

WELCOME TO THE UCT CHEMICALS NETWORK DISCUSSION



School of Public Health and Family Medicine
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UNIVERSITY OF CAPE TOWN
UNIVERSITHI YASEKAPA - UNIVERSITEIT VAN KAAPSTAD

Introduce yourself (name, job title, organization and country) in the **chat section**.

Only the presenter and facilitator will speak. Any comments or questions from attendees should be typed in the **chat section**.

Please kindly keep you microphone muted and cameras off during the discussion

NOTE: If you are having **technical difficulties**, please join the WhatsApp group for assistance:

<https://chat.whatsapp.com/CdEJNdPEva30263AB3KYBq>

Discussion 4 Topic:

Chemicals Risk Communication

- Date: 8 September 2021
- Time: 16h00 – 17h30 (GMT+2)
- Presenter: Hanna-Andrea Rother, UCT
Manal Azzi & Halshka Graczyk, ILO
Baskut Tuncak, Leigh Day
Koebu Khalema, Africa Institute
- Facilitator: Hanna-Andrea Rother, UCT

UCT'S CHEMICALS NETWORK DISCUSSION

CHEMICALS RISK COMMUNICATION



Prof. Hanna-Andrea Rother

Head of the University of Cape Town's
Division of Environmental Health



Manal Azzi

Senior Occupational Safety and Health
(OSH) Specialist at the International
Labour Organisation (ILO)



Baskut Tuncak

Senior attorney and head of
international advisory service at Leigh
Day



Dr. Koebu Khalema

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Dr. Halshka Graczyk

Technical Specialist on
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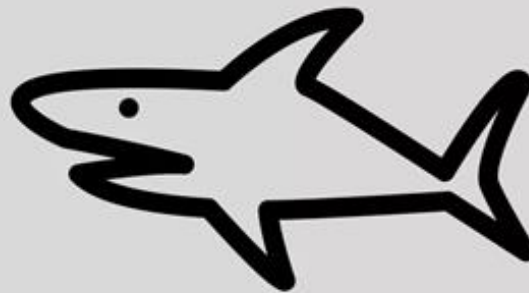
HAZARD VS RISK

- **Risk** is a function of Hazard and Exposure

➤ $R = f(H \times E)$

Hazard

Something that can potentially cause harm



Risk



= hazard + exposure

UNDERSTAND DIFFERENCE BETWEEN HAZARD ASSESSMENT VS RISK ASSESSMENT

Difference Between Chemical Hazard vs Risk Assessment

HAZARD ASSESSMENT

- Focuses on intrinsic properties of active ingredient or formulated production
- ⇒ WHO hazard classification
- ⇒ GHS hazard classification

Globally Harmonized System of the Classification and Labelling of Chemicals (GHS)

RISK ASSESSMENT

- Assesses hazards plus potential exposures
- Operator exposures (OELs)
- Animal data based on LD/LC₅₀ extrapolated to humans
- Toxicological & Ecotox data (dossiers)

HAZARD COMMUNICATION VS RISK COMMUNICATION MECHANISMS

HAZARD COMMUNICATION

➤ Pesticide labels

- ☐ Colour codes/bands



WHO acute toxicity hazard classification based on pesticide's LD50

- RED Label Class Ia & Ib – extremely hazardous
- YELLOW Label Class II – highly hazardous
- BLUE Label Class III – moderately hazardous
- GREEN Label Unclassified - less hazardous

➤ Safety Data Sheets (SDSs)

RISK COMMUNICATION

➤ Pictograms (pesticide and GHS labels)



Prolonged or repeated exposure to this chemical may cause long term health effects as cancer or birth defects.

➤ Labels

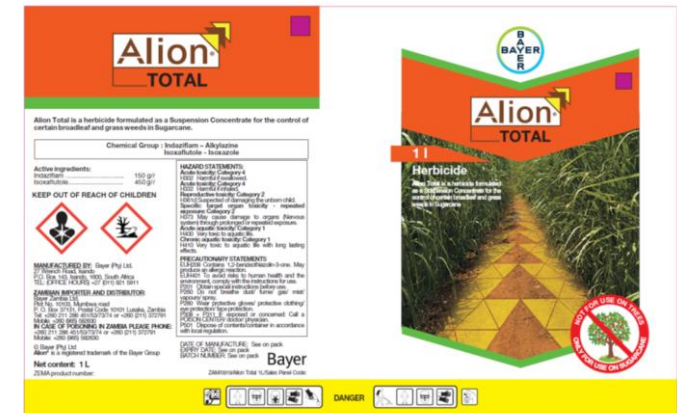
➤ Posters

➤ Training

➤ Billboards

➤ Packaging

➤ Media – TV, Social Media, Radio



INTRODUCTION TO RISK COMMUNICATION

PRESENTED BY: HANNA-ANDREA ROTHER, UCT

Purpose of risk communication is dependent on the goal of the transaction:

- To inform/”educate” a particular population (e.g., awareness raising, training)
- To affect behaviour change/ encourage protective action (e.g., use alternatives, change safety practices, promote use of PPE)
- To communicate during a crisis – disaster warnings and emergency information (e.g., early warning systems, no swimming in contaminated waters); and
- To encourage or facilitate conflict resolution or problem solving

IMPACTS ON EFFECTIVE RISK COMMUNICATION

4 Factors to Evaluate for Effective RC

- **The Target Audience**
 - e.g., educational level; reading level; local conditions
- **The Messenger**
 - Official (govt, chemical companies); unofficial (friends, family, media)
- **The Message** (informing or influencing)
 - Plain language, actions feasible, seek to inform
- **The Medium**
 - labels; culturally appropriate

Examples of constraints on effective RC

- **Organizational Constraints**
 - Inadequate resources
 - Confidential Business Information
 - Lack of accountability and responsibility
- **Emotional Constraints**
 - Unwillingness to see the public as an equal partner
 - Not considering the audience and communicator's risk perceptions
- **Lack of trust**
 - Mistrust of risk assessments
 - Lack of faith in science and institutions (e.g., government & industry)
 - Disagreements in what is an acceptable risk
- **Lack of knowledge and understanding of RC info**



EXAMPLES OF BENEFITS OF EFFECTIVE RISK COMMUNICATION

- Protect human health from acute and chronic health effects
- Protect the environment from pollution
- Allows for people to engage in discussions and debate rather than just “provision of information”
- Enables target audience to participate in deciding how risks should be managed

BACKGROUND TO QUESTION 1: THE GHS IN THE WORLD OF WORK: ILO ROLE AND RESPONSE

PRESENTED BY: MANAL AZZI, ILO

- Founded in 1919 as a UN specialized agency to promote **rights at work**, encourage **decent employment** opportunities, enhance **social protection** and strengthen **social dialogue** on work-related issues
- Tripartite governance structure: **governments, employers** and **workers** of 187 member States – Core work is to assist in the development, implementation and monitoring of **International Labour Standards (ILS)**
- In today's globalized economy, ILS are an essential component of the international framework for ensuring decent work as well as **occupational safety and health**:
 - The **Chemicals** Convention, 1990 (No. 170)
 - The **Prevention of Major Industrial Accidents** Convention, 1993 (No. 174)
 - Promotional Framework for **Occupational Safety and Health** Convention, 2006 (No. 187)
 - **Occupational Safety and health** Convention, 1981 (No. 155)
 - **Occupational Health Services** Convention, 1985 (No. 161)
 - **Asbestos** Convention, 1986 (No. 162)
 - Occupational **Cancer** Convention, 1974 (No. 139)
 - Safety and Health in **Agriculture** Convention, 2001 (No. 184)
 - Safety and Health in **Construction** Convention, 1988 (No. 167)
 - Safety and Health in **Mines** Convention, 1995 (No. 176)

NEW REPORT ON GHS IN THE WORLD OF WORK: MAPPING SYNERGIES BETWEEN ILO INSTRUMENTS AND THE GHS

Overview

- Introduction and development of the GHS
 - History of the need for a harmonized system following a series of accidents in the 1970s and 1980s
 - GHS came hand in hand with C170 (1990) and C174 (1993)
- The world of work as a driver of GHS development and implementation
 - Tripartite stakeholders can all benefit from a harmonized system
- Critical synergies between ILS and GHS
 - Usefulness as a reference for the development of legislation
- GHS as an essential OSH element – hand in hand with OSH-MS 2001
- Annex: Practical reference for stakeholders
 - Includes an annex with ILO instruments which contain GHS elements



▶ **The GHS in the world of work:**
Mapping synergies between ILO Instruments and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

GHS Label Elements



[Read the report here](#)

SYNERGIES BETWEEN INTERNATIONAL LABOUR STANDARDS AND THE GHS

ILO instrument	GHS element			
	Classification	Labelling	Safety Data Sheets	Training
<i>Conventions</i>				
C170 - Chemicals	X	X	X	X
C174 - Major industrial accidents	X	X		X
C187 - Promotional framework for OSH	X	X		X
C155 - Occupational Safety and Health	X	X	X	X
C139 - Occupational cancer	X	X	X	X
C148 - Working environment	X	X	X	X
C162 - Asbestos		X	X	X
C136 - Benzene		X	X	X
C184 - Safety and health in agriculture	X	X	X	X
C176 - Safety and health in mines	X	X	X	X

ILO instrument	GHS element			
	Classification	Labelling	Safety Data Sheets	Training
<i>Recommendations</i>				
R177 - Chemicals	X	X	X	X
R164 - Occupational Safety and Health		X	X	X
R147 - Occupational Cancer	X	X		X
R172 - Asbestos		X	X	X
R144 - Benzene	X	X	X	X
R192 - Safety and Health in Agriculture				X
R175 - Safety and Health in Construction				X
R183 - Safety and Health in Mines	X	X	X	X

By implementing the GHS, States work toward fulfilling obligations in ILS, at the same time by ratifying and implementing many ILS, States work toward fulfilling obligations of the GHS

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?

There will be 20 minutes to discuss this question in the chat section.

Please keep your cameras off and microphones muted.

Make use of the chat function to discuss

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BACKGROUND TO QUESTION 2: CASE STUDY: THE GHS IN THE GARMENT SECTOR IN VIET NAM PRESENTED BY: BASKUT TUNCAK

- The garment sector utilizes many different types of hazardous chemicals in its operations
 - Practical application of the GHS can take time after reform, with manufactures having existing stocks of chemicals with old labels
- In 2012, non-compliance on chemical labelling and SDS was detected in a number of factories
 - Containers were not labelled with contents in 1/3 of the factories deemed non-compliant
 - Hazard pictograms were not indicated on secondary containers in the vast majority of non-compliant factories
 - Labels were in a foreign language (typically English or Chinese) in one third of non-compliant factories
 - Other defects: wrong chemical on the label, chemicals stored in water bottles, the wrong pictogram was used or pictogram was missing



CASE STUDY: AGRICULTURAL WORKERS AND PESTICIDE LABELLING IN PUNJAB, INDIA

- In 2015, a report was filed with FAO on inadequate labelling of pesticides in Punjab
 - Labels lacked adequate safety advice or health warnings
 - Omitted phrases about possible reproductive damage
- Pesticides didn't have Punjabi on the label, so farmers had difficulty reading the text or were unable to read it at all
 - Many farmers were not able to read the labels at all due to font size or illiteracy
- Products didn't use GHS compliant symbols, but rather a color code system that was confusing to users
 - Users interviewed did not know the correct order or understand the logic of the system
 - One worker believed that products with a green color “increased the yield” or that yellow was the most dangerous as it “worked from the outside”

RISK COMMUNICATION AND THE RIGHT TO KNOW

- The implementation of the GHS is important to realize the ILO's fundamental principles and rights at work, as well as relevant conventions that are not primarily focused on OSH
 - Fundamental rights to **Freedom of Association** and the **Effective Recognition of the Right to Collective Bargaining** are dependent upon the right to know
 - Without information, workers and their representatives cannot engage in meaningful discussions on workplace hazards and measures for protection
 - Workers across various protected groups, including children, remain vulnerable to discrimination in employment when workplace hazards are unknown or undisclosed
 - **Elimination of force or compulsory labour** has been defined as including deception regarding the work entailed
 - Without information about chemical hazards, workers may be unaware of the chemical risk they are subject to

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?

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CASE STUDY: PCB RISK COMMUNICATION IN AFRICA

PRESENTED BY: KOEBU KHALEMA, AFRICA INSTITUTE

Background

- The Stockholm convention has listed over 30 harmful and persistent organic pollutants.
- One of the key actions that countries need to take is to raise awareness about these chemicals,(Article 10)
- Many countries are struggling to communicate the risks of these pollutants effectively due to Technical Nature of the subject.
- PCB is an industrial chemical: found in Transformers and capacitors among others. Mostly owned and operated by electricity supply and distribution companies, however there are other private owners such as big installations in industries, mines and large firms
- Risk Communication means establishing dialogue with the public about the hazards and steps to be taken to reduce the risk {it is useful to communicate the difference between HAZARD and RISK}

Exposure situation – LESOTHO CASE

- In the national electricity network, many of the transformers are found in the public spaces and when the leaks occur, it is the general public that is exposed.
- Additionally, there have been wide reports that people use the transformer oil for other purposes ranging from medicinal, cooking, application to animals for skin diseases, production of diesel and as fuel. The public has gone to an extent of stealing this oil as it is known to last longer in any use. Sometime it is even sold, perhaps sourced from some workers with access to it.

CASE STUDY: PCB RISK COMMUNICATION IN AFRICA

PRESENTED BY: KOEBU KHALEMA, AFRICA INSTITUTE

Roll out and Dissemination – 4 November 2020 – 11 June 2021

Mass media was selected as the best tool to disseminate the messages and start the dialogue:

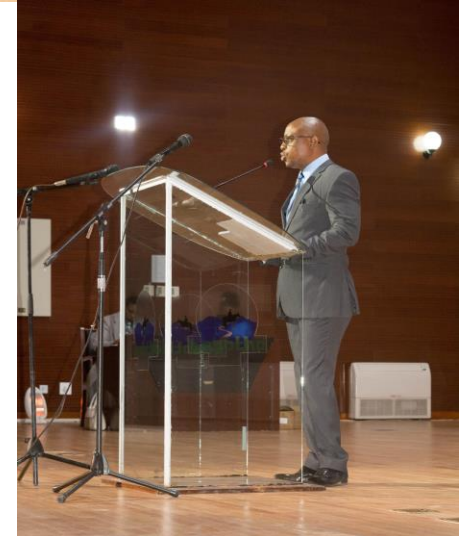
- **Media :** Several **Press conferences** were called at different stages of the campaigns. Media houses were alerted of the project and its objectives at the start and were then informed of the subject matter of PCBs and their health impacts, then called upon as key partners in disseminating the messages, thereby also being guided on how to relay the messages.
- **General Public:** There were **Radio and TV** programs scheduled on weekly basis for a period of six months, where officials of both the national electricity utility and environment authority would make presentations in **LOCAL language**; and the general public allowed to call in and ask questions and also comment on what they may have seen regarding transformer oils. Voice and video clips were developed using local popular comedians' actors, run daily on radios and LTV.
- Specific sectors of the public were also targeted through **Workshops and Roadshows: Herd boys, LG Council secretaries, Farmers and Street vendors.**



CASE STUDY: PCB RISK COMMUNICATION IN AFRICA

PRESENTED BY: KOEBU KHALEMA, AFRICA INSTITUTE

- **Leaners/Students:** A special program for leaners was organized as a competition, over ten weeks. On a weekly basis a radio, program was run where officials would present on a selected topic on PCBs and then several questions asked in the program where learners were called upon and encouraged to call in and answer the questions, in order to win a tablet and data bundles. One winner was chosen every week and the final 10 were awarded their tablets in another highly publicised event officiated by the Ministers and Principal Secretaries of the three Ministries- Ministry of Environment, Ministry of Education and Ministry of Energy.
- **Workers:** In depth targeted workshops were held for technical works force of the utility company, with special emphasis on health and safety issues, including, Handling, PPE and identification(inventory) sampling and testing of transformer oil.
- **Policy makers:** One breakfast meetings was successfully organized for policy makers, including parliamentarians (portfolio committee members on natural resources).
- **Emphasis :** requisite policy directions and regulatory instruments needed not only to protect the nation but to eliminate PCB in the country. Laws and regulations banning imports and use, regulations for life cycle management and standards and guidelines on management of contaminated equipment were emphasised to this group.



CASE STUDY: PCB RISK COMMUNICATION IN AFRICA

PRESENTED BY: KOEBU KHALEMA, AFRICA INSTITUTE

IMPACT: - FEEDBACK & PPE DEMAND FROM WORKERS

- It is estimated that the messages reached at least 500,000 people in the country, through Radio and TV
- The **workshops** reached over **500** people: **Women in Science 40; Traditional healers 40; Parliamentarians 40**
- Private transformer owners, Border Control Enforcement Officials, Representatives of Geography & Environmental Movements, Lesotho Science & Maths Teachers Associations, NGOs (TRC, GROW, PELUM, SERUMULA, DPE, SOLD) **>400**
- **Herd boys** meetings gathered **500** young men where 50 branded hats were given away
- **Roadshows** reached out to more than **1000** spectators where 50 hats and 50 branded bottles were given away.
- **Radio competition award ceremony** had **100** direct participants, broadcasted to the nation.



DISCUSSION TIME

There will be 15 minutes to discuss the case studies presented and ask questions to the presenters.

Please keep your cameras off and microphones muted.

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THANK YOU FOR JOINING UCT'S CHEMICALS NETWORK DISCUSSION

Save the date:
Chemicals Network Discussion 5
Date: 5th October 2021
Time: 14h00 – 15h30 (GMT+2)

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