



SUB-REGIONAL WORKSHOP ON INDUSTRIAL CHEMICALS UNDER THE ROTTERDAM CONVENTION

**VENUE: BURGERS PARK HOTEL
CNR LILLIAN NGOYI AND MINNAAR ROAD
PRETORIA, SOUTH AFRICA**

21 TO 23 OCTOBER 2014

SUMMARY REPORT

BACKGROUND

In response to the concerns about the dangers of certain pesticides, formulations and industrial chemicals on human health and the environment, the United Nations Environment Programme (UNEP) and the Food and Agricultural Organisation of the United Nations (FAO) jointly introduced the Prior Informed Consent (PIC) procedure under the Rotterdam Convention. This procedure was intended to ensure that governments have the information that they need about hazardous chemicals to assess risks and take informed decisions on chemical imports, while the Convention possessed the overarching objective of protecting human health and the environment against the effects of hazardous chemicals.

Over the years, the Africa Institute (AI) and its partners including the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS) have hosted and conducted trainings on assisting member countries in implementing the obligations to the convention. In this regard, the AI and the BRS implemented a sub-regional project in 2014-2015 aimed at helping selected parties (Uganda, Kenya, Lesotho, Tanzania, Swaziland, Ethiopia, Mauritius and Botswana) in improving their national coordination mechanisms and thus their

reporting to the BRS. The project also included awareness raising component on the Globally Harmonised System of labeling (GHS) and also programs being implemented by the World Health Organisation (WHO). The following were the project general objectives:

- To facilitate capacity-development of developing country Parties to assess and manage risks, prepare and communicate import responses, and take decisions on final regulatory actions for hazardous industrial chemicals listed under the Rotterdam Convention in accordance with the PIC procedure;
- To provide an opportunity for the promotion and coordination of integrated implementation of the Basel, Rotterdam and Stockholm Conventions;
- To generate on-the-ground results and experiences that will also be fed as case studies into the electronic toolbox of the Inter-Organisation Programme for the Sound Management of Chemicals (IOMC) that assists countries at differing levels of economic, technical and institutional development to manage industrial chemicals.

In order to achieve these objectives, it had three (3) core activities:

- Holding of the 'Introductory Workshop on Industrial Chemicals under the Rotterdam Convention for the Sub-Region' for key stakeholders involved in industrial chemicals management in the 8 countries; and.
- Development of and dissemination of Information, Educational and Communication (IEC) materials on industrial chemicals hazards and improvements in their identification and communication, through the Globally Harmonized System of labelling and classification (GHS), at the national level, in the participating countries, targeting different levels of stakeholders;
- Facilitation of setting up or refine the coordination mechanisms and national frameworks for the management of industrial chemicals. in five (5) pilot countries in the region

Upon its completion, the entire project was expected to result in enhanced awareness of the importance of the Rotterdam Convention among the decision-makers at the national institutions involved in industrial chemicals management. It was expected to improve the processes and tools used in the development and strengthening of national infrastructure for industrial chemicals management and its outputs.

In the pilot countries, the project built upon the initial work to be performed by the Sub-regional workshop participants and develop updated National Chemicals Profiles containing information on industrial chemicals. The national frameworks for the management of Industrial Chemicals initially developed during the Sub-regional Workshop will be refined during the national Follow-Up Seminars by

the Designated National Authorities (DNAs) for the Rotterdam Convention in these countries along with relevant stakeholders involved in the general management of chemicals.

INCEPTION WORKSHOP PROCEEDINGS

An Inception workshop was convened in Pretoria, South Africa, from 21 to 23 October 2014 at which the eight (8) participating countries discussed the overall status of industrial chemicals management plus their different respective roles and the key challenges being faced in the countries.

The workshop consisted of technical presentations, simulation exercises, group demonstrates and plenary discussions aimed at developing hands-on experience on how to put into place national cooperation and coordination mechanisms for the implementation of the Rotterdam convention. A total of twenty eight (28) participants were present from participating countries, SBRSC, WHO and Africa Institute. Detailed presentations made during the workshop are available on the Africa Institute website.

Opening Session

The Workshop was opened at 09.00 am by Dr. Taelo Letsela the Executive Director of the Africa Institute after welcoming all to the workshop and to South Africa. He called upon all the participants to introduce themselves and indicate there expectations from the workshop. After the round of introductions and participant's expectations, the Africa Institute Executive Director, highlighted the outputs of the meeting as being:

- Awareness-raising among the decision-makers, followed by a process to establish roles, responsibilities and development of frameworks for the management of industrial chemicals, including priorities, and the implementation of those plans.
- Information-sharing on the tools and approaches for assessing and managing risk as part of the sound management of industrial chemicals, so as to meet their obligations under the Rotterdam Convention;
- Development of strategies for using available materials to raise awareness on hazard assessment, risk assessment and management, and other issues related to industrial chemicals; Globally harmonized System of Labeling and Classification of chemicals (GHS), information, education and communication (IEC) materials on industrial chemicals;
- Development of administrative frameworks and institutions for the management of industrial chemicals that would make it easier for countries to meet their obligations under the Rotterdam Convention and other relevant MEAs; challenges and stakeholder identification;
- Use of the electronic industrial chemicals toolkit.

The workshop then heard a statement from Mr. Alex Mangwiro, from the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS). He told the meeting that since 2010, the United Nations Environment Programme (UNEP) has been around to assist developing nations meet their obligations under the Rotterdam Convention, Stockholm Convention and Basel Convention. New tools such as toolkits were now available to aid countries in meeting their obligations to the conventions and the three (3) day workshop would afford all in attendance the opportunity to test a new toolkit and thus determine its efficiency and effectiveness. In concluding his statement, he presented a brief video giving an overview on the process for listing chemicals into Annex III of the Rotterdam Convention.

A representative of World Health Organisation (WHO) Dr. Kersten Gutschmidt, informed the meeting about activities that WHO is currently conducting a number of health and environment activities around the world including the assessment of chemicals of concern on the continent, the drive towards setting up poison's centres and the development of toolkits to better inform government authorities in the management of chemicals and hazardous waste. He indicated that WHO has partnered with SBRSC on a number of projects as testimony of collaboration among UN agencies. He urged all participants to make use of the regional WHO office based in Congo Brazzaville and informed the meeting that a representative of the regional office would give updates on activities being undertaken by the office during the workshop. He assured the meeting of the full cooperation and participation in the project by WHO.

DAY 1 PROCEEDING

Session 1: Overview of the Rotterdam Convention

In his presentation titled “The Rotterdam Convention and its Prior Informed Consent Procedure (PIC)”, Mr. Mangwiro (BRS) explained that the Rotterdam Convention is about information sharing between parties about selected industrial chemicals, pesticides and formulation of significance. It is about informed decisions on chemical import and use resulting in facilitation of knowledge exchange so as to protect human health and the environment. He told the meeting that Prior Informed Consent (PIC) was introduced as a decision guidance document to be used to ban, restrict or allow the trade in chemicals in annex III of the convention.

Mr. James Mulolo (Africa Institute) then followed with a presentation on “National Coordination and Cooperation under the Rotterdam Convention”. In his presentation, he summarized the steps required for an effective national coordination system under the Rotterdam Convention. In his presentation, Mr. Mulolo outlined the steps necessary to set up an effective National Coordination mechanism as being the following:

- The Lead Agency being a legal entity with a mandate to implement conventions.

- Make use of existing inter-sectoral committees.
- The representation of relevant institutions.
- Thematic task teams led by local technical experts.
- Stakeholders to form National Coordination mechanism could include; Government Policy makers, private sector, NGOs, Academia, Informal sector, Traders, IGOs, Government officials.

He emphasized that the process of sustaining an effective coordination mechanisms would include, Time, Facilitation, Flexibility, Sustainability, Transparency and Relationships.

Mr. Mulolo indicated that countries with already existing NCS, like the Strategic Approach for International Chemicals Management (SAICM) as well as the steering committee set up for the National Implementation Plan (NIP) for Stockholm Convention, would only need to strengthen these.

Simulation Exercise

This exercise involved two (2) activities:

Exercise 1: Identification of relevant stakeholders to participate in the national coordination mechanism (working groups)

This allowed the participants to identify Ministries/Agencies within the government who have mandates directly related to chemicals and wastes management as well as relevant stakeholders outside of government who would be involved with the particular chemical, establish a multi-stakeholder committee and to carry out a stakeholder analysis in order to determine who should possibly be involved or might want to be involved in managing the chemical.

Exercise 2: How to put into place mechanisms to coordinate decision-making and national actions to meet the obligations of the Rotterdam Convention; Establishing a national coordination mechanism: key elements, characteristics and steps.

This involved the completing of the import response form for Tris under the Rotterdam Convention.

The participants were divided into groups and after the group discussions all presented their findings to plenary. The detailed group presentations during plenary and the subsequent discussions form part of the recommendations of the report.

DAY 2 PROCEEDING

Day 2 started with the review of the previous day's work by workshop facilitators and any clarifications from the participants if any. The session 2 that looked at Hazard, risk assessment and management was then introduced.

Session 2: Hazard, Risk Assessment and Management

Mr. Alex Mangwiro (SBRS) made a presentation on "Notification of Final Regulatory Actions under the Rotterdam Convention-Bridging Information". His presentation addressed the specific conditions that must be met for chemicals to be proposed for listing by the Chemical Review Committee. He told the participants about the need for bridging as a way that creates an avenue for all countries to participate in the PIC procedure. He however indicated that this does require national capacities in terms of technical expertise such as a risk assessor.

The next presentation for the day was done by Dr. Kersten Gutschmidt (WHO) titled "Introduction to Risk Assessment". The presentation focused on the different stages of a chemical life cycle and the environmental health paradigm in relation to the chemical's source-exposure-effect pathway. The risk assessment framework for chemicals was explained, involving hazard characterization, exposure assessment and risk characterization. He told the meeting that this toolkit would assist to structure a user into thinking and guiding through the risk assessment process. The WHO Toolkit was thus explained as a risk assessment tool box was introduced, explaining its purpose and content and the potential for risk assessment distance learning was discussed.

A presentation on "Public Health Management of Chemical Accidents" by Dr. Kersten Gutschmidt (WHO) was focused on raising awareness about chemical incidents and their impact on public health. He described public health functions in the management of chemical incidents and introduced the WHO Manual for the Public Health Management of Chemical Incidents. He gave examples of mass poisoning incidents throughout the world. These included poisoning due to diethylene glycol in cough syrup in Panama (2006), bromide poisoning in Angola (2007) and toxic waste dumping in Cote d'Ivoire (2006). The role of the public health system in terms of detection and alertness, response, prevention and preparedness were discussed followed by an introduction to the WHO Manual on chemical incidents and the WHO website for further information. Dr. Gutschmidt also introduced participants to the International Health Regulations (IHR 2005), their importance and key party obligations for the parties.

Dr. Gutschmidt then spoke on "Poison Centres" and their beneficial role. He told the meeting that Poison Centers (PCs) are cardinal in chemical safety of the general population there are substantial benefits and services that can be offered by the PCs. He outlined the requirements for setting up one. He explained that though PC are not available in the region and there are plans to have them by many countries, these provide an important source of information with respect to the Rotterdam Convention as the national exposure data which can be used to assess the national impact of chemicals to human health and/or the environment.

To conclude his set of presentations, Dr. Gutschmidt took the participants through the “WHO Human Health Risk Assessment Toolkit”. He illustrated the use of the risk assessment toolkit by use of roadmaps. He also shows the various resource web base links available in using the toolkit.

Toolkit Demonstrations

Participants then divided into groups to practice the use of the toolkit. This was aimed at demonstrating how the principles and roadmaps that comprise the Toolkit can be used by a public health or related professional in the immediate response to an acute chemical incident that involves the general public.

The participants were given a case study on the ‘Accidental release of Chlorine Gas’. They were asked to assess the health risks and to provide recommendations concerning evacuation, sheltering in place as well as other response measures. The case study required the use of the ALOHA model for exposure assessment and risk characterization. The participants were informed that the model was available for download at <http://www2.epa.gov/cameo/cameo-downloading-installing-and-running-aloha>. After the exercise, the groups presented their findings using the risk assessment toolkit. The facilitators encouraged the participants to practice with the toolkit for them to get a mastery over it. Their findings form part of the recommendations to this report.

Dr. Kersten Gutschmidt (WHO) made his final presentation for the day on the “Demonstration of the IOMC Toolbox for Decision Making in Chemicals management”. The focus of the toolbox for was for decision making. He told the meeting that the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was an institution set up to strengthen international cooperation in the field of chemicals. The toolbox was a one stop shopping on the web for countries who wish to set up or improve their chemicals management system. The Toolbox was thus aimed at countries who wish to address specific national issues regarding chemicals management. The IOMC Toolbox was explained as a problem-solving tool that enabled countries to identify the most appropriate and efficient national actions to address specific national problems related to chemicals management. A proof-of-concept version of the IOMC Toolbox was discussed focusing on a national management scheme for pesticides, an occupational health and safety system and chemical accidents prevention, preparedness and response system for major hazards.

Mr. Mangwiro (UNEP) then introduced the Rotterdam Convention Toolkit on Industrial Chemicals. The risk assessment toolkit under the Rotterdam Convention can be accessed at www.mockmonster.com/toolkit/. He stated that the toolkit is still a work in progress but it’s an attempt under the Basel, Rotterdam and Stockholm (BRS) conventions to assist developing countries get the protection they warrant from being party to the conventions and to assist them with meeting their obligations. Mr. Mangwiro demonstrated how the

toolkit can be used and stressed on the importance of GHS to help with collecting data and developing national resources for the sound management of chemicals.

DAY 3 PROCEEDING

The third and final day addressed session 3 of the agenda and was all about development of final tools for chemicals management.

Session 3: Framework Development for the Sound Management of Industrial Chemicals

Dr. Koebu Khalema (Africa Institute) made a presentation on “Chemicals Management Tool for a National Framework for Sound Management of Chemicals: Globally Harmonised System of the Classification and Labeling of Chemicals (GHS)”. His presentation gave an overview of GHS and its implementation. The need for sound chemical management was reviewed with GHS being the foundation for countries in developing a framework for chemicals management. GHS was discussed in the context of international chemical agreements. The presentation then detailed the structure for a National Implementation Strategy (NIS) for the GHS including capacity assessment, stakeholder engagement, and action plan development. Dr. Khalema told the meeting that under this project various IEC materials will be developed that will focus on GHS for selected industrial chemicals and the idea was to raise awareness among the various stakeholders in the participating countries on these chemicals. He distributed examples of such IEC materials that had been developed and sort comments from the participants on how to improve their presentation and content. Participants were encouraged to make use of their Bureau of Standards in incorporating GHS into their economies whether by way of compulsory or voluntary standards.

After this set of presentations, the participants then again went into group work for a simulation exercise.

Simulation Exercise

Exercise 3: Establishment of a process for managing ammonium hydrogen sulphide (used in stink bombs, sneezing powder) which is used in hoaxes during carnival time; hazard and risk assessing, action plan of who to involve and who does what. This exercise allowed participants to enumerate the steps they would follow to manage ammonium hydrogen sulphide using the electronic tool for industrial chemicals under the Rotterdam Convention. This involved analysing the country situation and diagnosing the main industrial chemical problems, identifying stakeholders, hazard/risk assessment and notification of the final regulatory action for ammonium hydrogen sulphide.

Challenges

At the conclusion of the workshop, participants highlighted the challenges being faced by parties in implementing their convention obligations. The following were the challenges:

- Lack of appointed Designated National Authority and Official Contact Point
- Overlapping of roles by different government agencies leading to no or little activity
- Availability of officials relevant for the meetings
- Tendency by meeting participants to require the payment of allowances for them to attend meetings
- Government scaling down on meetings and workshop related activities
- Lack of resources tools for making decisions

Recommendations

The meeting made the following recommendations in order to address the challenge of industrial chemicals management at country level:

1. Parties need to establish or strengthen national task teams on industrial chemicals management
2. Establish sustainable mechanism for managing industrial chemicals in the countries
3. Improve communication with the SBRSC and Regional centres
4. Enactment of Environmental laws on industrial chemicals and where these exist, strengthen them
5. Secretariat of the Basel, Rotterdam and Stockholm conventions should facilitate data collection on industrial chemicals from African countries for purposes of final regulatory action under the Rotterdam convention
6. There should be improved collaboration between WHO country offices and national governments
7. National coordination mechanisms should be formalized or operationalized in member countries
8. Parties should prioritize chemical profiles update

Closing Session

Mr. Mangwiro went through the expectations of the participants and all agreed that these were met during the three (3) day workshop. He hoped all parties represented at the workshop would ensure that their reporting mechanism worked and would not be among those parties not reporting on their import responses in future.

Dr. Gutschmidt expressed his gratitude for the opportunity to work with BRS and the Africa Institute and indicated that the WHO regional office in Congo Brazzaville and the respective Country offices should be made use of by the parties for effective and efficient attention particularly on further information on risk assessment and the use of the risk assessment toolkit.

The Africa Institute would, Dr. Letsela explained to the participants, be conducting five (5) 'National Follow Up' seminars which would be conducted in Botswana, Lesotho, Uganda, Kenya and Swaziland to see how challenges of coordination could be improved in order to meet the countries obligations under the Rotterdam Convention. These seminars would also act as dissemination platforms for IEC materials that would be developed under the project apart from refining national frameworks for the management of Industrial Chemicals. He expressed appreciation to the SBRSC and WHO for the financial and technical support in the implementation of the project and hoped that the pilot countries to the project would make use of the tools including the awareness raising materials produced under the project to raise the chemical profile in the countries and also meet their obligations to the Rotterdam and all other multilateral environmental agreements.

Participants evaluated the workshop by use of forms provided after which the workshop was then officially closed.



**SUB-REGIONAL WORKSHOP ON INDUSTRIAL CHEMICALS UNDER THE
ROTTERDAM CONVENTION
BURGERS PARK HOTEL, PRETORIA, SOUTH AFRICA
21 TO 23 OCTOBER 2014**

**Organized by the Secretariat of the Basel, Rotterdam and Stockholm Conventions and the Africa
Institute with support from the World Health Organisation**

AGENDA

Time	Activity	Presenter
DAY 1		
TUESDAY 21 OCTOBER		
Session 1: Opening, Introduction and Rotterdam Convention Implementation		
Morning 09:00	Registration of participants	
	Opening Remarks – AI	AI
	Opening Remarks – Scope, purpose and structure of the workshop	BRS Secretariat
	Video – Process for listing chemicals into Annex III of the Rotterdam convention	BRS Secretariat
COFFEE BREAK		
	Rotterdam Convention Overview <ul style="list-style-type: none"> • PIC Procedure • Mechanism for National Coordination and Cooperation 	BRS Secretariat / AI
LUNCH		
	Simulation exercises on Import Responses for Industrial Chemicals (Tris) – stakeholder analysis, DGD usage, etc..	Participants
	Report of group discussions in plenary.	
COFFEE BREAK		
	<i>Continuation of the above exercise</i>	Participants
DAY 2		
WEDNESDAY 22, OCTOBER		
Session 2: Hazard, Risk Assessment and Management		
Morning 09:00	<ul style="list-style-type: none"> • Notification of Final Regulatory Actions under the Rotterdam Convention – Bridging Information • Introduction to risk assessment (45 min) 	<i>BRS Secretariat</i>
		<i>WHO</i>
COFFEE BREAK		
	Chemical incidents:	<i>WHO</i>

	<ul style="list-style-type: none"> Public health management of chemical accidents (45 – 60 min) International Health Regulations (15 min) Poison Centres (15 min) 	
LUNCH		
	<ul style="list-style-type: none"> Introduction to the WHO Human Health Risk Assessment Toolkit (10 min) Risk assessment - Hands-on exercise (working groups) (1 to 2.5 hrs?!)) 	<i>WHO</i>
Toolkits demonstrations		
	Demonstration of the IOMC Toolbox for Decision-Making in Chemicals Management (IOMC Toolbox (10 min)	WHO
	http://www.mockmonster.com/toolkit/ Introduction to the Rotterdam Convention toolkit on industrial chemicals	BRS Secretariat
DAY 3 THURSDAY 23 OCTOBER		
Session 3: Framework development for the sound management of industrial chemicals		
	Chemicals management tool for a National framework for sound management of chemicals: Hazard assessment and role of the Globally Harmonized System of Classification and Labelling of chemicals (GHS) for sound chemicals management of industrial chemicals	AI
	Using the Rotterdam Convention toolkit on industrial chemicals, carry out simulation exercises on the management of a specific chemical; GHS implementation strategy, notification of Final Regulatory Action using Bridging information - who does what and when? <ul style="list-style-type: none"> Checklist, UNEP LIRA Guidance IOMC GHS Implementation guidelines 2010. http://www.mockmonster.com/toolkit/ 	Participants
COFFEE BREAK		
	<i>Continuation of the above exercise</i>	
LUNCH		
	<i>Continuation of the above exercise</i>	
	Presentation of country strategies in plenary	
	Workshop evaluation / Were expectations met? Feedback on the RC Toolkit	
	Closing	

LIST OF PARTICIPANTS

NO	NAME	COUNTRY	INSTITUTION	TITLE	E-MAIL CONTACT & TELEPHONE NUMBER
1.	MUGABI STEPHEN DAVID	UGANDA	MINISTRY OF WATER AND ENVIRONMENT UGANDA	ASSISTANT COMMISSIONER – ENVIRONMENT AFFAIRS / DNA – ROTTERDEM CONVENTION – INDUSTRIAL CHEMICALS	mugabisd@gmail.com Tel: +256 782 059 294
2.	ENID TURIAHIKAYO	UGANDA	NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY UGANDA	ENVIRONMENT AUDITS MONITORING OFFICER / SAICM FOCAL POINT	enidt@nemaug.org Tel: +256 774 698 962
3.	SEMANDA KASSIM	UGANDA	MINISTRY OF TRADE, INDUSTRY AND COOPERATIVE UGANDA	INSPECTOR AND ENGINEER	bobs2004kassim@yahoo.com Tel: + 256 703 028929
4.	MOLEBOHENG PETLANE	LESOTHO	MINISTRY OF TOURISM, ENVIRONMENT AND CULTURE DEPARTMENT OF ENVIRONMENT	ENVIRONMENT OFFICER (PC)	marleymjp@gmail.com Tel: +266 634 32362
5.	MR. MOKITIMI THEKISO	LESOTHO	MINISTRY OF HEALTH	SENIOR ENVIRONMENTAL HEALTH OFFICER	blesmokitimi@yahoo.com mokitimithekiso@yahoo.com Tel: +266 589 96696
6.	ESAIAH TJELELE	LESOTHO	MINISTRY OF AGRICULTURE AND FOOD SECURITY	CHIEF RESEARCH OFFICER	etjelele@yahoo.co.uk Tel: +266 627 33737
7	GOMOLEMO MASEELANE	BOTSWANA	MINISTRY OF HEALTH DEPARTMENT OF PUBLIC HEALTH	HEALTH OFFICER	gmaseelane@yahoo.com Tel: +267 363 2120 +267 72177438
8	MOABI DONALD MMOLAWA	BOTSWANA	MINISTRY OF ENVIRONMENT WILDLIFE AND TOURISM DEPARTMENT WASTE MANAGEMENT AND POLLUTION CONTROL	CHIEF ENVIRONMENTAL ENGINEER	moabimd@yahoo.com mdmmotawa@gov.bw Tel: +267 393 4479 +267 71331926

9	TSHEPO LILY MOSEDAME	BOTSWANA	MINISTRY OF AGRICULTURE CROP PRODUCTION	PRINCIPAL AGRIC SCIENTIFIC OFFICER	tlmosedame@gov.bw Tel: +267 392 8745
10	NDIYO DANIEL WILLIAM	UNITED REPUBLIC OF TANZANIA	GOVERNMENT CHEMIST LABORATORY AGENCY	MANAGER EASTERN ZONE LABORATORY, DAR ESSALAAM	ndiyo@yahoo.com Daniel.ndiyo@gcla.go.tz Tel: +255 754 475517
11	MASAMBU BONAVENTURE NJOKA	UNITED REPUBLIC OF TANZANIA	GOVERNMENT CHEMIST LABORATORY AGENCY UNITED REPUBLIC OF TANZANIA	MANAGER NORTHERN ZONE LABORATORY, ARUSHA	bonaventure.masambu@gcla.go.tz or bone25tz@yahoo.com Tel: +255 767 317282
12	MANYELE SAMWEL	UNITED REPUBLIC OF TANZANIA	GOVERNMENT CHEMIST LABORATORY AGENCY UNITED REPUBLIC OF TANZANIA	CHIEF GOVERNMENT CHEMIST, URT	smanyeles@gmail.com or cgc@gcla.go.tz Tel: +255 654 994277
13	NJORA DICKSON MUNUHE	KENYA	NEMA – KENYA	PRINCIPAL COMPLIANCE AND ENFORCEMENT OFFICER	dnjora@nema.go.ke or dicksonmunuhe@yahoo.com Tel: +254 072 228 7283
14	NGARUIYA PAUL NJUGUNA	KENYA	PEST CONTROL PRODUCTS BOARD, KENYA	MANAGER, REGISTRATION AND ANALYSIS	Paul.ngaruiya12@yahoo.com Tel: +254 072 2894 138
15	AYALEW ABIREHAM MISGANAW	ETHIOPIA	MINISTRY OF HEALTH	NATIONAL HYGIENE AND ENVIRONMENTAL HEALTH COORDINATOR	gudukasa7@gmail.com Tel: +251 913 094802
16	ABERRA ROMAN KASSAHUN	ETHIOPIA	MINISTRY OF ENVIRONMENT AND FOREST	DIRECTOR PROJECT MONITORING AND EVALUATION DIRECTORATE	romankassahun@yahoo.com Tel: +251 911 794117
17	JIMA MENGISTU REGASSA	ETHIOPIA	MINISTRY OF INDUSTRY ETHIOPIA	DIRECTOR, IZ DEVELOPMENT AND ENVIRONMENT SAFETY	meng-reg@yahoo.com Tel: +251 911 397273
18	GOREEBA RAVINDRANATH	MAURITIUS	MINISTRY OF HEALTH - DANGEROUS CHEMICALS MAURITIUS	SENIOR PUBLIC HEALTH AND FOOD SAFETY INSPECTOR	rgoreeba@gmail.com Tel: +230 210 3701
19	MANNA KALYANEE	MAURITIUS	MINISTRY OF INDUSTRY, COMMERCE & CONSUMER PROTECTION (INDUSTRY DIVISION) MAURITIUS	ANALYST (INDUSTRY)	kmanna@mail.gov.mu Tel: +230 210 7100 Cell: +230 760 0399

20	DLAMINI HLOBISILE BIANCA	SWAZILAND	SWAZILAND ENVIRONEMT AUTHORITY	ENVIRONMENT INSPECTOR	bhdlamini@sea.org.sz Tel: +268 763 51849
21	MOTSA CALEB DUMISA	SWAZILAND	SWAZILAND MINISTRY OF COMMERCE INDUSTRY & TRADE	TOWNSHIPS ENGINEER	calebmotsa@gmail.com Tel: +268 768 88959
22	NXUMALO NELISIWE INNOCENTIA	SWAZILAND	SWAZILAND REVENUE AUTHORITY	SENIOR CUSTOMS OFFICER	nnxumalo@sra.org.sz Tel: +268 240 64155
23	BAGAYOKO MAGARAN	CONGO BRAZZAVILLE	WHO/AFRO HEALTH AND ENVIRONMENT	REGIONAL ADVISOR	bagayokom@who.int Tel: +242 057 970305
24	ALEX MANGWIRO	SWITZERLAND	BRS SECRETARIAN	PROGRAMME OFFICER	alexander.mangwiro@brsmeas.org Tel: +41229178458
25	MULOLO JAMES	SOUTH AFRICA	AFRICA INSTITUTE	PROJECTS COORDINATOR	jmulolo@environment.gov.za Tel: +27 12 399 9866
26	KHALEMA KOEBU	SOUTH AFRICA	AFRICA INSTITUTE	PROGRAM OFFICER	kkhalema@environment.gov.za Tel: +27 12 399 9863
27	LETSELA TAELO	SOUTH AFRICA	AFRICA INSTITUTE	EXECUTIVE DIRECTOR	letsela@environment.gov.za Tel: +27 12 399 9861
28	GUTSCHMIDT KERSTEN	SWITZERLAND	WHO, PUBLIC HEALTH, ENVIRONMENTAL AND SOCIAL DETERMINATION OF HEALTH	TECHNICAL OFFICER	gutschmidt@who.int Tel: +412 279 13731

