



University of Cape Town's CHEMICALS NETWORK

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Digest Summary of Discussion 4 2021

To make informed decisions about risks to health, safety and the environment, there must be access to information and tools to understand this information. Risk communication has several definitions, but the core concept focuses on the interactive exchange of information and opinions (risk perceptions) concerning risks (e.g., on chemical hazards in this case) associated with exposures to hazards and provides ways in which these can be managed. This UCT Chemical Network discussion was entitled “**Chemicals Risk Communication**”. To view the PowerPoint presentation and other resources for this discussion, click [here](#).

ABOUT THE PRESENTERS



Prof. Hanna-Andrea Rother is Professor and Head of the Environmental Health Division in the University of Cape Town’s School of Public Health and Family Medicine. She has worked in the field of chemicals and pesticide risk management for over 30 years researching, teaching, and conducting capacity building work (e.g., academic programmes, communities of practices, diverse training) in the areas of exposures, risk management, risk communication, policy development and analysis, and risk perceptions. Andrea has published extensively and led the development of over 40 risk communication tools particularly aimed at low-literate populations and policy makers.



Dr Halshka Graczyk is a Technical Specialist on Occupational Safety and Health (OSH) at the International Labour Organization (ILO) in Geneva, Switzerland. In this role, Halshka backstops the chemicals portfolio - which spans across all work sectors and occupations worldwide and assesses hazardous exposures along the life cycle of chemicals and waste. In addition, she supports several technical areas including OSH risk assessment, GHS, major industrial accidents and the development of evidence based public policies, programmes and strategies. Halshka holds a Ph.D. with a specialization in OSH, focused on the evaluation of novel and emerging risks (University of Lausanne, Switzerland), a Masters of Public Health (Johns Hopkins University, Bloomberg School of Public Health) and a Bachelors degree in Public Health and Economics (Johns Hopkins University).



Dr Manal Azzi is a Senior Occupational Safety and Health (OSH) Specialist at the International Labour Organization (ILO) based in Geneva, Switzerland. In her 17 years with the ILO, she has had the opportunity to supervise interventions around the world. Dr Azzi currently leads the ILO’s occupational safety and health team and manages the work on chemical safety and the environment and ILO’s activities on non-communicable diseases, health promotion in the workplace including improved wellbeing, nutrition and the prevention of stress, psychosocial risks, violence, and substance abuse in the world of work. She also coordinates the world day for safety and health at work campaign, which focuses in 2021 on strengthening OSH systems in the face of the COVID-19 pandemic. She currently manages a global project to improve OSH in micro, small and medium-sized enterprises. She also works on advancing OSH management systems and ILO Conventions 155 and 187 among others, to develop policies and programmes and strengthen national systems on OSH in numerous countries. Dr Azzi has published over 15 reports across the areas of expertise mentioned above. Dr Azzi holds a PhD in Health Sciences and Policy (Faculty of Health & Medical Sciences-University of Surrey, UK), a masters in labour law, LLM (University of Leicester), a Masters in Nutrition, and BSc. in environmental and public health sciences (American University of Beirut), and a degree in biochemistry, human physiology, and health education (University of Sydney).



Baskut Tuncak, Senior attorney and head of international advisory services at Leigh Day, leads the international advisory practice of London-based environmental and human rights law firm, Leigh Day, where he advises clients on matters regarding human rights, pollution, and occupational health. Until recently, Mr. Tuncak served as UN Special Rapporteur on human rights and hazardous substances and wastes (2014-2020), on appointment by the Human Rights Council. During his tenure, Mr. Tuncak worked with States, businesses, and international organizations to design preventative measures and to secure remedies for victims. Mr. Tuncak serves on the advisory board of various governmental and non-governmental initiatives around the world. Previous posts include senior researcher at the Raoul Wallenberg Institute, a visiting scholar at American University Washington College of Law and senior attorney with the Centre for International Environmental Law (CIEL). He is an adjunct professor at Boğaziçi University and founder of Common Rights.

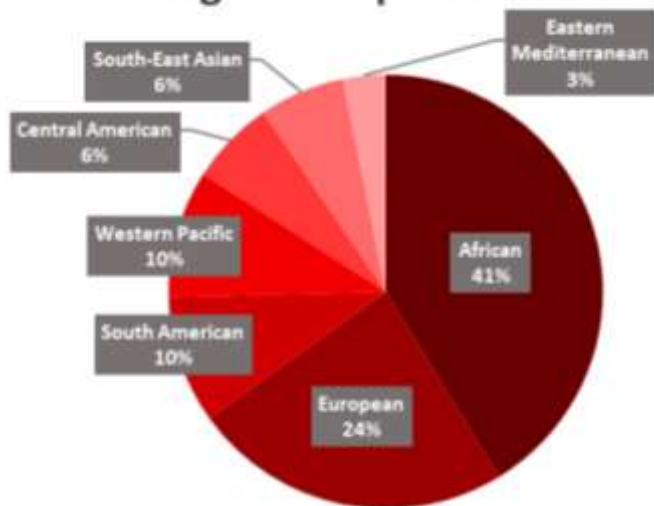


Dr Koebu Khalema is the Program officer at Africa Institute, the English Speaking African Regional centre for Stockholm and Basel Convention. He has been with the Institute for 9 years, disseminating information and executing Regional and National Projects in Chemicals and Waste Management and providing technical assistance therein. He is more than 20 years in the field, spanning from the years when he was a Chemistry lecturer at National University of Lesotho, and as an independent consultant before joining the centre.

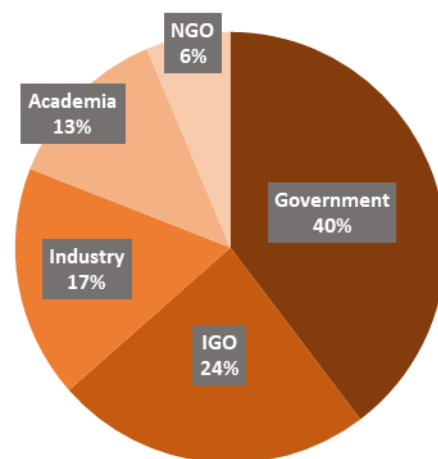
2021 DISCUSSION 4 ATTENDANCE BREAKDOWN

ATTENDEES: 63
Female – 54%
Male – 46%

Regional representation



Stakeholder representation



Key:
IGOs = Intergovernmental Organisations
NGOs = Non-governmental Organisations

KEY MESSAGES FROM THE DISCUSSION

1. Several countries indicated the **status of ratification** of several International Labour Standards, including key ILO conventions, which is key for setting the stage for access to information and good risk communication.
2. Many participants highlighted the **need to institutionalize the adoption of the GHS** through existing national policies and implementation measures, as well as by including dedicated GHS implementation in national policies and legislation rather than relying on the adoption of the GHS at organisation level only.
3. A key point raised was the GHS adoption should be considered while updating or developing national policies on **Occupational Health and Safety**.
4. **Enforcement** of GHS and other relevant risk communication legislation was highlighted as a problem area that needs to be improved on. A suggestion is that when stakeholders engage with ministries of environment, health, and labour to discuss national strategies, enforcement mechanisms should be actively promoted.
5. It was highlighted that while **the right to information and the right-to-know is important** for access to information, **the right-to-comprehend is even more so** to ensure that mechanisms are in place for understanding the risk information. Misinterpretations of the information can lead to unnecessary exposures to chemicals when users do not understand the information they are provided with or how to apply it.
6. No risk information, especially in pictorial forms, is intuitively obvious. **Training of all sectors of society** is key for risk communication methods to work in protecting health and the environment from chemical exposures. Starting with primary school education.

CONTRIBUTIONS FROM DISCUSSION PARTICIPANTS

The discussion was structured around three questions. The key discussion points raised by participants and organized by themes or countries (although not representative) are presented under each:

Question 1:

How can the labour sector or labour stakeholders play a more prominent role in GHS implementation at the national level, and risk communication at the workplace level?

COUNTRY:	PARTICIPANT RESPONSES:
KENYA (NGO)	<ul style="list-style-type: none"> - The low numbers of countries that have ratified the chemicals convention is incredibly disappointing.
MALAYSIA (Academia)	<ul style="list-style-type: none"> - The GHS implementation in agriculture sector would be challenging as references used by national authorities in agriculture sector are WHO/FAO guidelines. - Some countries have decided not to implement GHS at the agriculture sector.
MYANMAR (Industry)	<ul style="list-style-type: none"> - Labour authorities cooperate with HSE officials in national, regional, and private sectors.
MYANMAR (IGO)	<ul style="list-style-type: none"> - Start with the employer or supplier taking the action to raise the awareness about risk communication and GHS. - They are the closest contacts with the end users/workers.
SIERRA LEONE (Government)	<ul style="list-style-type: none"> - Conduct robust engagement. - Public awareness raising. - Training.
SOUTH AFRICA (Academia)	<ul style="list-style-type: none"> - The labour sector has taken the lead in GHS implementation. - It is good to see the linkages of the ILO work on chemicals management and relevance for other sectors – it encourages a breakdown of silos. - Research in South Africa has shown that training on the toxicity colour codes highlights poor understanding of these codes. - Farmers interpreted high toxicity to mean higher strength in the product and so it is better. - A lot of time has been spent in correcting this misunderstanding to reduce toxic exposures and wrong use of products. - At Local Government Municipal Health Services and applicable By-Laws should align to the National level. - Labour really needs to be empowered through policies, both national and organizational.
SOUTH AFRICA (Government)	<ul style="list-style-type: none"> - The implementation of GHS in Forestry is different to agriculture. - In SA, the Department of employment and Labour have promulgated new legislation in line with GHS called “The Hazardous Chemicals Agents Regulations”. - This will ensure the chemical companies comply to GHS and the employers comply to OHS regulations with regards to hazardous chemicals and biomonitoring. - There are some issues that are different for Forestry that do not apply to commercial agriculture.
SWITZERLAND (IGO)	<ul style="list-style-type: none"> - There is a role for labour inspectorates as well, to ensure enforcement of GHS and related provisions on OSH. - Forestry is part of agriculture, so it is covered under conventions related to the agriculture (for example C184 and others). - Alignment at all levels is critical.
TANZANIA (NGO)	<ul style="list-style-type: none"> - This should start with the National policies because sometimes labour laws do not ensure enforcement. - Enforcement is not taken seriously, especially by workers and or in ensuring understanding of the risks associated with chemicals.
ZIMBABWE (Industry)	<ul style="list-style-type: none"> - The Labour Sector should spearhead advocacy for GHS to be made into law, and should work closely with the Environment, Health and Economic sectors/ministries to inform policy makers on the importance of GHS. - The Labour Sector should focus on presenting economic losses suffered because of mortality and morbidity caused by exposure, and the increased burden of disease for the country caused by exposure.

PRESENTER'S COMMENTS

Question: Does the new ILO GHS document illustration show how to link C170 with the GHS?

- Yes.
- There is a summary table of what it covers and the specific provisions of C170 listed in the Annex (with all other instruments too).

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 participant views.

Poll 1 Results (N = 22)

Do you know if any labour standards/ILO conventions have been ratified in your country? If yes, please say which ones and include your country's name.

Yes: 15

No: 7

Countries that said yes:

	Standards or conventions ratified
Colombia	C170, C174
Hungary	73 conventions ratified
Iran	C029, C100, C105, C111
Malaysia	C155, C187
South Africa	27 ILO conventions and HCA regulations
South Korea	C187, C155, C139, C162 and C170
Ukraine	C170

Poll 2 Results (N = 13)

Has your country ratified Convention 170 (C170 – The chemicals convention)?



Poll 3 Results (N = 5)

In the industry or workplace setting, in your opinion, could the provisions of C170 be useful in meeting the requirements of the GHS? Please explain.

Yes (n = 4):

- “Yes, that would be a basis for requirements of the GHS.”
- “Yes, it is strongly recommended that provisions of C170 be useful.”
- “Yes, requirements of risk communications in the C170 would help industries.”
- “Yes”

No (n = 1):

- “I am not familiar with C170.”

Question 2:

What are the tools or mechanisms that need to be in place to ensure a workers' right-to-know when it comes to chemicals hazards at the workplace?

COUNTRY:	PARTICIPANT RESPONSES:
IRAN (Academia)	<ul style="list-style-type: none"> - MSDS must be available. - Information sheets displayed on big boards. - Big signs used to communicate risks and hazards. - Books of instructions in labs, farms, factories, and other workplaces must be provided. - A washing station for eyes and shower stations in case of emergencies should be provided. - For agricultural pesticide workers pesticide labels and safety equipment must be provided and explained. - Regular worksite inspections must be conducted. - Walk throughs must be done on site to visually assess the types of equipment, work practices, and any potential hazards that could be harmful to workers. - Interviews with workers and managers can also be done. - Creating hazard maps is also a good approach.
MALAYSIA (Government)	<ul style="list-style-type: none"> - Comprehensibility testing.
MONTENEGRO (Government)	<ul style="list-style-type: none"> - Training for safe work and risk assessment in workplaces
MYANMAR (IGO)	<ul style="list-style-type: none"> - Legally create an information obligation for the employer and right of withdrawal for the worker if information is not available. - Workplace inspection can also be conducted. - An OSH committee at workplace and OSH management system should consider and inform the workers' right to know.
MYANMAR (Industry)	<ul style="list-style-type: none"> - Having hazard communication tools, chemical risk assessment, relevant chemical storage and handling training, chemical inspector's approval are basic tools. - Chemical hazards for workers in local languages is important.
SOUTH AFRICA (Academia)	<ul style="list-style-type: none"> - An integrated and intergovernmental approach that filters down to education at school and worker training. - More countries should write into legislation the right-to-comprehend. - Industry must be held accountable to not only having labels, but documents or QR codes that explain what the information means as part of the packaging. - First induction or orientation programs for new workers or transfers should be done. - Then clear layout of the workplace and storage and flow of chemicals use can follow. - This information must then be reinforced continuously through labels. - Occupational Health and Safety Training Programmes for workers can be done. - Workplace induction must be included. - Medical and Environmental Surveillance & Monitoring will also help. - UCT developed the comprehensibility testing tool for the GHS. Sadly, GHS comprehensibility testing was only conducted once the pictograms, etc. were agreed upon and many countries kept indicating how they would change the pictograms! - Consider a similar tool as used by the WHO - 5 keys for Food Safety - Daily broadcasts to workers on selected chemicals can also be established as well as consistent announcements during breaks over intercoms.
SOUTH AFRICA (Government)	<ul style="list-style-type: none"> - Proper training on the labels and SDS in the users' own language - SA has 11 official languages and only 2 appear on pesticide labels. - Colour codes don't work as some people are red/green colour blind - which is a huge problem.
SWITZERLAND (IGO)	<ul style="list-style-type: none"> - Very interesting re: risk communication vs. comprehension, an important lesson learned - Some provisions from certain ILO Conventions indicate that the right to information also includes provisions for appropriate training for workers towards comprehension and not just information.
TANZANIA (NGO)	<ul style="list-style-type: none"> - Language barrier should be the first thing to be emphasized on, because most the chemical are imported in a language workers cannot understand easily.

Poll 4 Results (N = 16)

Are you aware of mechanisms (tools (e.g., SDS) or legislation) or have you had experience with transparency of information on imported chemicals?

Gaps in existing mechanisms legislation (n = 2):

- “In South Africa there is no legislation requiring the listing of chemicals in products such as flame retardants.”
- “No.”

Insufficient mechanisms (n = 7):

- “SDS are there but in a language which workers do not understand. Few of them can understand directives on the SDS.”
- “The SDS does not necessarily contain all the necessary information. I have found some pesticides companies using the incorrect CAS numbers on their SDS to make their products seem “safer” than they are.”
- “Some limitation if dealing with CBI.”
- “Not all. Some imported chemicals are mixtures, and it is not mentioned exactly what chemical ingredients are in them. If some importers describe only trade names, users must check with the SDS to get more info.”
- “Imported chemicals often decanted into other containers and sold as other products.”
- “Imported chemicals must comply to local legislation on labelling, SDS, classification. Some chemicals come with incomplete SDS and incorrectly classified chemicals as per the local legislation. Local legislation requires two languages. Some did not come in both.”
- “Imported chemicals through back channels found in Chinese markets in Chinese so not legible to the average South African user.”

Existing mechanisms (n = 7):

- “Information tools, training for safe work, risk assessment on workplace, and inspection controls.”
- “Risk Management – ISO/SANS.”
- “In Montenegro, we have 127 chemicals on list.”
- “Yes – Malaysia.”
- “Iran – I am aware about some pesticides, am also familiar with the obsolete pesticides. Now we are facing with stockpiles of obsolete pesticides in some developing countries.”
- “In Zimbabwe we have legislation requiring imported hazardous substances to have labels which are GHS compliant (SI 268 of 2018).”
- “There are some legislations.”

Poll 5 Results (N = 10)

What tools do you think are complementary to the GHS and need to be put into place for low literate workers to promote their right to know?

Training and awareness raising (n = 6):

- “Awareness training is very important.”
- “Occupational Health and Safety Training Programs for workers, risk assessments, workplace induction, medical and environmental surveillance, and monitoring and inspection control.”
- “GHS should be included in primary and secondary school curriculum.”
- “Training workers so that they are able to comprehend the meaning of labels on chemicals.”
- “Toolbox meeting before start or handling of any chemical at the workplace.”
- “A participatory approach to develop comprehensibility amongst all affected, i.e., workers and employers as well as regulators.”

Fixed tools and mechanisms (n = 2):

- MSDS available, information sheets in big boards, big signs, books of related proper instructions in the workplace, a washing station for eyes, a shower for agricultural pesticide workers, pesticide labels and safety equipment.”
- “Area labelling, label/pictograms in native languages, dos and don’ts posters.”

Legal mechanisms (n = 2):

- “It should be a legal requirement that industries must include with their products, information on what the precautionary risk and safety information means.”
- “There should be a legal requiring for employers to inform – this should be followed up with enforcement and monitoring. Workers’ committees also need to be empowered through training so that they cascade to their members importance of chemical safety.”

Case Study:

Poll 6 Results (N = 6)

Do you have any examples of other case studies of chemical risk communication with workers in your country? Please state your country and examples.

Iran (n = 1):

- “Yes, when working as a consultant for the biggest Iranian pesticide production company, in the factory helping workers for safety issues (20 years ago) providing them with safety sheets, photos, charts about safety gloves, overalls, masks.”

Montenegro (n = 1):

- “In Montenegro we have OSH performance NAPO in kingdom of chemicals in kindergarten.”

South Africa (n = 3):

- “DFFE: NRM have changed our pesticide policy and updated our risk communication with workers in our toolbox talks emphasizing human health impacts and exposures of pesticides and why we don’t use some of the pesticide we did in the past.”
- “In South Africa, we also developed awareness materials which are shared with the public and schools when conducting awareness workshops relating to the chemicals of focus at the time.”
- “In South Africa, we developed stickers with the GHS pictograms on it and distributed these to different categories of workers and the public.”

Unknown (n = 1):

- “We developed a kind of skull and cross bones symbol to indicate and show how pesticide residues can be on worker’s clothing and carried into the home.”

Poll 7 Results (N = 5)

In your country, are there any continuous education or outreach programs on communicating and preventing chemical hazards?

Brazil (n = 1):

- “In our Regional Centre/CETESB/Brazil has been developing the guideline on Preparedness Plan for Communities Exposed to Technological Risk of Chemical Origin.”

Iran (n = 1):

- “Yes, after many years of work by myself and other related academic people, we now have some type of these regular sessions.”

Malaysia (n = 1):

- “Yes and no. Initially yes but now under the OSH Master Plan, we are integrating OSH including chemicals in the school, university syllabus and modules.”

South Africa (n = 1):

- “Yes. DFFE: NRM has outreach programs through our training program.”

Unknown (n = 1):

- “Environmental Health Practitioners both at National and Local Government integrate chemical risk awareness into Health Promotion and Education, especially in Malaria Control Program.”

Key resources:

- **Risk communication for chemical risk management, OECD-workshop, Berlin, Germany, 18-20 September 2000.**
- Rother H-A (2014) **Communicating pesticide neurotoxicity research findings and risks to decision-makers and the public.** *NeuroToxicology* 45: 327- 337. <http://dx.doi.org/10.1016/j.neuro.2014.03.001>
- **The GHS in the world of work: Mapping synergies between ILO Instruments and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**
This report examines the critical synergies between the GHS and the ILO's ILS on chemicals and OSH, aiming to promote GHS implementation and greater engagement of the world of work toward the sound management of chemicals.
https://www.ilo.org/global/topics/safety-and-health-at-work/news/WCMS_818523/lang-en/index.htm
- **A 5 step guide for employers, workers and their representatives on conducting workplace risk assessments**
https://www.ilo.org/safework/info/publications/WCMS_232886/lang-en/index.htm
- **Training package on workplace risk assessment and management for small and medium-sized enterprises**
https://www.ilo.org/global/topics/safety-and-health-at-work/resources-library/training/WCMS_215344/lang-en/index.htm
- **International Labour Standards on Occupational Safety and Health**
<https://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/occupational-safety-and-health/lang-en/index.htm>
- **The GHS in the world of work: Mapping synergies between ILO Instruments and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)**
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https://www.ilo.org/global/topics/safety-and-health-at-work/news/WCMS_818523/lang-en/index.htm

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 and Family Medicine. 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 question or require clarification on this initiative, please contact UCT at chemicallistserver@gmail.com.

If you are not already a member, to join the Chemical Network at: <https://forms.office.com/r/Lk1tgAL6DF>

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 of trade names or commercial processes constitute endorsement.