of global climate change. Climate change then results in climatic events such as extreme weather events, sea level rise, and air pollution, which then impacts direct and indirect chemical exposures.

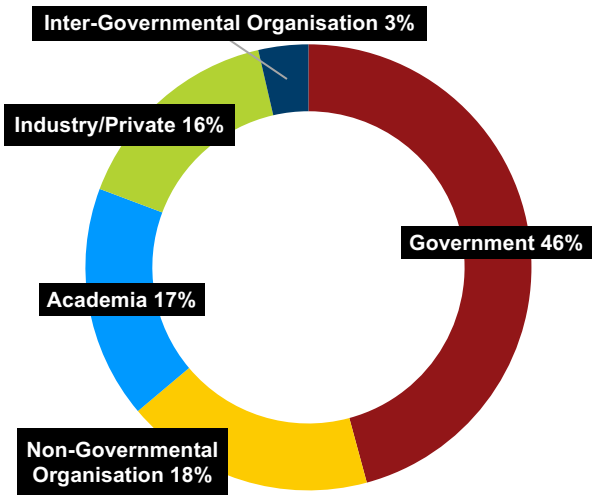
The call to action, as indicated in the upcoming UCT Division of Environmental Health policy brief on chemicals and climate change, includes **reducing the quantity of hazardous chemicals** used and also **reducing their impact on GHG emissions**. **Intersectoral collaboration** is needed for legislation and action to ultimately **protect human health and the environment**.

Multiple chapters of the Health Effects of Climate Change (HECC) in the United Kingdom report, published by the UKHSA, pertain to chemicals, as multiple climate change effects impact chemicals and exposures. For example: **temperature impacts chemical behaviour and their effects** on people; increased **rainfall impacts mobilisation of chemicals**; climate change impacts pests, which might **impact pesticide use**, impacting the food we eat; **wildfires** are increasing, and these release chemicals into the air; and **drought** can impact soil, changing the availability of chemicals in the soil.

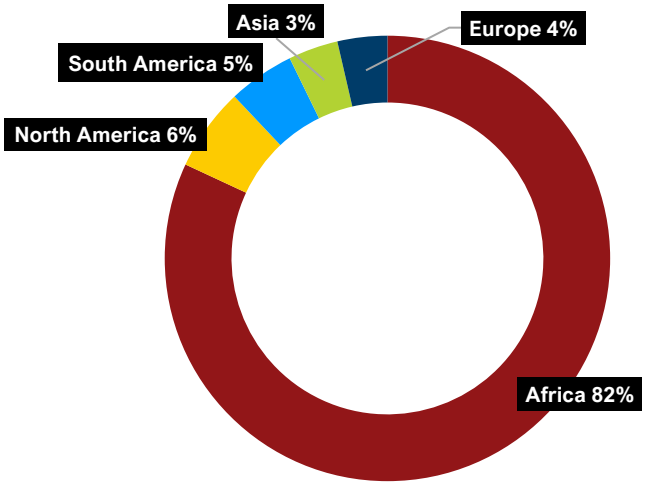
Very little is available in the literature regarding the risk to health from chemicals due to climate change, as highlighted by a literature review in the report, which provides recommendations for further research. Despite a lack of scientific data, changes in climatic and environmental conditions are likely to affect human exposure to chemicals. **Managing chemical and climate change interlinkages** includes **identifying sources and pathways of exposures**, **characterising the risks**, and understanding **who is responsible** for managing these. Other key actions include building our **knowledge base**, improving **risk assessments**, generating **more data**, understanding **exposure pathways**, conducting **more surveillance**, and improving **integration between different sectors**. It could be useful to prioritise specific chemicals or pathways for research to focus on.

ATTENDANCE BREAKDOWN

Sector



Region



Total number of live participants = 83
Total number of participants who posted their responses prior = 2

ABOUT THE PRESENTERS

Prof Hanna-Andrea Rother is professor and head of the Division of Environmental Health in the School of Public Health at the University of Cape Town, and honorary professor in the Department of Public Health, Environments and Society, Faculty of Public Health and Policy (PHP), at the London School of Hygiene and Tropical Medicine. She has over 30 years of experience in research, teaching and building capacity, particularly in Africa, on pesticides, risk communication and risk management. She has published widely on the topic and served for twelve years as a World Health Organization (WHO) expert panel advisor on the Food and Agriculture (FAO)/WHO Joint Meeting on Pesticide Management (JMPM). She is also currently an international board member of the European Partnership for the Assessment of Chemicals.

Prof Raquel Duarte-Davidson heads the Chemicals and Environmental Effects Department of the UKHSA. Prior to this, she was a Principal Scientist at the Environment Agency, responsible for implementing the Agency's chemical risk assessment policy. In addition, Raquel is the National Focal Point (NFP) for the UK, WHO Europe Environment and Health Process, and the NFP for the WHO Chemical Risk Assessment Network. She heads the WHO Collaborating Centre for the Public Health Management of Chemical Exposures and co-Directs the Health Protection Research Unit (HPRU) on Climate and Environmental Change and Health (ECH) with the London School of Hygiene and Tropical Medicine (LSHTM). She is an independent expert on the European Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) and the chair on SCHEER's rapid risk assessment working group.

Dr Tom Gaulton (PhD) works as a Health Protection Scientist in the Chemical and Environmental Effects Department of UKHSA. Tom has over 10 years' experience in public health research on both chemical and biological health threats.

Dr Haydn Cole is Group Leader of Chemicals and Poisons in the Chemicals and Environmental Effects Department at UKHSA, responsible for the management and activities of the group, focussing on protecting public health from chemicals and environmental hazards. This includes contributing to UKHSA's capability for emergency preparedness, response and resilience for chemical and environmental hazards and providing evidence-based advice to government to inform policy and health-based guidance, ensuring this is underpinned by an active evidence and applied research programme. Haydn also contributes to international work programs and delivers capacity-building programs in support of UKHSA's global health initiatives. Haydn has experience from across the sectors focussing on chemical risk assessment and risk management.

CONTRIBUTIONS FROM PARTICIPANTS

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 Swedish Chemicals Agency (KemI) or DEH UCT, nor does citing trade names or commercial processes constitute an endorsement

The key discussion points raised by participants are presented under each question. Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data but rather provide a snapshot of participants' views.

QUESTION 1
What are the sources of chemical contamination, linked to climate change, in your country/region, and priorities?

South Africa
- Landfills, and leaching of persistent organic pollutants and mercury into groundwater from improper waste disposal
- Agricultural runoff
- Industrial runoff
- Mining

Uganda
- Mostly the agricultural, industrial, and cosmetics and beauty industries
- Improper waste management
- Emerging pests and diseases due to changing weather patterns, increasing the use of pesticides

Lesotho
- Plastic and textile firms, agriculture, mining, and obsolete pesticides
- Very poor waste management

Benin
- Pollution from cotton production

Tunisia
- Improper disposal and management of industrial and household waste

Nigeria
- Industrial and agricultural sectors

Guyana
- Changes in climate affect pest cycles, resulting in unpredictable infestations, which forces producers to use and overuse pesticides

Gabon
- Gas flared by oil companies

Zimbabwe
- Mostly industry and improper waste management

Eswatini
- Agriculture, poor waste management, and from the industrial sector

Madagascar
- Wildfires and agriculture

Other
- Higher temperatures may increase the volatility and degradation of certain chemicals, making them more likely to evaporate and spread. This can lead to higher concentrations of airborne pollutants
- Almost any environmental abnormality will lead to more chemical exposure - drought, flood, wildfires, etc.
- Electricity generation – coal power stations

- Some countries might be having unpredictable amounts of rainfall, which washes away the residue of pesticides which keep off insects. The farmer doubles and triples his doses with no attention to development of pest resistance and also safe residue limits at the time of harvest, which exposes the consumer to high levels of toxic chemicals and creates a pesticide resistant insect which causes even more damage

POLL RESPONSES

Poll 1. Why do you think climate change and chemicals is an important issue for policymakers to focus on?

- To control the release of chemicals that exacerbate climate change
- It has a negative impact on the health of humans and the environment
- It is an integral part of a circular green economy, and the linkages between the multilateral environmental agreements need to be managed properly to ensure chemicals and their impacts on climate change are mitigated
- Chemical contamination/pollution can have a major impact on climate with both immediate and long-term health consequences
- To increase the awareness on the effects of chemicals on health and the environment, that could exacerbate the effects of CC
- Climate change can exacerbate the release, spread, and exposure to hazardous chemicals. For example, extreme weather events such as floods and storms can cause chemical spills, etc.
- Because there is a significant impact from both sectors, but not enough responsibility is being taken by policymakers
- The need for increased and improved collaborations among relevant stakeholders, i.e., environment, health, agriculture, etc.
- Policymakers can influence and present opportunities to communicate evidence
- Negative impacts on health, environment, economy, and trade
- It exacerbates chemical contamination and affects public health and the environment
- The two cannot be addressed separately as the use of chemicals impacts the other sectors, so there is a need for policymakers to harmonise legislations and policies so that they are comprehensive
- To know where in the lifecycle of chemicals to intervene and how it will improve the reduction of hazardous chemical exposure to both the environment and human beings
- Adverse effects will accumulate over time, so need to be addressed at the earliest, meaning now!
- Impacts ecosystems, food systems, and human health
- Exposes population to food security and safety crises
- Both climate change and chemical pollution can have significant economic costs. Extreme weather events can damage infrastructure, disrupt supply chains, and lead to biodiversity losses

Poll 2. What are the implications of increasing climate events on chemical exposures?

- In tropical climates, more heating will make already inadequate personal protective equipment (PPE) even more ineffective
- Intensifies the environmental impacts on health, especially of the high-risk populations and communities
- An increase in climate events can exacerbate the spread, concentration, and impact of hazardous chemicals in the environment, posing new challenges to public health, ecosystems, and infrastructure
- Mauritius: as part of small island developing states (SIDS), torrential rain can lead to discharge of chemicals into the sea and cause damage to coral and pollution of the sea, leading to an impact on the marine ecosystem
- Workers are likely to face increased risks related to toxic chemicals due to climate and environmental changes. Numerous health conditions in workers have been linked to climate change
- Chemical exposures will increase
- Increased or spread of further contamination
- Increased run-off of pesticides in flooding, increase air pollution from volatile substances due to higher temperature, increase particulate matter in air carrying pollutants
- The Department of Forestry, Fisheries and the Environment (DFFE) is mandated to give

effect to the right of citizens to an environment that is not harmful to their health or well-being.

- Without water, fertilisers cannot be absorbed. With too much water, soil can be eroded. Leaching can cause contamination of crops, water sources, and soil

Poll 3. Do the government departments in your country that regulate chemicals also include issues related to climate change?

Yes	15
No	10
Don't Know	4

QUESTION 2
How do we characterise/understand the risk from chemicals due to climate change to humans? Give examples that you are aware of

- Risk is characterised through research, epidemiological studies, environmental monitoring, and modelling techniques
- Modelling is a good way, but evidence is also needed to confirm/validate modelling. However, it is difficult to get enough data even for modelling. It is difficult enough to get data on temperature, but it is more difficult when you look at 1000s of chemicals
- More data is necessary, yes, but it is costly and time-consuming. Precautionary principle, and hazard assessment, are the key
- HECC report chapter 15 describes chemical indicators e.g. bathing water quality, but they need new processing of existing data, updating of reporting systems, or additional data being collected
- The more the climate deteriorates, the more exposed the environment and people will be. For example, if it is very hot, it will be difficult for a farmer to use their PPE
- Studies have demonstrated that ozone depletion will increase cases of cataracts
- Increased use of pesticides in agriculture, including the frequency of application and the volume, might be one of the indicators
- Increases in temperatures, for example, could lead to an increase in toxicity from pesticides, PCBs, etc.
- Climate change has resulted in new pest incursion in the sugarcane sector in Eswatini, which has led to increased use and misuse of pesticides. This exposes too many people to pesticides

POLL RESPONSES

Poll 1. List gaps around what you think is needed to characterise human exposure risks linked to chemicals and climate change.

- Lack of data
- Limited risk assessment models
- Limited research
- There are no specific studies relating climate change to release of chemicals
- Data and information, epidemiological studies
- Disaster management plans should consider mitigation for chemical exposures in extreme weather events
- Attribution of the risk to climate change versus other aspects
- Lack of epidemiological studies and risk assessment
- Scattered research efforts
- Insufficient data on chemical behaviour under climate stressors, insufficient focus on vulnerable populations
- Limited public awareness and education
- Lack of reliable data on chemical disposal and corresponding effects of these chemicals
- The UNFCCC focus more on mitigation action and adaptation action. There is no action directly related to chemicals because this is very complex
- Limited resources
- Lack of policies and legislation
- Environmental data, such as temperature and rainfall, chemical use

Poll 2. What information do regulators and others need to regulate the interlinkage better (e.g. research opportunities)?

- Sufficient research data on the linkages and possibly a policy brief to explain it better to policymakers
- Awareness precedes change
- Data showing increase in pesticide use over the years
- Easy language
- Good data is required to fully understand and give guidance to regulators
- Robust environmental monitoring
- Data on exposure
- Environmental impact of chemicals
- Toxicity on chemicals like pesticides on water and soil
- Data including uncertainties of cause-effect relationships
- The understanding of how the systems work to be able to predict and mitigate better
- Health education for regulators, e.g. to understand the climate change effects on endocrine-disrupting chemicals
- Data linking farmer's pesticide use behaviours with increase in temperature
- Data on the effects on health and environment
- Sufficient, comprehensible data that links increased use of chemicals to the effects of chemical exposures
- A standard procedure to mitigate climate change and chemical exposures
- Data on the significant sources of chemical exposures within the country (e.g. mining, agriculture, industry, etc.)
- Increasing capacity of researchers, collaborative efforts between researchers
- Regulators need data. Evidence from several scientific studies
- Interdisciplinary research
- There is a lot of data being generated but very little data being interpreted and cascaded to the public in the form of awareness

QUESTION 3
How could the risks from the chemicals and climate change interlinkages be managed?

- Exposure risk can be managed by making the following mandatory for those releasing chemicals into the environment: 1. Prior notice of expected exposure events; 2. Informed consent by adults or for children by their legal guardians
- This should be managed by a data-driven approach backed up by policymakers who have the political will to implement decisions that will alleviate the risks of chemicals and climate change
- Chemicals and climate change interlinkages could be managed through coordinating a national multi-faceted monitoring system for industries, sectors or businesses that are similar. This system could be used to monitor the implementation of a national roadmap with objectives to achieve set reduction targets
- A multi-sectoral approach is key, including transparency (not alarm-raising) to the public by giving access to all relevant stakeholders including the general public so they can see their role in the process
- The chemical industry should pay for independent research
- Prioritising the development of less hazardous chemicals to substitute hazardous chemicals. Green chemistry
- Governments need to set more stringent laws that will control or curb chemicals misuse, disposal, etc., for all sectors
- Awareness-creation and conventions
- Stronger legislation should be introduced to reduce the risks that chemicals may have on climate. Cornubia is a very good example

POLL RESPONSES

Poll 1. For the climate change and chemicals interlinkages, which sector should take responsibility for identifying and managing the health risks?

Chemical Sector	2
Climate Change Sector	1
Both	19
Others (list in chat)	1

Poll 2. What measures are already in place or what can be done to reduce risk from the chemicals and climate change interlinkages?

- A national/international stocktaking exercise concerning all aspects of climate change impacts on chemicals could be a way forward
- Polluter pays principle, regulations
- Public awareness on hazardous chemicals
- Registration and reregistration of chemicals and pesticides, education and training, and inspections of storage facilities. Legislation is needed to enforce misuse penalties
- International agreements such as the Vienna Convention and Montreal Protocol
- Fines for spillages, polluter pays principle
- Management of chemicals throughout their life cycle
- National climate change action plans
- In Botswana, our act emphasises the polluter pays principle, but it does come with a number of challenges

Q&A

Several questions were answered live during the session (view the recording here), the rest, included in this digest, were answered through typed responses by Raquel.

Question	Response
What are the most effective strategies for monitoring and mitigating chemical contamination in the context of increasing extreme weather events?	Really difficult because extreme weather events are short-lived and by the time we are able to take measurements, the chemical pollutants have moved elsewhere. Modelling may be a way of gaining a better understanding but to model properly we need to have a lot of information on the chemicals at sites etc. Biomonitoring is a way of finding out chemical contamination where chemicals involved are known to accumulate in the body
What are some successful case studies of countries that have implemented policies addressing both chemical safety and climate change?	Net-zero approaches should include impacts of chemicals, but I cannot think of examples where these are done
How can advancements in technology and data analysis improve the management of chemical risks in a changing climate?	Information is required on changes in chemical usage and what the impact of these will have - i.e., move towards 'safer chemicals'. There are concerns that there may be a move towards using more persistent chemicals with increased climate change, but no evidence of this, except that there may be a move towards looking for chemicals that stay longer in the environment. Informing policymakers of these risks is important

RESOURCES

- UKHSA, 2023. Health Effects of Climate Change (HECC) Report https://www.gov.uk/government/publications/climate-change-health-effects-in-the-uk
- Pesticide Action Network, 2022-2023 Report. Chemicals and Climate Change: A Vicious Cycle https://www.panna.org/resources/pesticides-and-climate-change-a-vicious-cycle/
- United Nations Environment Programme (UNEP), 2021 Report. Chemicals, Wastes and Climate Change: Interlinkages and Potential for Coordinated Action https://www.unep.org/resources/report/chemicals-wastes-and-climate-change-interlinkages-and-potential-coordinated-action
- UKHSA, 2023 HECC Report. Chapter 12: Impact of climate change on human exposure to chemicals in the UK https://assets.publishing.service.gov.uk/media/65705ea1739135000db03bc1/HECC-report-2023-chapter-12-chemicals.pdf
- WHO, 2017. Chemicals Road Map https://www.who.int/publications/i/item/WHO-FWC-PHE-EPE-17.03

- UNEP, 2024. Global Framework on Chemicals https://www.chemicalsframework.org/page/text-global-framework-chemicals

Chemical Network: The Chemical Network is a non-partisan online forum established by the Division of Environmental Health (DEH) at the University of Cape Town's (UCT) School of Public Health. It was established as part of a knowledge management and sharing project supported by the Swedish Chemicals Authority (KemI).

This forum has been produced with financial assistance from Sweden, through the Swedish International Development Cooperation Agency (SIDA), which has been arranged by the Swedish Chemicals Agency (KemI). The views herein shall not be taken to reflect the official opinion of SIDA or the Swedish Chemicals Agency.

If you have any questions or require clarification on this initiative, please contact UCT at **chemicallistserver@gmail.com**. If you are not already a member, join the Chemical Network at: **http://eepurl.com/hf9nwf**

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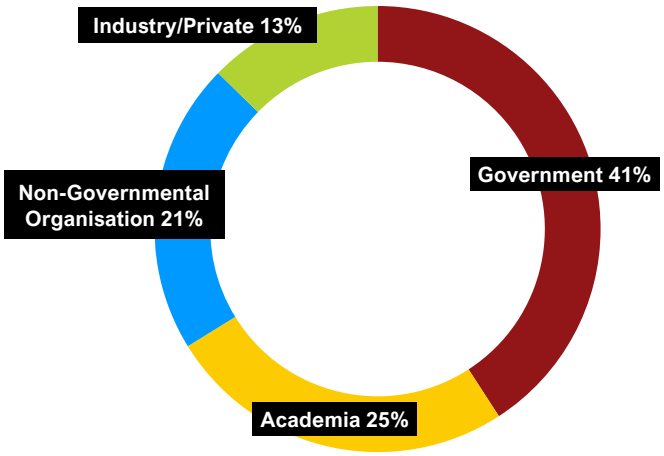
DISCUSSION DIGEST
Issue: 5 of 2024
Date: 14 Nov 2024

Finding Sustainable Approaches to Communicating Chemical Risks

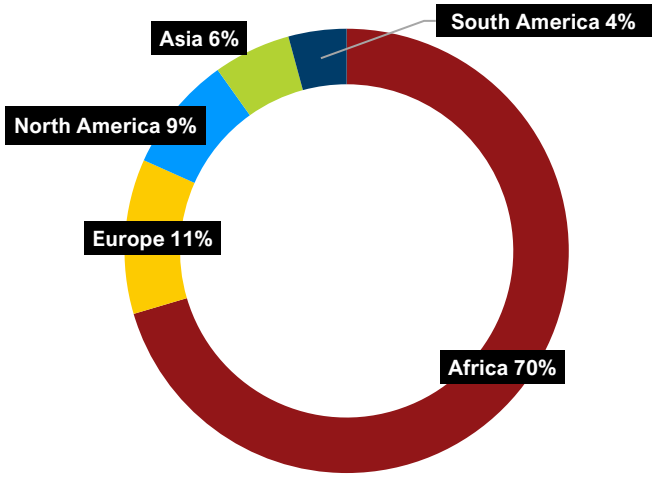
The UCT Chemical Network (CN) held a discussion on the 14th of November 2024, titled 'Finding Sustainable Approaches to Communicating Chemical Risks'. This was presented by **Prof Hanna-Andrea Rother** (University of Cape Town), **Dr Nosiku Sipilanyambe Munyinda** (University of Zambia, JMPM), and **Ellie Roger** (University of Edinburgh, Centre for Pesticide Suicide Prevention). Click to view: the PowerPoint presentation, discussion recording, and newsletter.

ATTENDANCE BREAKDOWN

Sector



Region



Total number of live participants = 71

ABOUT THE PRESENTERS

Andrea Rother is a professor and head of the Division of Environmental Health in the School of Public Health at the University of Cape Town, and an honorary professor in the Department of Public Health, Environments and Society, Faculty of Public Health and Policy (PHP), at the London School of Hygiene and Tropical Medicine. She has over 30 years of experience in research, teaching and building capacity, particularly in Africa, on pesticides, risk communication and risk management. She has published widely on the topic and served for twelve years as a World Health Organization (WHO) expert panel advisor on the Food and Agriculture (FAO)/WHO Joint Meeting on Pesticide Management (JMPM). She is also currently an international board member of the European Partnership for the Assessment of Chemicals.

Nosiku Munyinda. Dr Nosiku Sipilanyambe Munyinda is a lecturer and researcher at the Department of Environmental Health – School of Public Health at the University of Zambia. She is also an honorary senior lecturer at the Division of Environmental Health – School of Public Health at the University of Cape Town. She holds a BSc in environmental and natural resources management, an MSc in environmental engineering and sustainable infrastructure and a PhD in environmental health. Her research interests include environmental pollution and health effects, and climate change science, mitigation and adaptation. Dr Munyinda has a robust interface with policymakers, seeing her represent the University of Zambia on various national and international technical and project steering committees. She is a member of the Stockholm Convention Persistent Organic Pollutant Review Committee (POP-RC) and the Joint Meeting on Pesticide Management (JMPM).

Ellie Roger is the Communication and Development Officer at the Centre for Pesticide Suicide Prevention (CPSP), based at the University of Edinburgh. With over 10 years of experience in the not-for-profit sector, she brings expertise in communications, events, and engagement. Since joining CPSP in January 2022, she has supported the centre's efforts to raise awareness of pesticide self-poisoning as a global health issue and to maximise the impact of CPSP's work. Previously, Ellie worked as a communications and engagement officer for a medical research centre and has extensive experience in stakeholder engagement and events management.

CONTRIBUTIONS FROM PARTICIPANTS

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The key discussion points raised by participants are presented under each question. Throughout the discussion, informal polls were conducted to help encourage discussion among the participants. They do not provide any representative data but rather provide a snapshot of participants' views.

SECTION 1
Andrea Rother

KEY MESSAGES

- Often, once-off risk communication (RC) campaigns are conducted, **but risk communication needs to be long-term and sustainable**
- The role or purpose of RC is often to **inform or educate a particular population** (awareness-raising); for **behaviour or perception change**; during a **crisis**; and to encourage **conflict resolution/problem-solving**
- Historically, RC has been linear/one-way authoritarian communication, but there has been a realisation that it **needs to be a two-way engagement**. Those being exposed can inform what types of RC media are being used, which can build trust and facilitate decision-making
- There is **no singular medium appropriate for all target audiences**. It is important to know the target audience, select the appropriate messengers, use the right/clear message, and use the appropriate media/channels
- **Risk perception differs between people** and is influenced by various factors, such as the information we get, which impacts how we understand or interpret the RC medium. Poor RC can have adverse consequences. It is important to know how people have responded to or interpreted your RC

POLL RESPONSES

Poll 1. Who is responsible for communicating chemical health risk messages to 1. farmers, 2. workers, and 3. the public? Indicate target group in response

- Government
- Industry/manufacturers/producers
- Neutral, unbiased persons
- Regulators
- Non-Governmental Organisations (NGOs)
- Suppliers/sellers
- 1-3. government; employers; media, industry
- 1. Industry and government
- 2. Industry, government and employers
- 3. Industry, government and retailers
- Farmers: Ministry of Agriculture, agriculture extensionists, farmer group leaders
- Workers: ministry of local government, industries
- Government (all 3), farmer associations (1), unions (2)
- Researchers and experts
- Manufacturers (labels & safety data sheets), distributors (labels & safety data sheets), government (awareness-raising)
- 1. Ministry of Health and Agriculture, people tend to follow the government
- 2. Occupational health and safety management teams
- 3. Ministry of Health
- Industry, government, regulators, community stewards

Poll 2. Which picture best illustrates potential chronic health effects to low literate populations?

Option 1	15
Option 2	13
Option 3	1

Poll 3. Explain what you think is the chemical industry's responsibility in communicating chemical hazards and risks to the end users

- List all the potential health hazards in local languages
- Transparency and traceability of chemicals used and hazards-associated information on the product in local language
- Clearly and accessibly inform users about the hazards and risks of their products, how to reduce risks, monitor the effectiveness of communication, and repeat
- As they produce chemicals, they must inform people of their side effects
- Communication on the importance of the safe use of chemicals and side effects
- Disclose all physical, health and environmental hazards to the end user via hazard communication tools, training, awareness
- Proper labelling of products
- Transparency on the toxicity of the chemicals, and also during the registration process of the chemical
- Clear, well-labelled containers, use of simple language
- Hazards clearly explained, and a hotline
- Comply with the regulations on labelling
- Clear labelling of hazardous chemicals for easy identification in the communities for all users
- Warning labels, precautionary statements as per the Globally Harmonized System (GHS)
- Training on the label contents
- Make risks to health and life clear
- To state clearly the dangers and risks involved with a particular chemical. Explain clearly in local languages
- Inform the public about the composition of the chemicals, production processes

involved, and the risks of the chemical, including mitigation measures to be used to manage the risk
- They need to provide information to the users through clear labels and instructions
- Communicate chemicals risk in mainstream media
- Effective enforcement of the law related to chemical management and mitigation of risks

SECTION 2
Nosiku Munyinda

KEY MESSAGES

- Chemicals go through a **life cycle**, from inception through development, manufacture and storage to use and disposal. Different ministries of government have different roles in communication and deal with different stages of a chemical's life, from toxicological analysis, importation, and registration to occupational safety, use in various applications, and waste management. RC can be costly, so the financial ministry also needs to be involved
- **Safety data sheets (SDS)** are the first point of contact that many governments have with the chemical, containing key information about the chemical. They are important in communicating a chemical's inherent hazards and risks to human health and the environment. SDSs are mostly used for workplace safety and emergency personnel. Consumers also must be considered- this is where product labelling plays a role
- **Globally Harmonized System (GHS) is a standardised classification and labelling system for chemicals**. Under the GHS, labels contain symbols (pictograms), signal words indicating severity of the hazard, a hazard statement, and precautions
- However, there remains an issue of **comprehensibility and interpretation, language barriers**, and other issues, such as labels falling off a container
- Governments can also use chemical registers and awareness-raising activities such as electronic media programmes, printed media, and market platforms

POLL RESPONSES

Poll 4. **What are your expectations of governments' role in chemical risk communication?**

1. Regulations that are clear and non-ambiguous
2. Enforce regulations for the safe handling of chemicals
3. No fake news
4. Transparency
5. Give explanations on the local radio
6. Coordinate risk communication, design legislative requirements, and enforce communication by the industry
7. Provide accurate and timely information to the public about the risks of chemicals
8. Ensure industry's compliance in chemicals risk communication
9. Regulate chemical risk communication
10. Designate a public entity that is responsible for communication
11. Communicate using roadshows, plays on radio, and pamphlets
12. Engage local community members, traditional leaders, and local bylaws
13. Putting in place legislation with standardised symbols
14. Reestablish extension services
15. Train officials in supporting farmers
16. Conducting comprehension testing
17. Awareness-raising
18. Develop structures of communication they expect from the manufacturers or the industry in general, nationally
19. Make it mandatory for all key government departments involved to communicate
20. Training for users

Poll 5. What elements should be included in government's chemical risk communication plan/programme?

- Information on how to understand a label, pictograms, colour codes, the order of chemical labels, etc.
- The hazards posed by the chemicals, safe handling of these chemicals
- GHS symbols of chemical toxicity
- Waste management: disposal of empty packages e.g. with waste-collecting entities
- Types of pesticides, classification, hazards, strength
- Avoid colour codes as it creates confusion
- Literacy levels of target audience
- Information: charts, movies, social media
- Layman's terms

Poll 6. What are the best ways for the government to communicate to a varied audience?

- Communicate through social media, print and broadcast media
- Community engagement e.g. meetings/gatherings
- Chemical risks communication courses for professionals like pharmacists, food engineers etc.
- In the places where the products are sold
- Introduce in school curricula
- Workshops and trainings
- Production of awareness materials
- Combine mass communication and local communication
- Roadshows and outreach programmes
- Focus groups
- Social media
- Billboards, television adverts, newspapers, outreach
- Training, media radio
- Public safety days
- Community communication outreach
- Distribution of leaflets, church service, public schools, and gathering
- Through a toll-free number for text and calls
- Websites
- Newspaper articles
- Advertisements addressing the dangers of hazardous chemicals

Poll 7. How do you think the public should be able to communicate to government officials about chemical risks?

- Kenya has a toll-free line for alerting the government to non-compliance, exposures happening, etc.
- Website or online portals, SMS, government social media handles
- Whenever they come across mislabelling of chemicals
- Media and research groups, civil society
- There should be a government chemicals risk helpline
- Whistleblowing with open lines for easy reporting
- Social media
- Agriculture extension officers
- Toll-free lines
- Malawi has just introduced toll-free lines
- Public forums and town halls
- Partnerships with local health and environmental organisations
- Radio
- Through local leaders
- Through traditional leaders
- Community representative
- Lead farmers, farmer groups
- In South Africa, the public sends a complaint to the department through email, and we investigate
- Poison Information Centres

SECTION 3
Ellie Roger

KEY MESSAGES

- **Translating academic research** into information for the public can take on different forms
- **News articles are important** for relaying key information and messages, put in a different form for those who don't have the time or expertise to read a full journal article
- Blogs and opinion pieces can help keep things interesting
- **Choice of keywords and tags are important** to **enhance audience access**, especially to show up in web searches
- **Filmmaking and visual storytelling** are useful as **different people engage with different media**, and **people tend to relate more to stories than statistics**
- Part of information access includes engaging policymakers, using research to effectively motivate for/against a cause/ban
- Social media, e.g. LinkedIn, is very effective for reaching audiences
- **Safe messaging is important**, such as trigger warnings, helplines, and use of specific language around suicide and self-harm

POLL RESPONSES

Poll 8. What are the main ways you receive the latest research information about pesticide risks?

Newspapers	7
Opinion pieces/blogs	4
Social media	14
Journal articles	16
Events & conferences	9
Policy briefs	10
Newsletters	12

Poll 9. Is there anything we should or should not include when communicating pesticide risks?

- Not mention the name of the product used in a death in the media to prevent copycats
- Be aware that social media can sometimes, if not most of the time, over-sensationalise issues, which can cause panic
- Culture diversity
- Clear information
- False advertising – e.g. that a product is safe or natural
- Helplines
- We should exclude lethal levels
- Say what people can do and not always what they shouldn't do
- Some manufacturers can use social media to discredit their competition
- Just one message per campaign
- Potentially linking agriculture ministries with communities through apps/social media to highlight impacts and give information to farmers and communities

RESOURCES

- Organisation for Economic Co-operation and Development (OECD). Guidance Document on Risk Communication for Chemical Risk Management. July 2002. https://www.oecd.org/en/publications/oecd-guidance-document-on-risk-communication-for-chemical-risk-management_6954d334-en.html
- Centre for Pesticide Suicide Prevention (CPSP) website - https://centrepsp.org/
- Latest news and blogs - https://centrepsp.org/category/media/

- CPSP LinkedIn channel - https://www.linkedin.com/company/34669239/
- CPSP YouTube channel - https://www.youtube.com/@pesticidesuicideprevention
- Rother, H.A. December 2014. Communicating pesticide neurotoxicity research findings and risks to decision-makers and the public https://www.sciencedirect.com/science/article/pii/S0161813X14000345

Chemical Network: The Chemical Network is a non-partisan online forum established by the Division of Environmental Health (DEH) at the University of Cape Town's (UCT) School of Public Health. It was established as part of a knowledge management and sharing project supported by the Swedish Chemicals Authority (KemI).

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If you have any questions or require clarification on this initiative, please contact UCT at **chemicallistserver@gmail.com.** If you are not already a member, join the Chemical Network at: **http://eepurl.com/hf9nwf**