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# CHEMICAL ACCIDENT PREVENTION AND PREPAREDNESS PROGRAMME FOR TANZANIA (CAPP-TZ)

## NATIONAL INCEPTION WORKSHOP

**31st July – 1st August 2013**
**Protea Hotel Courtyard**
**Dar es Salaam, TANZANIA**

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## List of Abbreviations

| | |
|---|---|
| APELL | Awareness and Preparedness for Emergencies at Local Level |
| CAPP-TZ (CAPP-TZ) | Chemical Accidents Preparedness and Prevention Programme forTanzania |
| CAPP-WA | Chemical Accidents Preparedness Programme for -West Africa |
| EIA | Environmental Impact Assessment |
| EWURA | Energy, Water and Utility Authority |
| FFT | Freight Forwarders Tanzania |
| FOEN | Federal Office for the Environment |
| GCLA | Government Chemist Laboratory Agency |
| GHS | Globally Harmonized System |
| ILO | Intentional Labour Organisation |
| INERIS | National Institute for Industrial Environment |
| ISP | Implementation Support Package |
| LPG | Liquefied Petroleum G.as |
| MAHB | Major Accident Hazards Bureau |
| MoHSW | Ministry of Health and Social Welfare |
| MP | Member of Parliament |
| MSDS | Material Safety Data Sheets |
| NEMA | National Environment Management Agency |
| NEMC | National Environmental Management Council |
| ODS | Ozone Depleting Substances |
| OSHA | Occupational Health and Safety |
| PMO | Prime Minister's Office |
| SAICM | Strategic Approach to International Chemicals Management |
| SDC | Swiss Development Corporation |
| SUMATRA | Surface and Marine Authority |

| | |
|---|---|
| TBS | Tanzania Bureau of Standards |
| TFDA | Tanzania Food and Drugs Authority) |
| TPA | Tanzania Port Authority |
| TPDC | Tanzania Petroleum Development Corporation |
| TPRI | Tropical Pesticides Research Institute |
| TUCTA | Tanzania Union of Commercial and Trade Association |
| UDSM | University of Dar es salaam |
| UNEP | United National Environment Programme |

## EXECUTIVE SUMMARY

The Ministry of Health and Social Welfare through the Government Chemist Laboratory Agency (GCLA) applied jointly with UNEP a secured funding from the "Strategic Approach to International Chemicals Management (SAICM) Quick Start ProgrammeTrust Fund" to implement a *Chemical Accident Prevention and Preparedness Programme for Tanzania (CAPP-TZ)* based on the Flexible Framework Programme for CAPP developed by UNEP. CAPP - TZ is aiming at capacity building for the implementation of a CAPP Programme in Tanzania. The National Inception Workshop of the CAPP-TZ-project was held in Dar-Es—Salaam on 31 July and 1 August 2013.

It brought together a large variety of participants with different occupational backgrounds and liabilities due to their function and role (see Chapter 5). These participants are seen as key stakeholders who will be involved in the project and later in the CAPP-TZ Programme.

The Inception Workshops is the official launching of the CAPP – TZ in the country (see Chapter 2) and aimed to achieve several outcomes:

i. common understanding on importance and benefits of implementing a national CAPP;
ii. sharing experiences from African and developed countries on recent efforts in developing and implementing CAPP programmes;
iii. facilitating commitment from stakeholders and starting with the identification of next steps towards implementation of the CAPP Project in Tanzania;
iv. providing an overview of current approaches and experiences with respect to chemicals accident management (legal framework, industrial and transport activities perspective);
v. providing an overview of the CAPP – TZ Project (purpose, expected activities and outcome);
vi. introducing helpful CAPP – Tools.

As Chapter 2 shows, in Tanzania the agriculture sector employs over 75% of the workforce, the rest is distributed into manufacturing industries, wholesale and retail trade, mining and gas exploration, public services, transport and communication activities. Therefore, various types of chemicals have been imported and used in large volumes to facilitate production of goods and services. Because of the wide range of chemical use and handling including long distance transportation of chemicals, some chemical accidents have been experienced during the last years.

Various Policies, Legislation, Regulations, Guidelines and Procedures for chemicals management have been established in Tanzania. The key legislation includes the Industrial and Consumer Chemicals (Management and Control) Act no. 3 of 2003 and the Environment Management Act no. 20 of 2004. Though, the Government noted the need to strengthen capacity for implementation of the legal framework.

The prepared Inception Workshop programme is mentioned in Appendix II. It was facilitated by national and international experts. Day 1 was devoted to the official opening remarks of exponents from a large variety of Tanzanian governmental offices (Deputy Minister for Health and Social Welfare, Acting Permanent Secretary Ministry of Health

and Social Welfare, GCLA), Tanzanian industry and international organizations (SAICM, SDC) and various presentations, giving an overview over the situation in Tanzania, regarding the use and management of chemicals, as well as over the chemical hazards itself, the benefits of an improved chemical awareness and preparedness and international CAPP approaches (i.e. in the European Union and in Switzerland). Day 2 aimed at diving into a more a detailed debate of the CAPP – TZ – project itself. The UNEP's Flexible Framework Initiative for Addressing Chemical Accident Prevention and Preparedness was introduced and he planned CAPP-TZ Project Implementation process was presented. Finally, the introductory part of the workshop was finalized with presentations about the situation and experiences on chemical accident prevention and preparedness in Kenya and the Kenyan Chemicals Regulatory Framework. In the end, the CAPP Project in West Africa (Mali and Senegal; CAPP-WA) and its results was introduced.

Day 2 was finished with a group work, followed by a Plenary Discussion and Presentations (current situation, possible way forward, future CAPP – TZ – activities) and a closing ceremony.

The main results of the group work are in:

- Group 1 and Group 2, "Hazardous facilities and substances": an extensive, and yet unfinished, list of hazardous facilities and substances in Tanzania. This list can be used as a core element for the Country Situation Report, Its real value is the overview of relevant sites and relevant substances, which can be used as a starting point for further investigation in this direction, but also as "training" facilities for the education of the GCLA-staff and further persons. Furthermore, the work of these two groups resulted in some interesting considerations about the competence and responsibility of the governmental and further institutions and about the lack of knowledge about the relevant facilities and substances. Hence, the two groups made some recommendations about relevant information to be included (e.g. identification of key stakeholders, hazards Identification: location, risk rating/classification, level of awareness to the general population , current level of emergency preparedness, legislation in place, etc.), the information focal points (e.g. GCLA, NEMC, TFDA, TPRA), the most appropriate mechanisms (monitoring and audit, involvement of private sectors in the process, effective database, reporting mechanism (readily available information to everyone at any time on responsible personnel/institutions), etc.) and necessary strategies (e.g. awareness campaign and training, review of schools syllabus to include chemicals management awareness knowledge, effective legislation setup, etc.)
- Group 3 and Group 4, "Regulatory framework policy": these two groups delivered a comprehensive overview over all relevant legal framework and their inconsistencies. Furthermore, the gave an overview over the regulatory authorities and their field of competence as well over potential end user of the Country

Situation Report and a sound CAPP strategy (e.g. policy and law enforcing bodies e.g. Institution/Agency/Ministries, chemicals manufacturers, chemicals transporters, education institutions, hospital institutions, chemical laboratories, research institutions, large and small Scale Users, etc.).
To support the drafting of such Country Situation Report, the both groups defined a possible report structure, considering the relevant report topics, i.e. the strength of the country in relation to CAPP (existing legal strength, existing political willingness, institutional capacity), the mandates/responsibilities among different partners, the clear coordination among different actors lead by GCLA, and finally, the national resources allocation for funding CAPP (financial, human resources, equipments).

- Group 5 and Group 6, "Training and capacity building": these two groups highlighted the current training and edcuation "landscape" in the field of chemical management in Tanzania. They gathered a lof of sectoral training courses, e.g. by Trade unions (e.g. for farm workers dealing with pesticides), for Health Officers, the Traffic police, the GCLA and the NEMC.
They also gathered information about relevant training materials and used methodologies, as well about the receivers of trainings. Finale, they made some recommendations about who should be trained in future and in which field the training priorities and capacity building needs are.

In general, over the two days, the Inception Workshop showed on the one hand an interesting legal background for the management of chemical hazards, given by various Policies, Legislations, Regulations, Guidelines and Procedures for chemicals management. One of the main problems, however, is the inconsistency of much of these legal issues, so there is no comprehensive CAPP-strategy in Tanzania today. Therefore, one of the major issues of the CAPP programme should be the extinction of such inconsistencies and the definition of a comprehensive CAPP-strategy, including the relevant legislations, etc,

In spite of the legal inconsistencies, there is a lot of organisational competence in the field of chemical hazard prevention in relevant governmental institutions, societal organisations and in companies. This leads to many achievable relevant data.
On the other hand, the Inception Workshop also highlighted an immense lack of manpower (e.g. in governmental organisations), leading to failings in administering the necessary activities and a very shallow interaction between different relevant stakeholders. This leads to sectoral views of the chemical hazard management problem and a dangerous lack of knowledge about the relevant stakeholders in the field of chemical hazard management and their specific programs and projects regarding chemical safety issues. Finally, the methodological and technical competence in evaluation and assessing chemical hazards seems to be rudimental.

Thus, there is a relevant need to strengthen capacity for the implementation of chemical awareness and preparedness; therefore, further steps of the CAPP-TZ-project have to stress the interaction of the different stakeholders, the management and administration of the existing dangerous sites, the training of the relevant governmental institutions, e.g.

- the GCLA-staff in the headquarter in collecting, interpreting/analyzing and working on relevant data;
- the GCLA-chemical field inspectors in visiting and assessing dangerous sites and reporting their findings to the headquarter in an appropriate manner.

Further steps: have to be based on the final text of the new chapter “FURTHER STEPS in CAPP-TZ-project.

# INTRODUCTION

## 1.1 Background

The United Republic of Tanzania is a union of two countries, Tanganyika and Zanzibar located in East Africa and bordered by 8 countries as shown in the Geographical Map below.


The population of Tanzania according to the 2012 population and housing census was 44,928,923, whereby the agriculture sector employs over 75% of the workforce and the rest is distributed into manufacturing industries, wholesale and retail trade, mining and gas exploration, public services, transport and communication activities. Tanzania like many other developing countries has been importing and using various types of chemicals in large volumes to facilitate production of goods and services from the mentioned economic sectors. Because of the nature and wide range of chemical use and handling including long distance transportation of chemicals to mining sites and neighbouring counties, some chemical accidents have been experienced leading to adverse effects of health and the environment.

## 1.2 Chemicals Management and Implementation of CAPP-TZ

In Tanzania, various Policies, Legislation, Regulations, Guidelines and Procedures for chemicals management have been established. The key Legislation includes the Industrial and Consumer Chemicals (Management and Control) Act no. 3 of 2003 and the Environment Management Act no. 20 of 2004. The two Laws have provisions for Chemical Accidents Prevention and Preparedness, Environmental Impact Assessment, and Contingency Plans are precautions for safety in the use and handling of chemicals. On the other hand, the Safety and Health Act no.5 of 2003 has some provisions regarding the safety implementations.

Although the legal framework provides for such requirements, the Government noted the need to strengthen capacity for implementation. In this context the Ministry of Health and Social Welfare through the Government Chemist Laboratory Agency (GCLA), applied jointly with UNEP and secured funding from the "Strategic Approach to International Chemicals Management (SAICM) Quick Start Trust Fund" to implement the project titled *"Chemical Accident Prevention and Preparedness Programme for Tanzania (CAPP-TZ))".* The CAPP-TZ project is aimed at capacity building for implementation of a CAPP programme in Tanzania, which will contribute to the objectives of the SAICM specifically chemical risk reduction. As part of implementation of this project, the GCLA and the project partners organized an Inception Workshop on 31st July – 1st August 2013.

## PURPOSE AND OBJECTIVES OF THE INCEPTION WORKSHOP

The Inception Workshop was aimed at official launching of the CAPP – TZ Programme project by inviting key stakeholders who will be involved in the project and later in the CAPP-TZ Programme. It was also aimed to achieve the following specific objectives:

vii. To enable stakeholders to reach common understanding on importance and benefits of implementing a national CAPP Programme;
viii. To enable stakeholders to share experiences from African and developed countries on recent efforts in developing and implementing CAPP Programme;
ix. To facilitate commitment from stakeholders to move forward, starting with the identification of next steps towards implementation of the CAPP Project and thereafter programme in Tanzania;
x. To provide an overview of current approaches and experiences with respect to chemicals accident management as per legal framework, industrial and transport activities perspective;
xi. To provide an overview of the CAPP – TZ Programme Project, including an overview of its purpose, expected activities and outcome; and
xii. To provide an overview of UNEP's Flexible Framework for Addressing Chemical Accident Prevention and Preparedness Initiative and guidance tools.

## EXPECTED OUTCOMES OF THE INCEPTION WORKSHOP

The expected outcomes of the Inception Workshop were among others:

i. Common understanding among stakeholders on the importance and benefits of implementing a national CAPP Programme attained;
ii. Contribution of experiences from African and developed countries towards implementation of CAPP-TZ Programme realized;
iii. Commitment from stakeholders to move forward, towards implementation of the CAPP Project and programme thereafter in Tanzania achieved;
iv. The current approaches and experiences with respect to chemicals accident management as per legal framework, industrial and transportation perspective are known to stakeholders;
v. Common understanding among stakeholders on the CAPP – TZ Programme Project, including its purpose, expected activities and outcome attained; and
vi. Raised awareness to participants on the UNEP's Flexible Framework Initiative achieved.

## WORKSHOP PARTICIPANTS

In total, the Inception Workshop was attended by 79 participants (Appendix I). The categories of participants included; Government Chemist Laboratory Agency (GCLA) Management Team, International Experts (UNEP, FOEN, ILO, EC, Kenya) and from various sectors including a.i. Environmental Protection, Labour and Occupational Health, Public Health, Energy and Minerals, Industries, Agriculture and allied sectors, Transporters and Logistics, Fire and Rescue. Also present were GCLA Ministerial Advisory Board, Community Based Organizations and locally based International Organizations. The numbers of participants in each category is shown in the pie chart below.

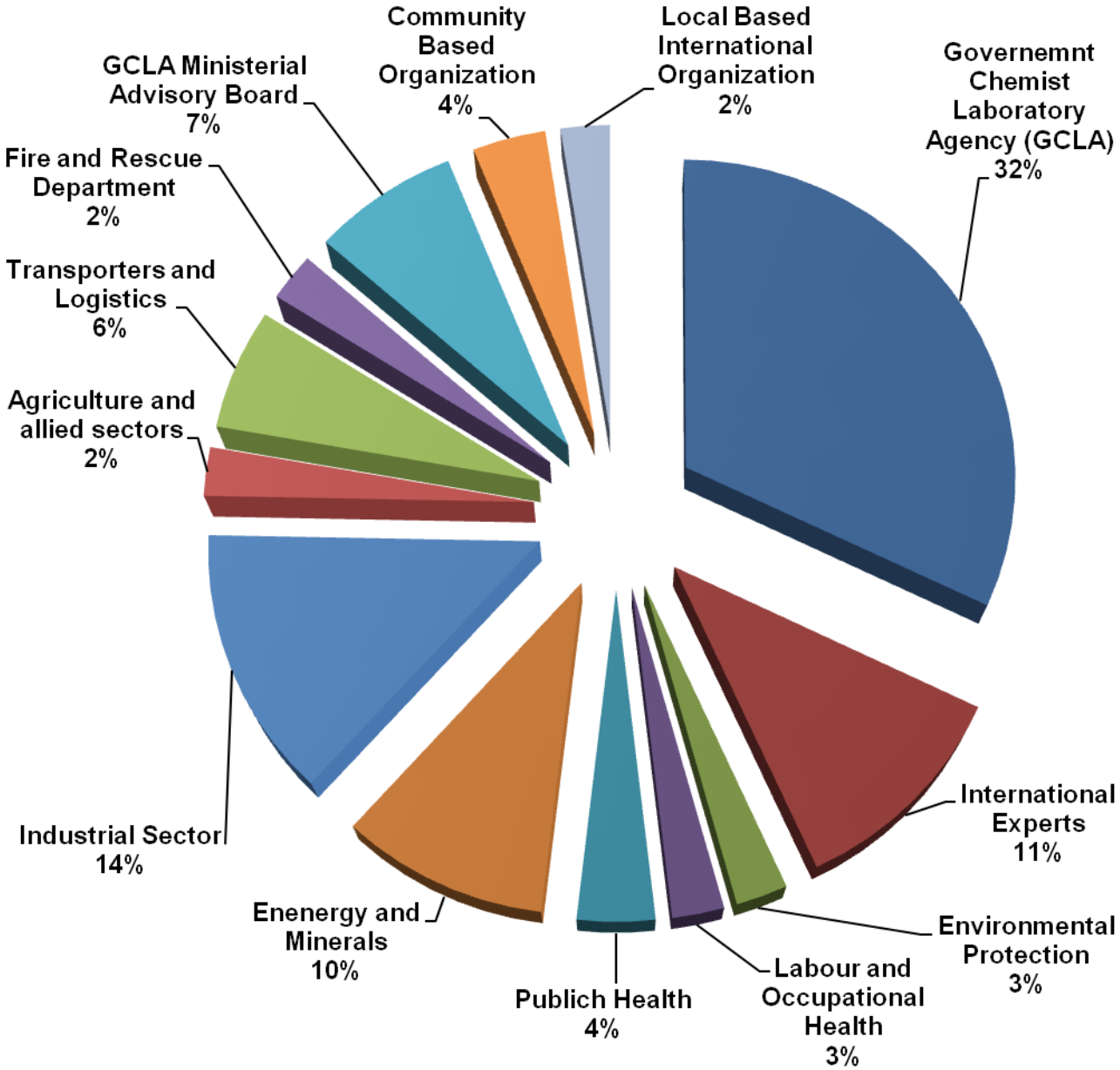


Figure 1: Stakeholders Analysis

## WORKSHOP STRUCTURE AND PROGRAMME

The Inception Workshop was conducted according to a prepared programme (Appendix II), and was facilitated by national and international experts.

**In Day 1, the following were conducted**:

- Opening Remarks and Official Launching of the CAPP-TZ Programme Project which were given as follows;
    1. Welcome remarks from **Prof. Samwel Manyele,** the Chief Government Chemist and CAPP-TZ Project Coordinator;

2. Opening remarks from:
    i. SAICM Africa Regional Focal Point, **Prof. Jamidu Katima;**
    ii. Director of Development Cooperation, Swiss Cooperation Office, Tanzania, **Ms. Géraldine Zeuner,** and
    iii. UNEP Regional Office for Africa, **Mr. Patrick Mwesigye.**
3. Welcome Speech from the Acting Permanent Secretary Ministry of Health and Social Welfare, **Dr. Donald Mbando**, and
4. Official opening and CAPP-TZ Launching Speech by the Deputy Minister for Health and Social Welfare, **Dr. Seif Rashid** on behalf of the Minister.

- Presentations were made on:
    1. Overview of the Inception Workshop;
    2. Overview of Industry and Commerce in Tanzania the Context of CAPP;
    3. Approach to Chemicals Accident Management and Chemical Transportation in Tanzania;
    4. Introduction to Chemical Accidents;
    5. Benefits of Improved Chemical Accident Prevention and Preparedness;
    6. Institutional and legal frameworks related to chemical accidents globally;, and
    7. CAPP Switzerland.
- Day 1 was concluded by Plenary Discussions.

**In Day 2, the following were conducted**:

- The workshop received the following presentations:
    1. UNEP's Flexible Framework Initiative for Addressing Chemical Accident Prevention and Preparedness;
    2. CAPP-TZ Project Implementation;
    3. Present situation and experience on chemical accident prevention and preparedness in Kenya;
    4. Overview of Chemicals Regulatory Framework in Kenya;
    5. Video Conference on Regional Experience: CAPP Project in West Africa: Mali and Senegal (CAPP-WA).

- Group work discussions and presentation on: Current Situation and the way forward and future activities of the CAPP – TZ project.
- Plenary discussions on the way forward and future activities
- Closing ceremony

# OPENING CEREMONY AND OFFICIAL LAUNCHING OF THE CAPP – TZ

## Welcome Remarks

Welcome remarks were given by Prof. Samwel Manyele, the Chief Government Chemist and CAPP-TZ Project Coordinator. In the remarks, he extended his appreciation to both international experts and national participants for taking the initiative to attend the workshop for launching of the CAPP-TZ Programme Project. Prof. Manyele concluded his remarks by inviting the Acting Permanent Secretary to chair the opening ceremony.

## Opening Remarks

### SAICM Africa Regional Focal Point, Prof. Jamidu Katima

In his remarks, Prof. Katima pointed out that, there are some uncertainties towards reaching the SAICM 2020 chemical safety goal, and therefore SAICM welcomed every step and project that is implemented to facilitate reaching that goal. He further highlighted that, attaining the SAICM 2020 goal is one aspect; however it is important to put in place initiatives and strategies for sound chemicals management to ensure sustainability.

He noted the few SAICM Quick Start Programme funded projects from which Africa had already benefitted, and the need for having inventories of all SAICM funded projects. He further pointed out the need of self assessment in areas the African region has covered so far and the respective achievements, against the 106 SAICM Plan of Action areas. He also noted the necessity prioritizing and of mainstreaming chemicals management into national Agenda, Policies, strategies and activities; and that some countries have managed this aspect

The remarks were concluded by highlighting his expectations that, the CAPP-TZ Inception Workshop will provide a good Roadmap towards implementation of the CAPP-TZ project and Programme respectively. And that, the successful implementation of the CAPP-TZ project and Programme will be used as a model for introducing sound chemicals management in Africa.

### Director of Development Cooperation, Swiss Cooperation Office, Tanzania, Ms. Géraldine Zeuner

In her remarks, Ms. Zeuner informed that, disaster management and risk reduction is one of the focal points of Swiss Development Cooperation (SDC) activities worldwide. Moreover, SDC has also clear humanitarian mandate to reduce loss of human lives with the focus and initiatives aiming at better prevention of losses. She pointed out chemical accidents to be among incidents which have potential to cause big losses,

whereby identification of vulnerable groups, provision of awareness, political commitment and assigning of responsibility are the key issues to be addressed clearly. She further insisted on the need for fostering political commitment and preparedness to ensure disasters prevention and loses that issue

Ms. Zeuner further informed that, SDC now has particular interest in health, agriculture and governance issues and that SDC is collaborating with Tanzania in CAPP. Ms. Zeuner concluded her remarks by pointing out that Switzerland will participate in the CAPP – TZ through Federal Office for the Environment (FOEN) by providing technical support and that, the lessons learnt will be shared by both partners and other countries. She also commented the good collaboration and information exchange that exists between Tanzania, Switzerland, UNEP and European Commission (EC), and that; it is expected to be strengthened during the implementation of CAPP – TZ.

### UNEP Regional Office for Africa, Mr. Patrick Mwesigye

In the remarks, the UNEP Regional Office for Africa representative expressed the interest of UNEP in being part of the CAPP TZ programme development, which is in line with its objectives. Further in his remarks, he noted and appreciated the response of stakeholders in supporting the project.

Mr. Mwesigye also expressed the need for African countries to assess how countries are prepared in matters related to CAPP, and thereafter use the available tools such as the Flexible Framework Guidance Document to develop, review and implement the respective programme.

In concluding the remarks, he expressed the commitment of UNEP to use all the available expertise to support the development of a CAPP-TZ.

## Welcome Speech by the Acting Permanent Secretary Ministry of Health and Social Welfare

In his speech, Dr. Mbando welcomed all participants from within and outside Tanzania and noted that, his Ministry through the Government Chemist Laboratory Agency (GCLA), on behalf of the Government of Tanzania is implementing a project titled *"Chemical Accident Prevention and Preparedness (CAPP) Programme for Tanzania"* with funding from the "Strategic Approach to International Chemicals Management (SAICM) Quick Start Programme Fund. He further noted that, the project is implemented by GCLA in collaboration with the United Nations Environment Programme (UNEP), and the Swiss Federal Office for the Environment (FOEN) as a technical partner to support UNEP and Tanzania in project implementation.

Dr. Mbando pointed out that, implementation of the CAPP-TZ project is aimed at capacity building to enable implementation of the CAPP programme which will contribute to the objectives of the SAICM specifically on chemical risk reduction and will in addition lead to effective implementation of the "Industrial and Consumer Chemicals (Management and Control) Act": (Cap 182), whose goal is protecting human health and the environment in Tanzania.

He further pointed out that, as Tanzania embarks on the implementation of CAPP – TZ project, the need for awareness creation to stakeholder's involvement and ensuring full participation from the initial stage cannot be overlooked. He noted that, as we live in a world where chemicals are widely used, and that the way they are used and handled can affect both human health and the environment within and beyond borders of use and application. He argued highlighted need for coordinated actions among stakeholders as no single institution has all the capacities to respond to national health and environmental emergencies, and that, all stakeholders have to work together and use the available skills to maximize utilization of efforts.

Dr. Mbando concluded his welcome speech by noting the rapid increase in use of chemicals in Tanzania, particularly in the areas of oil and gas exploration and mining and the health and environmental threat to about 45 Tanzanians if adequate chemical accidents and preparedness programmes are not in place. He therefore argued stakeholders to appreciate the importance and benefits of implementing a national CAPP Programme, in order to achieve the intended objectives towards sound management of chemicals as in the Ministry of Health and Social Welfare, safety is first but prevention is foremost.

## Opening and CAPP-TZ Launching Speech by the Deputy Minister for Health and Social Welfare

The opening and launching speech was given by the Deputy Minister for Health and Social Welfare Dr. Seif Rashid (MP) on behalf of the Minister.

In the speech, he pointed out the benefits of chemicals in human daily lives and the respective adverse effects to health and the environment if not properly managed. It was informed that, in today's world where nobody can be safe from environmental disasters, as the effects of climate change and environmental pollution from hazardous chemicals resulting from mismanagement of or chemical accidents leave no one as an outsider. The Minister pointed out that, chemical accidents do happen and can result to either releases of acute toxic substances which have immediate adverse health effects or releases of toxic substances which has long term health and environmental effects.

The Minister highlighted the major chemical accidents which have occurred nationally and internationally, including the following:

i. a road fuel tanker killed 217 and 200 people severely burned in 1978, Spain,
ii. a ruptured LPG pipe which later exploded; killed 650 and injured 6400 in 1984, Mexico City,
iii. a released cloud of Mmethyl isocyanate at a pesticide plant killed more than 3000 and, caused 170,000 injuries in 1984, in Bhopal India,
iv. A blast from a vandalized pipeline killed and injured more than 700 and injured 100 people in 1999, Nigeria, and
v. The most recent chemical accident which killed 15 people and caused 200 injuries, at a fertilizer plant in Texas on 17th April 2013.

The Minister pointed out some of the chemical accidents which occurred in Tanzania including:

- road fuel tanker accidents which led to 38 deaths and injured more than 50 people injuries in the years 2000 and 2012, a Tanzanian fuel tanker to Democratic Republic of Congo got in an accident and killed 230 people, and 196 people were severely burnt in 2010,
- 12 workers from a Textiles industry in Arusha were hospitalized after inhaling toxic gases from freshly sprayed mosquito nets in 2007.

The Minister also informed that, chemical accidents can lead to acute or chronic diseases. In addition, the epidemics or mass poisonings caused by chemicals are often difficult problems, as the effects are brought to light typically not as a chemical problem, but as an epidemic of a disease without obvious a etiology, which might take a long time to get a link. He pointed out an example of the Minamata bay in Japan case, whereby it took long time before the causative factor was identified. Barking on these facts, the Minister emphasized the need of ensuring safety to people and environment through enabling people to understand the existing risks and preparing them. The Minister commended the initiatives to implement the *"Chemical Accident Prevention and Preparedness Programme for Tanzania" Project* and thereafter Programme in Tanzania. The Minister affirmed the commitment of his Ministry towards implementation of the CAPP – TZ Project and Programme through GCLA, and that his Ministry will provide the required support within its capacity to ensure successful implementation and hence meeting of the SAICM goal that, by the year 2020: *chemicals are used and produced in ways that minimize risks to health and environment.*

The speech was concluded by expressing his wholehearted appreciation to: UNEP, SAICM Quick Start Trust Fund and FOEN for the technical and financial support to make the project possible; and the GCLA for the successful organization of the Inception Workshop. He acknowledged the presence of various international and

national stakeholders in chemicals management and that he expects at the end of the workshop common understanding of the importance and benefits of implementing a national Chemical Accident Prevention and Preparedness Programme will be reached. Thereafter, the Minister declared the "Chemical Accident Prevention and Preparedness Programme for Tanzania" (CAPP - TZ) officially launched.

### Vote of Thanks

The vote of thanks was given by Prof. David Ngassapa, the GCLA Ministerial Advisory Board Chairman. Prof. Ngassapa on behalf of all participants extended appreciation to the Guest of Honor, Dr. Seif Rashid for his presence and comprehensive speech pointing out the commitment of the Ministry of Health and Social Welfare towards implementation of the CAPP – TZ Project, and thereafter CAPP- TZ Programme. He concluded by pointing out that, he has confident in the gathered participants and their commitments to ensure that, the objectives of the Inception Workshop are met within the planned two days.

## PRESENTATIONS

During the two days workshop the following papers were presented:

### Overview and Objectives of the Inception Workshop

The paper on the Overview of the Inception Workshop was presented by Mr. Patrick Mwesigye, representative of the UNEP Regional Office for Africa. The presentation pointed out the purpose and objectives of the Inception Workshop which were to:

- Raise awareness of a Chemical Accident Prevention and Preparedness (CAPP) Programme Project and why it is important;
- Describe the benefits of improving chemical accident prevention and preparedness
- Provide an overview of Flexible Framework Initiative;
- Provide examples from other countries- Mali and Senegal;
- Explain expected outcome(s) of the CAPP Programme Project;
- Overview of tools and information Tanzania will have for own use (*e.g.,* a Country Situation Report, a Roadmap);
- Get commitment to move forward and identify next steps.

### Overview of Industry and Commerce (Tanzania) in the Context of CAPP

This paper was presented by Dr. Kannan Mangat from Berger Paints Tanzania Ltd, on behalf of Tanzania Confederation of trade and Industries. The presentation started by

defining the term "accident" as an unforeseen and unplanned event or circumstance. Dr. Kannan further focused and highlighted on the following:

i. Causes of industrial accidents,
ii. Hazardous identification and evaluation,
iii. Emergency response planning,
iv. Performance monitoring
v. Organizational and Personnel
vi. Prevention of chemical accidents
vii. Work place safety ideas
viii. Importance of Occupational safety and health

The presentation outlined the objectives content and expected outcomes of the inception workshop. IT also provided background information on UNEP's, FFT initiatives and the presentation was by describing Facets of safety and health in chemical industries which among others include:

i. Risk of accidents and /or harmful exposures, areas of concern,
ii. Dangerous materials,
iii. Hazards of pressure vessels,
iv. Flammable gases, vapours and dust hazards,
v. Hazards due to corrosion,
vi. Safety entry into confined spaces,
vii. Safety in use of pipelines, and
viii. Hazards due to instrument failures

Chemicals Transportation and Infrastructure in the Context of CAPP, presented by Mr. Iain Turner, from Freight Forwarders Group,Tanzania Ltd. The presentation started by giving the historical background of Freight Forwarders Tanzania Ltd, which has been transporting hazardous chemicals (Sodium Cyanide) since 1998 by rail and later on by road from 2004 to date. It was informed that, shifting from railway to road transport system was necessitated by uncertainty in railway transport and improved road infrastructure.

The presentation highlighted the categories of chemicals transported by FFT which included among others:

i. Explosives
ii. Flammables or Combustibles
iii. Oxidizing Chemicals
iv. Toxic Chemicals
v. Radioactive chemicals, and
vi. Corrosive Chemicals.

In order to ensure safety, prevention and preparedness for chemical accidents, procedures which are in place were reported to include:

- Use of Material Safety Data Sheets (MSDS) in which drivers are informed and instructed about hazardous chemicals, PPE required, First Aid and Emergency procedures,

- Provision of a “Short Form” of MSDS summarized and translated into Kiswahili for drivers,
- Contingency Planning which addresses among other aspects;
    i. The route to be travelled and route risk assessments
    ii. The strength of the Chemical,
    iii. The potential of personal contact with the chemical
    iv. The environmental impact considerations and
    v. Emergency preparedness procedures in general.

The presentation pointed out some of the major accidents his company has experienced so far and the respective measures were taken. He pointed out one of the major accidents which caused large spill of Hydrochloric Acid and Caustic Soda in 2012. In the accident a container turned upside down and the chemicals spilled out of the container. He pointed out the actions which were put in place to manage the situation involving the 3Cs (Control, Contain and Clean – up).

Furthermore he highlighted some of the challenges facing the transportation sector in Tanzania with respect to chemical accidents prevention and preparedness, and measures that have been put in place.

The challenges included:

- Long Response Times
    i. Distances: most of the distances are of 12 hours drive from Dar es Salaam.
    ii. Bad road conditions and ongoing construction in some routes
    iii. Large number of speed bumps.
- Re-Training and drills
    i. Escorters and some drivers have sufficient training and some do not.
    ii. Lack of site control

The measures which are in place to address some of the challenges include:

- Setting up of Local Response
    i. Basic spills response equipment
    ii. Training teams
    iii. Emergency Response Groups.
- Putting more emphasis on:
    i. One person to control a scene,
    ii. Responsibility of personnel,
    iii. Conducting more drills to ensure people know.

In concluding the presentation, he pointed out some recommendations to ensure chemical accidents prevention, and preparedness (when they occur). The recommendations included:

- The need for a national Licensing of drivers of dangerous goods.

- The need for a national Licensing of transporters of dangerous goods.

## Approach to Chemicals Accident Management in Tanzania

Presented by Prof. Samwel Manyele, the Chief Government Chemist, National SAICM Focal Point and CAPP-TZ Projector coordinator.

The presentation highlighted the legal framework with respect to chemical accidents prevention and preparedness, implementation status, achievements and challenges. The presentation also pointed out some of the chemical accidents that have occurred in Tanzania, current initiatives and way forward to ensure that health and environmental effects resulting from chemical accidents are minimized.

The presentation informed that in Tanzania more than 95% of chemicals are imported and widely used in various sectors, and the major user sectors include:

- industrial processes such as: textile industries, foam, paint, soap and detergent, acid batteries and pharmaceutical industries
- Agricultural activities which involve use of pesticides
- Large and small scale mining activities,
- Gas and oil exploration activities.

Because of environmental and health concern of chemicals and chemical accidents which happen from time to time, the existing regulatory framework to ensure sound management of chemicals was highlighted. Some of policies mentioned included:

- National Environmental Policy (NEP) of 1997 which,
- Health Policy of 2007 which requires adequate national capacity to ensure safety through management and control of chemicals and their products, including raising public awareness on safe chemical use and handling,
- Agricultural and Livestock Policy (1997) which provides for promotion of plant protection and agricultural extension services, including strengthening of agrochemicals registration and monitoring.

On the other hand, some of the existing legislation were pointed out to include:

- The Environmental Management Act No. 20 of 2004, which provides for legal and institutional framework for environmental management in the country.
- The Industrial and Consumer Chemicals Act of 2003, which provides for:
  - i. management and control of the production, import, transport, export, storage, dealing and disposal of industrial and consumer chemicals in the country.
  - ii. safe handling of chemicals and chemical wastes
  - iii. prevention and management chemicals accidents including management of spills and contaminated sites.

iv. requirements to chemical handlers to develop contingency plans which address matters related to chemical accidents prevention and preparedness.

- The Plant Protection Act of 1997, which provides for control and regulation of importation and use of plant protection substances, for sustainable plant and environmental protection;.

- The Fertilizers Act of 2009, which provides for regulation of manufacturing, importation, exportation, sale and utilization of agricultural fertilizers.

The presentation further informed that, the highlighted legislation sets requirements for companies to;

- Take precautions to prevent chemical accidents in order to prevent harm to health and to the environment,
- Conduct an EIA & Environmental Management Program and submit a summary of the program if dealing with highly hazardous chemicals.
- In case of accidents, immediately put into effect the approved contingency plans, and in addition to:
  i. immediately respond and notify the public, the Registrar and any other relevant authority in case of chemical spill.
  ii. prevent, eliminate , restore and ameliorate the adverse effects of the chemical accident or spill.
  iii. take all necessary steps to prevent spillages and contamination of the environment.
  **iv.** be liable for the expenses incurred during clean up operations or and any damages caused by a spill, accident or contaminated sites.

It was further pointed out that, the Legislation provides also for specific requirements for transporters of chemicals imported into Tanzania and those on transit to other countries to ensure safety during transportation.

The presentation was concluded by pointing out the achievements, challenges, and cited some chemical accidents which had occurred. Lastly, recommendations were given in order to improve safety standards and prevent chemical accidents.

Some of the recommendations were:

- Preventive measures should aim to eliminate the potential causes of accidents, such as a.i., the roadway system defects, mishandling by drivers, and mechanical errors in vehicles.
- Adequate driver training and adequate policies related to driving hours

- Container specifications, vehicle and mechanical conditions monitoring equipment and routing through safe roadway segments.
- MSDS, documentation, proper labeling and communication of hazards to the drivers and other handlers should be regulated more stringently.
- Setting up chemical emergency response centres at different locations in the country, which can quickly respond to emergencies on the road.

## Introduction to Chemical Accidents,

Presented by Mr. Thomas Plattner, RAPP Group.

The presentation started by highlighting various chemical accidents that happened all over the world. Chemical accidents were defined as equal to loss of control over hazardous substance(s) which can lead to consequences of: fires, explosions, release of toxic substances and release of substances hazardous to the environment. It was further pointed out that, the consequences of chemical accidents can lead to: loss of life, injury and health effects, pollution of drinking water, damage to agricultural crops, property damage (with severe economic effects), damage to cultural sites and damage to residential areas.

The presenter described some accidents which involved such chemicals as ammonia gas, liquefied petroleum gas (LPG), solvents, petrol and petroleum products, alkaline solution and chromium with their respective health and environmental consequences.

Causes of accidents were then pointed out to be:

- lack of understanding on the risks involved in carrying out the activities, including: lack of appropriate measures to control the risks such as poor design, maintenance and poor operating practice;
- lack of leadership by the management of the company to ensure that safe practices are applied; and
- simple human failure.

The presentation, concluded by highlighting measures necessary to prevent chemical accidents including:understanding the risks through systematic hazard identification and risk assessment, including: preventing the accident, reducing the probability of occurrence of an event (accident), preventing the damage and reducing the extent of damage.

i. following the relevant terms and conditions;
ii. considering safety issues in constructing and running hazardous facilities;
iii. preparing for the intervention;
**iv.** development of competency in industry and public authorities to understand chemical accident risks; application of appropriate measures to manage the risks including: training, control systems, maintenance and inspection and

inherently safer technologies; effective regulation of chemical accident hazards; transparent and consistent enforcement of good standards by public authorities.

**Benefits of Improved Chemical Accident Prevention and Preparedness,** presented by Mr. Luciano Fabbri.

The presentation started by pointing out the adverse effects of chemical accidents to include:

- Human cost which can be: injury or fatalities of people onsite and offsite and can lead to immediate and permanent, chronic illness, disability and birth defects.
- Environmental Damage, which can be immediate and long-term pollution, livestock and wildlife death and water sources pollution.
- Societal Impact, which can be communities broken up following long term evacuation, damage to infrastructure and demand for medical treatment.
- Financial impact, which can be: damaged property, lost time and productivity, response and clean-up costs, legal fees, financial penalties and compensation claims and loss of customers.

It was further informed that, the direct benefits for implementing a CAPP Programme include:

i. Saving of lives
ii. Reduced frequency and magnitude of accidents and injuries
iii. Reduced costs of accidents and injuries
iv. Better safety management systems
v. Improved risk awareness
vi. Improved business performance
vii. Improved welfare of workers
viii. Better emergency preparedness

The indirect benefits include:

i. Improved efficiency and productivity
ii. Lower production and maintenance costs
iii. Improved HSE performance
iv. Retention of staff
v. Allows more long-term business planning
vi. Access to capital and insurance at more attractive rates
vii. Improved reputation and relationship with employees, communities, authorities, etc.
viii. Lower insurance costs

The presentation was concluded by pointing out that the most obvious and important reason to establish a chemical accidents programme is to prevent accidents and limit any impacts of accidents if they do occur, thereby avoiding harming employees and members of the public, and avoiding damage to the environment and property. It is important to emphasize that accidents can harm people who do not work at the facility involved, and the effects can be both immediate and long-lasting.

CAPP in Switzerland, this paper was presented by Mr. Daniel Bonomi from Switzerland.

The presentation started by pointing out the historical background with of chemical accidents including the major accidents such as; ICMESA Factory, near Seveso, Italy; Sandoz, Schweizerhalle, Switzerland and Zürich – Affoltern. As a result of these accidents, Mr. Bonomi highlighted the different initiatives that were taken to control chemical accidents in Europe and Switzerland, including development of:

- Seveso Directive of the European Union in 1982,
- Swiss Environmental Protection Act in 1983, in which Article 10 is on Disaster prevention,
- Swiss Ordinance on Protection against Major Accidents (Major Accidents Ordinance, MAO) in 1991.

He further informed that there is a “concept of controlled responsibility” which means

- the responsibility to know the hazards of the substances used and of the processes run in an installation lies with the owner. So, the owner MUST know best
- The authority has to control, whether the owner fulfils his responsibility by defining the process approach and some sample checks

It is relevant to know that the “concept of controlled responsibility” doesn’t mean a divided responsibility, but a divided control process. The responsibility is bound to the owner!

In managing hazardous chemicals and chemical accidents, the two step approach based on threshold quantities and worst case scenarios was presented.

**Step 1:**

- The owner establishes a summary report based on **hazard** potential in terms of quantity of a substance and its properties (physical, chemical, toxicological, ecotoxical) refers threshold concept.
- The authorities evaluate the summary report.
    i. if the serious injuries hardly expected the step 1 ends up here,

ii. if serious damage may be expected, the authorities requires for risk study.

**Step 2:**

- The owner establishes a risk study.
- The authorities evaluate the risk study.
  i. if the is risk acceptable, then the procedures ends up here.
  ii. if risk not acceptable, then the authorities orders that, supplementary measures be taken.

In his presentation, Mr. Bonomi further insisted on participative development of guidance and cooperation of authorities are also key aspects with respect to chemical management and chemicals accidents prevention and preparedness.

Mr. Bonomi then concluded his presentation by pointing out that: hazard based approach and broad scope of the ordinance has proved its worth; principle of controlled responsibility of the owner and quantification of risk brings transparency but needs consensus between the stakeholders on the relevant parameters; andcollaboration, among authorities and among the stakeholders is the base for rapid progress.

## Flexible Framework Initiative for Chemical Accident Prevention and Preparedness

This paper was presented by Ms. Sanja Ursanic, the CAPP-TZ Project coordinator on behalf of UNEP.

The presentation started by highlighting 3 key functions of UNEP as to:

- assess the state of the world's environment and understand environmental challenges;
- promote global consensus and stimulate solutions to environmental problems through International Law (conventions and protocols, voluntary initiatives, and public-private partnerships);
- build capacity and networks to facilitate implementation and response to environmental challenges.

Ms. Ursanic also pointed out the UNEP's Safer Production Portfolio that it includes among others:

- Responsible Production approach for Chemical Hazards Management, which is a guidance and tool for SMEs aimed at engaging all stakeholders along the supply-chain in improved safer production, risk communication and emergency preparedness practices (Sectoral level / SMEs).

- Awareness and Preparedness for Emergencies at Local Level (APELL) Programme, which promotes multi-stakeholder preparedness to industrial accidents and disasters through community participation (Local level).

- Flexible Framework Initiative for Chemical Accident Prevention and Preparedness, which provides guidance for governments wishing to develop, review, strengthen or improve their chemical accident prevention and preparedness programmes (National level).

In focussing her presentation on the Flexible Framework Initiative, Ms. Ursanic informed that, it is part of the UNEP's ongoing activities to build capacities and develop technical tools, methodologies and strategic frameworks for environmentally sound production and use of chemicals. She further informed that, the Initiative began in response to an action point from the Strategic Approach to International Chemicals Management (SAICM) to develop collaborative practically oriented tools for chemical accident prevention.

She pointed out the milestones of the initiatives to include:

- Pilot CAPP Programme Projects in Cambodia and the Philippines in 2009,
- Chemical Accident Prevention Programme for West Africa in 2010/2012,
- UNEP published an Implementation Support Package (ISP) in 2012,
- CAPP Programme Project for Sri Lanka in 2013 and
- CAPP Programme Project for Tanzania to be implemented in 2013/2014.

She then informed on the purpose of the Flexible Framework initiatives that, to:

- Increase countries' understanding of issues related to chemical accident prevention and preparedness
- Improve the capacity of relevant institutions, agencies and experts to address the risks of chemical accidents
- Help countries to develop and implement an appropriate CAPP Programme.

Whereby at national level, it aims at providing guidance for governments wishing to develop, review, strengthen or improve their chemical accident prevention and preparedness programme, and that the expected ultimate impact is to reduce the consequences (on health and environment) and the likelihood of chemical accidents.

After highlighting the Flexible Framework initiatives, Ms. Ursanic introduced the Flexible Framework Guidance which a document that outlines the steps that a country can take to develop and implement the CAPP Programme. She pointed out the steps to include:

- Assessment of country-specific situation (risks, priorities, and cultural/legal context)

- Choosing and adapting of the relevant elements in light of country specific situation
- Implementing the programme.

Ms. Ursanic pointed out the Scope of the Flexible Framework Guidance that, it aimed for:

- Prevention of chemical accidents by
  - i. Avoiding incidents
  - ii. Reducing the impacts of incidents
  - iii. Learning from experience to control hazards

- Preparedness for accidents
  - i. Being ready and trained prior to the onset of an incident
  - ii. Having systems in place for emergency response to places where hazardous chemicals are produced, processed, used, handled, or stored.

Furthermore, Ms. Ursanic informed that, the *Guidance* has been designed to be flexible to ensure that:

- it can be applied in different national contexts worldwide;
- countries can focus on elements relevant to their particular context and adapt them as required; and
- countries can decide how to define actions, depending on priorities, resources and experience.

She then concluded her presentation by pointing out the five phases for the Chemical Accidents Prevention and Preparedness Programme development and implementation, which are:

- Phase 1: Initial Phase
- Phase 2: Assessment Phase
- Phase 3: Development Phase
- Phase 4: Implementation Phase
- Phase 5: Review and Revision Phase

## CAPP-TZ Project Implementation

This presentation was given by Ms. Josephine Kalima from GCLA.

The presentation started by informing that management of chemicals, prevention and preparedness and chemicals accidents in Tanzania are based on as provisions in the Industrial and Consumers Chemicals (Management and Control) Act of 2003. She further informed that, the Act also establishes the Emergency Response Committee (ERC) which has roles of;

- preparing disaster preparedness and contingency plans; and
- implementing of the same in case of emergencies.

It was further informed that proposals for an application to SAICM to implement the CAPP-Programme Project in Tanzania were endorsed by the Emergency Response Committee, with the purpose to facilitate prevention and management of chemical accidents both at the national and enterprise levels and to contribute to the goal of protection of health and the environment. She pointed out the ultimate goal of CAPP-TZ is to reduce the risks and consequences of chemical accidents within Tanzania through: establishment of an effective Task Force for elaborating the CAPP programme and implementing it; building capacity of institutions/agencies in CAPP by creating a system for engaging/consulting with relevant stakeholders (representatives of different affected industries, labour organisations, local communities, and community based organisations) during the course of the CAPP-TZ project;choosing relevant elements of the CAPP programme by using the *FF Guidance*; and planning for implementation of the CAPP Programme.

Before concluding her presentation, highlights were given on the project management, activities to be undertaken and assigning of responsibilities. Main steps in the CAPP – TZ Project and programme implementation were outlined, these include:

- Project initiation
- Development of a country situation report
- Development of a Road Map
- Implementation of CAPP Programme based on Roadmap and *Flexible Framework Guidance*
- Maintenance, review and, as appropriate, revision of a CAPP Programme

The presentation was concluded by pointing out the expected outcomes, which among others are:

- A CAPP multi-stakeholder Task Force formed to steer the CAPP-TZ project and to continue the work on CAPP after the project has ended,
- A network of practitioners relevant to CAPP established in country/ region,
- UNEP's *Flexible Framework Guidance* is introduced in the country, available in local language (Kiswahili) and applied by the Task Force,
- A cCountry Situation Report and Roadmap reports are developed,
- Training materials are developed, and relevant actors are trained, and
- Sustaining activities to implement a CAPP Programme beyond the end of the CAPP-TZ Project are defined.

## Present Situation and Experience on Chemical Accident Prevention and Preparedness in Kenya

Mr. Francis N. Kihumba, a chemicals and wastes expert from the Ministry of Environment and Mineral Resources of Kenya presented this paper.
He started his presentation by pointing out the major source and uses of chemicals that; most of the chemicals are imported where Petroleum imports being the number one followed by pesticides and industrial chemicals. He further informed that, the imported chemicals are used in various sectors such as: manufacturing industries, agriculture, energy and other services like water treatment. Mr. Kihumba informed the potential of Kenya with respect to chemical accidents particularly during transportation as Kenya is a transit state for exports from Northern Tanzania, Uganda, Burudi, Rwanda, Democratic Republic of Congo and Southern Sudan, pointing out that in 2010 for example, the transit cargo was 5,000 thousand tones.

In his presentation, Mr. Kihumba pointed out that, historically Chemical accidents predominantly occur in services system, informal sector, industries and road and rail transport on which Kenya has experience many of such incidents. He highlighted some of the chemical accidents including the biggest tragedy in Kenya at Sachangwani where by a fuel tanker accident and explosion led to 131 deaths.

Mr. Kihumba informed that, as a result of Sachangwani accidents, the following initiatives have been put in place:
Currently organization, protection and rescue during disasters caused by hazardous substances are by various government and nongovernmental organizations departments at different levels in the country.

- Specific improvements have been proposed as below:
  i. **Improving coordination and inter-agency cooperation** – The main agencies concerned with chemical emergencies are being made to be more aware of their individual and collective roles and as such, improve functionality in the area of chemicals emergency planning and response.

  ii. **Operationalisation** of a comprehensive emergency response plan for chemical emergency planning, personal precautions and safety.

  iii. **Enhancing human safety is the most important concern when a spill occurs.** Safety concerns are being made to extend to those who might be contaminated directly and indirectly during the containment and cleanup process.

  iv. **Precautionary Measures:** Guidelines are being made that will reduce the hazard to human health when responding to a pesticide spill.

- **The key roles of** various institutions are as described below:
  i. Agrochemical Association of Kenya – Training and Capacity building to minimize accidents among members.
  ii. Petroleum Institute of East Africa – Training, information exchange and industrial practices.
  iii. OSAMARG – Applying MARPOL Guidelines and Conformity to IMO Regulations.
  iv. Kenya Association of Manufacturers – EMS Certification, Cleaner Production, Health and Safety survey and fire survey.

- The key from the Government and nongovernmental had been required to review their capacity to address chemical accidents and response to emergencies.

Mr. Kihumba concluded his presentation by highlighting the roles of some key institutions including:

- The roles of the police include:
  i. Informing, alerting and raising the alarm,
  ii. Activating forces for rescue and relief,
  iii. Coordinating, rescue operations,
  iv. Directing protection and rescue operations,

- National Environment Management Agency (NEMA)
  i. Responsible for informing and raising the alarm during disasters caused by hazardous substances as well as documenting environmental impacts.

  ii. Makes assessments of the level of danger directs and coordinates measures for the prevention and reduction of the effects of disasters, in collaboration with other ministries and agencies.

  iii. Direct the organization of local community protection, rescue and relief forces and organizes forces for protection, rescue and aid for other purposes.

  iv. Has an emergency response call number

## Overview of Chemicals Regulatory Framework in Kenya

Presented by Mr. Dickson M. Njora, Principal Compliance and Enforcement Officer from the National Environmental Management Authority (NEMA) of Kenya The presentation informed that, the right to a clean and healthy environment is provided in both; the Constitution of Kenya and the Environmental Management and Coordination Act (EMCA).

He further informed that, the EMCA entitles every person in Kenya to a clean and healthy environment and each person has the duty to safeguard and enhance the environment.

In order to implement the EMCA, the various Regulations and standards established to ensure protection of human health and environment were mentioned. These included among others:

i. Environmental (Impact Assessment and Audit) Regulations, 2003.
ii. Waste Management Regulations, 2006 (Basel & POPs Conventions)
iii. Water Quality Regulations, 2006 to protect water resources from pollution.
iv. Controlled Substances Regulations, 2007 for Control of Ozone Depleting Substances (ODS)., Vienna Convention & Montreal Protocol).

He also reported that some Regulations which are still in the process of development, and these included:

i. Classification & labeling as per the Globally Harmonized System (GHS).
ii. E-Waste- (electronic waste) guidelines which have been finalized and are being developed into regulations in order to be legally binding.
iii. Asbestos wastes- draft Asbestos handling and disposal guidelines have been developed awaiting finalization.
iv. Regulations on used oil, waste tyres and plastic wastes which were being developed

In concluding his presentation, it was pointed out that the various control measures which are in place include:

- Licensing as a regulatory tool to ensure compliance to gazetted regulations.
- Enforcement as a regulatory tool to ensure compliance to environmental regulations, done through inspections, investigations and prosecutions.
- Enforcement actions include;
  - Warning (verbal, written)
  - Prosecution
  - Closure of facilities

## Experience of CAPP Project in West Africa: Mali and Senegal (CAPP-WA)- Video Conference

This paper was presented by Mr. Franck Prats, the CAPP-WA Technical Support Expert and Ms. Johanna Suikkanen, UNEP.

The CAPP-WA project was granted funds from the SAICM Quick Start Programme. UNEP Division of Technology, Industry and Economics was an Executing Agency and country beneficiaries were Direction National de l'Assainissement, et Controle des Pollutions in Mali and Direction de l'Environnement et des Etablissements Classes in

Senegal. The French Ministry of Environment provided in-kind contribution to engage the French National Institute for Industrial Environment and Risks (INERIS) to provide technical support to UNEP and Mali and Senegal.

A country situation mapping at the start of the project identified main challenges related to chemical accident prevention and preparedness in Mali and Senegal. These were: lack of the enforcement of regulation, difficulty of finding information and not defined responsibilities among different agencies. Further assessment of country situation showed also differences between two countries in terms of industrial development and level of expertise related to industrial safety which were important when designing capacity building activities.

The project opened discussions on different services and industries in CAPP Task Forces and by mutual industrial site visits collaboration between Mali and Senegal was established and enhanced. This opened possibilities for future collaborations between the two countries which could be materialising by sharing experience in inspection and implementation of CAPP system, cross training on specific aspects of CAPP systems and training of Malian experts by Senegalese experts

The experience supported the development of the *Flexible Framework Implementation Support Package* which gathered experience of implementing CAPP Programme Projects to facilitate future implementation and also opened opportunities for the Flexible Framework application on a regional level in the West Africa.

## PLENARY DISCUSSIONS

The plenary discussions were chaired by Prof. Samwel Manyele, the Chief Government Chemist and CAPP-TZ Project Coordinator. The discussions were guided by questions and issues raised during discussions following presentation of papers, as presented below.

### DISCUSSION QUESTIONS AND ANSWERS

**Qn.1: What are the required capacities necessary to implement the CAPP programme?**

**A.: The required capacities include:**

- Understanding of aspects required in the process including the risk assessment. In the European Union it is the role of the operator. The necessary steps to conduct the risk assessment.
- The operator has to conduct the process and the regulator has to evaluate the process.
- It is important to understand what is available and then improve from there.
    i. Access the information
    ii. Access the resources available

**Qn. 2: How will Tanzania sustain the CAPP Programme after the closure of the project, can this aspect be foreseen and adhered right from the beginning? How can this be done?**

A: The following were pointed as necessary in sustaining the CAPP-Programme beyond the Project:

1. Dedicated champion: committed persons who will lead in accomplishment of the necessary actions, and ensure that other stakeholders are doing what they are supposed to do. Including and utilizing what is available, and improve from the existing gaps by setting procedures including review of some appropriate legislation.
2. Continuous awareness and involvement of political leaders. Enganging industries in the process as they have much to contribute towards sustainability of the project.
3. Make use of lessons learned in incidents/accidents to improve the legislation and other areas as appropriate .Understanding risks of certain hazardous activities: Industries should try to address the risks of the processes involved and risk analysis.
    i. Regulatory bodies should understand and evaluate risks which were analysed by the operator, main elements and linkages between those two bodies.
    ii. Important that industry understands benefits of their engagement /involvement. Unfortunately, accidents are often driving forces of

development of CAPP Programmes. Political commitment could ensure the sustainability of the programme is assured.

4. Establishment of the cooperation between different stakeholders which will ensure that the programme will be sustainable after completion of the project .

5. Mapping important stakeholders to ensure political commitment to move forward with development of the programme.

6. Identify the roles of each stakeholder and engage them in the process, and make sure to maintain the momentum.

**Qn. 3: How could cooperation among stakeholders be strengthened during the project implementation and thereafter?**

A: The following aspects should be considered:

- There are many stakeholders therefore stakeholders` analysis should be done to identify key stakeholders and their respective roles.
- At this point it was noted that many stakeholders were present at the workshop, and that it was important for them to make statements on their willingness to participate in the CAPP project and programme.

- GCLA has to provide leadership;
  i. Specify stakeholders' roles,
  ii. Conduct monitoring. Consider a modality to involve the public;
  iii. Among the stakeholders is the Prime Minister's Office (PMO), which forms part of the team (Chair of the ERC and Task Force).
- The Disaster management and coordination policy is under review, the issue of chemicals accidents prevention and preparedness will be included.

**Qn. 4: What are the elements of pre-planning that can be used to prevent chemicals accident during transportation?**

A: Some of **the key elements are:**

- Pre-planning including route assessment.
- Risk Assessment (hazardous nature)
- Risk Management.

**Qn.5: What are the situation with respect to compensation for damaged environment and what should be done to address the matter at a national level?**

**A: It was informed that:**

- In Tanzania, the issue of compensation for workers is handled under the Directorate of Labour in the Ministry of Labour, Youth and Employment.
- OSHA does not cover compensation matters from chemical accidents. When an occupational accident happens, a Board will be established to investigate and compensation will be based on the report.
- Systems for compensation in case of chemical accidents are very complex in most cases.

**Qn.6: Are there other better ways available for dangerous goods transportation other than road and rail?**

**A: It was informed that:**

- There is no option for transportation of dangerous chemicals apart from road and rail, however rail transport is preferred.

**Qn. 7: Is transport done in the night or during the day time?**

**A: It was informed that:**

- It is best to transport only during the day time.

**Qn. 7: Are the procedures undertaken by the Freight Forwarders Tanzania Ltd during transportation of chemicals done on voluntary basis or it is a legal requirement?**

**A: It was informed that:**

- Some are on voluntary basis to ensure safety to health and the environment and company integrity.
- Most are done to fulfill both national and international legal requirements

**Qn. 8: How do you handle driver's fatigue during transportation of chemicals?**

**A: It was informed that:**

- It is a company directive that, drivers have to rest after every two hours drive.

**Qn. 9: GCLA has only about 140 staff, how do you handle all those tasks?**

**A: It was informed that:**

- GCLA manages all the activities in collaboration with Health Officers who are being trained as chemical inspectors. Initiatives are taken from time to time to recruit more staff including on contract recruitments.

**Qn. 10: Is dilution a solution to pollution during chemical accident and spill to environment?**

**A: It was discussed and agreed that:**

- It is not always a solution, as dilution may increases the spread over of the chemical, while in some cases (eg. acids) the concentration may be reduced. This can expand the problem rather than solving.
- It was noted that in Schweizerhalle, Switzerland experience, water was used to fight fire, and the water for fire-fighting polluted the Rhine River. Had water not been used, there would only be fire and the cloud of smoke, which would be less damage on environment- therefore dilution, is not always the best solution.

**Qn.11: You pointed out the two steps approach- how threshold is defined and what it does mean? How often a risk analysis has to be done?**

**A: It was informed that:**

- the thresholds were defined on substance properties (toxicity and physical characteristics) by expert judgment taking into account that in the small Swiss country industry and housings may often be located nearby. The authority has to decide case by case whether a risk analysis is necessary based on the estimation of the consequences of worst case scenarios.
- Around 10% of the installations subjected to the mayor accident ordinance had to submit and keep updated a risk analysis. Risk analysis are also done in planning procedures for new buildings near hazardous facilities.

**Qn. 12: How often it happens that a facility has to be closed down because it is too risky to be there anymore?**

**A: It was responded that:**

- It happens and that was done in Bern, Switzerland.

**Qn. 13: There is some information that expired chemicals are imported illegally and sold in Tanzania, is GCLA aware?**

**A: It was pointed out that:**

- GCLA has no such information, anyone with information should report and GCLA will follow up.

**Qn.14: Emulsion is categorized as an explosive, is that true?**

**A: It was informed that:**

- Emulsion is classified as an explosive although it is not because it needs accelerant to become explosive (diesel etc) that is why it is sometimes put in that category.

**Qn. 15: How will the public be involved in the implementation of the CAPP-TZ project and Programme?**

**A: It was informed that:**

- It is important not to forget that the public is very important. For instance in case of emergency planning, the public should be informed and fully involved otherwise the emergency planning will be useless.
- It was affirmed that thorough involvement of the public would be ensured.

**Qn.16: Will poisonings and pharmaceuticals issues also be under CAPP?**

**A: It was informed that:**

- Poison issues will be taken care through establishment of a poison control centre.

**Qn.17: Which challenges and obstacles did you face when putting together information in the group?**

**A: It was responded that:**

- Group members were not experts in the field and did not know where to get that information.
- Groups were random; members in groups are not necessarily experts.
- Experts in different fields need to be brought together for this programme.

**Qn. 18: What are the existing challenges towards implementation of the CAPP-TZ Project and Programme?**

**A**: **It was discussed and recommended that:**

- Within institutions that are represented at the workshop - some are so big sometimes information sharing within needs institutions shouldbe strengthened.

- Capacity building and commitment to read and understand various legal documents and guidelines is needed.

- It is good for everybody to know what is expected from them related to CAPP.

- We have activities and regulations, it is a challenge to strengthen consultation mechanism and coordination. Having a policy on chemicals management could be the solution to these challenges.

**Qn. 19: If universities' programmes are answering their needs, why it was a problem to find training programmes in these universities? Do we really have appropriate trainings and capacity building activities in place?**

**A: It was informed that:**

- Some graduates are from universities where OSHA programmes are optional not compulsory. It is recommended for initiatives to review the high learning programmes.

**Qn: 20: Do fire companies and emergency responders get sufficient support from the Government in terms of legal framework, network and capacity necessary to address chemical emergencies?**

**A: It was responded that:**

- Inadequate in regard to equipment and personnel skills to fight fire incidences.
- Emergencies first responders are not well equipped.
- Equipment for fighting *chemical accidents* are not adequate.
- Fire and safety units in the country cannot adequately address chemical emergencies. Expertise and equipment are sufficient, In the port some are available, but are not enough; they can only fight incidents off shore. The challenge is still on whenever national incident which requires immediate response;
- the national emergency responders and private sector- need a common system to manage critical disasters.

In addition, some questions/ issues which were considered important for the CAPP-TZ project were raised after presentations, however were not discussed in the Plenary Discussion sessions because of time limitations. The questions are available in Appended (Appendix III).

# GROUP WORK PRESENTATIONS

## GROUP 1: HAZARDOUS FACILITIES AND SUBSTANCES

### Way forward - COUNTRY SITUATION REPORT

| S/N | 1.FACILITIES/LOCATIONS | 2. INDUSTRIAL ACTIVITIES | 3. CHEMICALS INVOLVED | 4. BODY/AGENCY |
|---|---|---|---|---|
| 1 | PETROLLEUM STORAGE TANKS<br>• Near residential areas eg Kigamboni, Igoma –Mwanza etc | • Manufacturing (eg. foam, paints, fertilizers)<br>• Mineral Processing<br>• Exploration<br>• Storage<br>• Transportation<br>• Blasting<br>• Repackaging<br>• Laboratory analysis<br>• Plant and Animal pastes control<br>• Fumigation | • Lead<br>• Sulphur dioxide | NEMC<br>TPDC<br>EWURA<br>GCLA<br>OSHA<br>MEM<br>TFDA<br>TPRA |
| 2 | PETROL STATIONS<br>• Near residential areas | | | |
| 3 | SOLID WASTE DUMP SITES<br>• Illegal (eg. Mandela Road)<br>• Legal (Pugu Kinyamwezi) | | Miscellaneous Chemicals | NEMC<br>GCLA<br>OSHA<br>MUNICIPAL COUNCILS |
| 4 | PORTS /AIRPORTS/<br>• JNIA<br>• DSM<br>• MTWARA<br>• TANGA | | Miscellaneous Chemicals | |
| 5 | INDUSTRIES<br>• Industrial Area (Mikocheni, Pugu Road, Keko, Igogo - Mwanza)<br>• Non Industrial Areas (eg. KTN – Mbagala ) | | Miscellaneous Chemicals | |
| 6 | TRANSPORT INTERFACE<br>• Railways<br>• Roads | | | |
| 7 | MINING AND MINERAL PROCESSING SITES<br>• Legal (Large and Small Scale )<br>• Illegal<br>• TSF (Tailings Storage Facility) | | • Sodium Cyanide<br>• Ammonium Nitrate<br>• Calcium Carbonate<br>• Calcium | |

1. POTENTIAL END USERS

- PM's Office – Disaster Management
- NEMC
- OSHA
- GCLA
- TFDA
- Sector Ministries

2. INFORMATION TO BE INCLUDED

- Identification of key stakeholders
- Hazards Identification (Location, Risk Rating/Classification)Level of awareness to the general population
- Current level of emergency preparedness
- Legislation in Place

3. INFORMATION FOCAL POINTS
    - GCLA
    - NEMC
    - TFDA
    - TPRA

4. MOST APPROPRIATE MECHANISM
    - Monitoring and Audit
    - Involvement of private sectors in the process
    - Effective Database
    - Reporting Mechanism (Readily available information to everyone at any time on responsible personnel/institutions)

5. STRATEGIES
    - Awareness campaign and training
    - Review of schools syllabus to include chemicals management awareness knowledge
    - Effective legislation setup

## GROUP 2: HAZARDOUS FACILITIES AND SUBSTANCES

1. Where are the hazardous facilities located?
    - Widely spread(Ministry of Agr)
    - Country wide (petroleum and gas)

- Country wide (GCLA)
- Ports and mining areas
- Mainly Dar es Salaam and Arusha

2. What are their industrial activities?
   - Storage , trades, import (Ministry of Agr)
   - Domestic use, industries uses, and other uses(petroleum and gas)
   - Production to disposal (GCLA)
   - Mining activities, constructions and power generation Pharmaceutical food industries

3. Which chemicals are involved?
   - Pesticides and fertilizer (Ministry of Agr)
   - Petroleum and gas
   - All industrial and consumers chemicals (GCLA)
   - Mining explosive
   - Food chemicals and all drugs

4. Which body/agency has this information?
   - Ministry of agriculture (Ministry of Agr)
   - EWURA and TPDC and TPA (petroleum and gas)
   - GCLA
   - Ministry of minerals and energy
   - TFDA

**Way Forward – COUNTRY SITUATION REPORT**

1. Who are the end uses of the Country Situation Report?
   - Societies
   - Handlers
   - Regulatory bodies
   - Producers
   - Policy makers
   - Learning institutions

2. What kind of information should be included in the Country Situation Report?
   - Risk analysis
   - Legal tool (regulations and rules)
   - List of past studies (references from past studies)
   - Database of expertise

- A lot of training

3. Who are the information's focal point to gather information about hazardous facilities and chemicals?
    - all the registers
    - all the chambers
    - private institutions, organizations and NGO's
    - policy maker

4. What is the most appropriate mechanism to gather information and update the Country Situation Report (regularly)?
    - through emergency response committee
    - designating focal CAPP-TZaccessibility of the database

5. What strategy should be identified to fill gaps?
    - Revisions of rules and regulations
    - Much training to expertise (capacity building)
    - Solidity fund from government budget

## GROUP 3: REGULATORY FRAMEWORK POLICY

1. National Environmental Policy, 1997 – Vice President Office
2. Healthy Policy 2007 – Ministry of Health and Welfare
3. Agriculture Policy 1997– Ministry of Agriculture

4. International Labor Organization (ILO) Policy - International Convention
5. Conventional Industrial Installation Policy, 1974 – International Convention

ACTS:

6. Environmental Management Act, 2004 – Vice President Office
7. Industrial and Consumers Chemical Act – Ministry of Health and Welfare
8. Crop Protection Act, 1997 - Ministry of Agriculture
9. Fertilizer Act,2009 – Ministry of Agriculture
10. TPRI (Tropical Pesticides Research Institute) Act, 1979 – Ministry of Agriculture
11. Labor Act of Tanzania, 2004 – Ministry of Labor & Youth
12. Atomic Energy Act

REGULATORY AUTHORITY:

13. Sumatra (Surface and Marine Authority) – Ministry of Transport
14. Ewura (Energy, Water and Utility Authority) – Ministry of Energy and Minerals and Ministry of Water

15. NEMC (National Environmental Management Council) Authority – Vice President Office
16. Government Chemist Laboratory Agency
17. TPRI (Tropical Pesticides Research Institute)
18. TFDA (Tanzania Food and Drugs Authority)

**WAY FORWARD- Country Situation Report**

Potential end users

1. Policy and law enforcing bodies e.g. Institution/Agency/Ministries
2. Chemicals Manufacturers
3. Chemicals Transporters
4. Education Institutions
5. Hospital Institutions
6. Chemical Laboratories
7. Research Institutions
8. Large and Small Scale Users

REQUIRED REPORT

1. In case of accident what level of injuries/destruction/ losses that report can have
2. Chemical hazards
3. Handling procedures
4. Materials Safety Data sheet
5. List of Chemicals
6. Source/Origin of Chemicals
7. Regulation/Legislation/Institutions
8. Insurance
9. International Standards
10. Local Standards
11. Statistics information

FOCAL POINT TO GATHER INFORMATION

1. GCLA (Government Chemist Laboratory Agency)

APPROPIATE MECHANISMS

1. Multi-sectoral Workshops
2. Training
3. Mass Media
4. Research

## GROUP 4: REGULATORY FRAMEWORK POLICY

| POLICY | RESPONSIBLE MINISTRY | CLASSIFICATION |
|---|---|---|
| NATIONAL ENVIRONMENTAL POLICY OF 1997 | DIVISION OF ENVIRONMENT-VPO | ENVIRONMENT |
| NATIONAL HEALTH POLICY OF 2007 | MINISTRY OF HEALTH AND SOCIAL WELFARE | HUMAN HEALTH |
| AGRICULTURE AND LIVESTOCK POLICY OF 1997 | MINISTRY OF AGRICULTURE AND LIVESTOCK | AGRICULTURE |
| *OIL AND GAS POLICIES* | MINISTRY OF ENERGY | OIL AND GAS |

EXISTING CHEMICAL RELATED ACTS IN TANZANIA

- Industrial and Consumer Chemicals (Control and Management Act) No.3 of 2003 (CAP 182)
- Industrial and Consumer Chemicals (Management and Control) regulations of 2012
- Occupation Health and Safety Act of 2003
- Plant Protection Health Act
- Mining act
- Atomic Energy Act
- Fertilizers Act
- Environmental Management Act Cap 191 of 2004
    - Environmental Impact Assessment and Audit Regulations of 2006
    - Env. Management (hazardous wastes) regulation of 2008
    - Environmental management (water quality)of 2007
    - Environmental management (air quality) of 2007

| ACTS | LICENCE | PERMITS/CERTIFICATES | CLASSIFICATION |
|---|---|---|---|
| Industrial and Consumers Chemicals no.3 of 2003 (cap 182) | | import, export, transportation of chemical | industrial and consumer chemicals |
| Environment Management Act 2004 and its regulations | Licence installation disposal facilities | waste oil and e-waste and metal scraps and export of hazardous wastes | |
| Occupational Health and Safety | premise | | |

| | | | |
|---|---|---|---|
| Plant Protection Health | | import/export | pesticides |
| Ozone Depleting Substance | | import/export | ODS |
| Fertilizer | | Import/ export | Fertilizer |
| Atomic Energy | | Import/ Export | Radioactive |

WHO IS RESPONSIBLE FOR MANAGING?

| ACTS | RESPONSIBLE MINISTRY | IMPLEMENTING AGENCY | CLASSIFICATION |
|---|---|---|---|
| ICCA | Ministry of Health and Social Welfare | GCLA | Industrial and Consumers Chemical (Hs Code 22-40) |
| EMA 2004 and its Regulations | Licence Installation Disposal Facilities | Waste Oil, E-Waste, Metal Scraps and Export of Hazardous Wastes | |
| Occupational Health And Safety | Ministry of Labour and Youth | OSHA | |
| Plant Protection Health | Ministry of Agriculture and Livestock | Plant Protection Department | Pesticides |
| Mining Act | Ministry of Energy And Minerals | Commissioner of Mining | Explosives |
| Atomic Energy Act | Ministry of Science and Technology | Tanzania Atomic Energy | Radioactive |

Potential End users of the Country Situation Report

- Policy makers in Tanzania
- Regulatory bodies of chemicals
- Private sectors
- Industries
- Regulated communities
- General public

What Kind of information should be in the Country Situation Report?

- Strength of the country in relation to CAPP
    - Existing Legal strength
    - Existing Political willingness
    - Institutional capacity
- Mandates/Responsibilities among different partners

- Clear Coordination among different actors lead by GCLA
- National Resources allocation for funding CAPP
    - Financial
    - Human resources
    - Equipments

Who are Information Focal Points?

- Regulators

Mechanisms to gather information and update country situation report

- By using consultant in collaboration with CAPP Task force.

## GROUP 6: TRAINING AND CAPACITY BUILDING

Combination of members in the group: TPRI, TUCTA, TBS, GCLA, MIT

Some of the trainings relevant/ linked with chemicals management, accidents and disaster management

TUCTA

- Trainings on the best use and management of agro-chemicals in plantations (for workers and surrounding communities)

**TPRI**

- Training for vector control to advanced diploma students (Health Officers) (disaster preparedness?)
- Pesticides management training (structured periodic training conducted twice a year in May and October (to pesticide dealers, extension officers)

**TRAFFIC POLICE HQs**

- Law enforcement awareness and how to handle chemical accidents/ management and transportation

** Trainings range from: Trainings of trainers, Outreach training programs; Onsite training (some tailor made trainings, TPRI)

**GCLA**

Special training for chemical inspectors by GCLA (guided by the ICCA Industrial Chemical and Consumer Act) which deals with all chemicals with exception of pharmaceuticals, pesticides, radioactive chemicals.

- Awareness and training to industries/ chemical handlers on safe chemical handling, and transportation by GCLA
- Trainings for environmental inspectors by NEMC, Department of Minerals,

**MATERIALS/ METHODOLOGY USED**

i. Brochures/ leaflets
ii. Printed booklets
iii. Posters
iv. Materials Safety Data Sheets (MSDS)
v. Personal Protective Equipment
vi. Lecture handouts
vii. Exhibitions
viii. Presentations
ix. Training modules

**FINDINGS**

- GCLA has to diversify trainings to other direct /indirect players of chemicals e.g. Plant Inspectors from the Ministry of Industry etc

**WHO RECEIVES TRAININGS**

i. With GCLA's special training to chemicals inspectors target are health officers, police unit
ii. Management teams/ supervisors/operators within the plantations
iii. Operators of the plantations
iv. Plantation management team
v. Trade Union Leaders
vi. Health and Safety Committee members in plantations
**vii.** Sensitization of the neighbouring communities on

**Way Forward- Training and capacity building gaps/ needs as far as CAPP is concerned:**

| Training Priorities and Capacity Building Needs | Topics | Who should be trained | Potential Trainers (Outsourced Consultants) |
|---|---|---|---|
| Training on disaster management and preparedness (safety, first aid) | In blue | ○ Company/ facility<br>○ Rescue units<br>○ DMU<br>○ Community at large | PMO, |
| Training on interpretation and application of the relevant legislations | In blue | Law enforcers<br>Environmental Inspectors | NEMC/ UNEP |

| | | | |
|---|---|---|---|
| Training on handling of contaminated sites and the disposal of the contaminants/ chemical | In blue | engineers, chemists, environmental officers/ authorities | Outsourced experts |
| Training for chemical analysis/ identification of unknown chemicals (enhancing the capacity, increasing the pool of experts) | | chemical analysts, engineers, chemists | GCLA/outsourced consultant |
| Others to be trained process engineers, town planners and architects: in terms of safe engineering and planning of the facilities/ buildingslaw enforcers, policy makers, CSO | | | Potential trainers and training facilities: All relevant local institutions and authorities (GCLA, TPRI, UDSM, NEMC); international institutions: ILO, UNEP, RAPP (Swiss Training) |

## GROUP 6: TRAINING AND CAPACITY BUILDING

| Types of training | Internal (provider) | External (provider) |
|---|---|---|
| - Chemicals management Government institutions - GCLA, OSHA, higher learning institutions – Ardhi University,UDSM , UDOM private businesses - mining companies, petro chemical companies, chemical industries | | |

| | | |
|---|---|---|
| (Sadolin paints etc)Transporters - FFGRP, private institutions, consultantstrade unions – TUICO, IMDG, CANUTEC, ChemAlert External Consultants, - nternational program for chemical safety (IPCS),ICMI (International CN Management Institute) | | |
| Chemicals accidents | | |
| Type of training | **Internal (provider)** | **External (provider)** |

Disaster management
Short courses

- Introduction to Disaster risk management (short)
- Disaster and emergency preparedness managementClimate change induced disastersMainstreaming the climate adaptation and disaster risk in development agenda

Long term (BSc / MSc)

- Disaster science
- Disaster risk management (un-propogenic hazards and natural disasters)

| | |
|---|---|
| ○ Disaster risk/ engineering in emergency Ardhi University Security companiesPMO's office – Disaster Management Department | |

**TRAINING MATERIALS**

i. Training manual & books
ii. IPCS modules
iii. Chemical inspector's manual
iv. Chemical transport manual
v. Chemical safety manual
vi. Mercury training kit of UNEP
vii. Training videos
viii. Internet
ix. Case study videos (Disaster)
x. Indigenous knowledge
xi. Research papers
xii. ICMI Cyanide Code

**TRAINING RECIPIENT**

i. Industry personnel, employees
ii. Relevant Government agencies
iii. Some local authorities
iv. Disaster focal point
v. University students
vi. Transporter's drivers
vii. First responders (Security companies, Red Cross, Fire brigades, Police, Community Based Organisation etc)

**WAY FORWARD- MOST APPROPRIATE PRIORITY TRAINING NEEDS and THEMES**

| Short term needs | Medium term needs | Long term needs |
|---|---|---|

| | | |
|---|---|---|
| Chemicals transportation – (transporters) drivers, traffic police, local community along the routes, inspectors | Chemical risk management Chemical incident management – Regulators, industries, transporters | Chemical risk management Chemical incident management – Regulators, industries, transporters |
| Chemical safety – industries, informal sectors, inspectors | | |
| Disaster management (Mass causality management, Basic first aid, incident management) – Community leaders on risk areas, Police, firemen, medical (paramedics & medical responders), Voluntary organizations (Red cross, etc), media | Disaster risk management (Disaster response, preparedness, Paramedics) – Police, transporters, Selected industries of high risk, Ports | Disaster science – To be incorporated in higher learning institutions, local and international experts |
| Awareness campaign on chemicals safety & disaster management | Awareness campaign on chemicals safety & disaster management | Awareness campaign on chemicals safety & disaster management |
| Chemical waste management after accident – Regulators (NEMC, GCLA, Ministry of Health, Industries) | Chemical waste management after accident | Chemical waste management after accident |

## CLOSING CEREMONY

### UNEP ROA REMARKS

In the closing remarks to conclude the CAPP-TZ Inception Workshop, the UNEP ROA Mr. Patrick Mwesigye commended on the participation and contribution of stakeholders during the two days. He thereafter pointed out the commitment of UNEP towards successful implementation of the CAPP-TZ Project and Programme. He informed that, UNEP is ready and committed to work with all national and international stakeholders and that, Ms. Sanja Ursanic as UNEP CAPP-TZ project coordinator and Ms. Clara Makenya at UNEP local office will facilitate the coordination of all respective issues related to UNEP roles in the project. Mr. Mwesigye concluded his remarks by expressing his gratitude to all participants for their time and positive contribution to enable take-off of CAPP-TZ project and thereafter programme.

### CLOSING SPEECH

Prof. Samwel Manyele, the Chief Government Chemist and national CAPP-TZ project coordinator gave the official closing of the workshop. In his speech, Prof. Manyele noted the good attendance of different experts from various fields in chemicals management

and control at national and international level. He further pointed out that, the good participation reflects the commitment of stakeholders towards implementation of the CAPP-TZ project and the CAPP – TZ Programme to ensure that risks of chemicals to health and the environment are adequately minimized. It also reflects the potential for working together for furthering the goal of CAPP-TZ beyond the project period so as to attain its intended goals.

Before official closing, Prof. Manyele on behalf of the Minister for Health and Social Welfare extended his warm congratulations for the successful completion of the CAPP-TZ Inception Workshop. He also pointed out that, Tanzania as the growing developing country, is committed to implement successfully the CAPP-TZ Project and thereafter the CAPP Programme which will lead to effectively implementation of the Industrial and Consumers Chemical (Management and Control) no.3 of 2003, Multilateral Environmental Agreements and SAICM.

In concluding his speech, Prof. Manyele pointed out his appreciation to all participants for the positive participation and contribution during the two days. He commended the work done by all participants and trusted that, the spirit of commitment, innovation and team work will prevail throughout during and beyond the project. He then thanked the Deputy Minister for Health and Social Welfare and the Acting Permanent Secretary for their valued time they shared during the opening. He also thanked UNEP, Swiss Embassy and FOEN and other international experts for the technical and financial support to enable successful hosting of the two valuable days. Before announcing the official closure of the workshop, he thanked Chief Executive Officers and members of the GCLA Ministerial Advisory Board for their full participation during the two days.

## MAIN FINDINGS

The main findings of the Inception workshop are:

- the legal background for the management of chemical hazards is given by various Policies, Legislations, Regulations, Guidelines and Procedures for chemicals management
    - there are two key Legislation, i.e. the Industrial and Consumer Chemicals (Management and Control) Act no. 3 of 2003 and the Environment Management Act no. 20 of 2004;
    - Occupational safety is mainly covered by the Safety and Health Act no.5 of 2003 (e.g. safety implementations);
    - However, there is the obvious need to strengthen capacity for implementation of chemical awareness and preparedness, mainly regarding the issue of capacity building for chemical risk reduction;
    - and there is no comprehensive policy for CAPP.

- there is a lot of organisational competence in the field of chemical hazard prevention:
  - in relevant governmental institutions (GCLA, etc.), in societal organisations (e.g. trade unions) and in companies (e.g. in the field of transportation and mining/gas/oil exploration);
  - several independent activities and (local/regional/sectoral) programs and projects were conducted, organised by different stakeholders, aiming at different outcomes, but all with respect to chemical safety issue;
  - on governmental level (and probably also on industrial and commercial level) are many relevant data about dangerous goods and dangerous facilities (e.g. import/export data, etc.) achievable.
- but, there is a lack
  - of manpower in the governmental organisations;
  - of possibilities to administer the necessary activities (e.g. out in the country, etc.);
  - of deep interaction with other organisations and companies, leading to a very sectoral view of the problem of chemical hazard management. There is almost no interaction between different stakeholders; they sometimes even do not know each other;
  - of knowledge about the relevant stakeholders in the field of chemical hazard management;
  - furthermore, there is a lack of methodological and technical competence in the field (e.g. for the chemical inspectors) to control and check dangerous facilities.
- in the further steps of the CAPP-TZ-project has to stress
  - the preparation of the group work results as core elements of the country situation report;
  - the interaction of the different stakeholders;
  - the management and administration of the existing dangerous sites, etc.; i.e.;
  - the training of the GCLA-staff in the headquarter in collecting, interpreting/analyzing and working on relevant data;
  - the training of the GCLA-chemical inspectors in visiting and assessing dangerous sites and reporting their findings to the headquarter in a appropriate manner.

## FURTHER STEPS in CAPP-TZ Project

Based on our impressions of the Inception Workshop, we would like to propose the following proposal for some further CAPP-TZ-steps:

- with regard to the first training session (currently planned for January 2014) it seems reasonable to early start the preparation of possible and meaningful planning; i.e. as soon as possible;
- topics of the first training session targeted on the GCLA staff and Task Force members could be:
    - assessment of companies dealing with chemicals (for the chemical field inspectors)
    - detailed definition of chemicals hazards, incl. a detailed evaluation of the (possibly) relevant acts (ICCA, OSHA) and their scope of responsibility regarding chemical accidents: for what kind of accident are these two acts relevant:
        - ICCA: medium/large events, outreaching the respective site area, affecting the residential area/environment around
        - OSHA: small events, e.g. small incidents (e.g. in a laboratory, etc.), not outreaching the respective site area -> work safety occupational health
- building up an online training/discussion platform (complementing the already existing share point platform of FOEN):
    - to interact regularly on a “regular’s table”-kind of discussion with the GCLA-staff;
    - to prepare the training session with the task force, respectively the GCLA-headquarter team via online preparation work;
    - to integrate the field inspector in such preparatory work;
    - to gather/facilitate first experiences of/for the field inspectors/GCLA headquarter;

# APPENDICES

## Appendix I

**CHEMICAL ACCIDENT PREVENTION AND PREPAREDNESS PROGRAMME FOR TANZANIA (CAPP-TZ)**

**NATIONAL INCEPTION WORKSHOP: LIST OF PARTICIPANTS**

| S/N | NAME | INSTITUTION | E-MAIL ADDRESS |
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**Appendix II**

**CHEMICAL ACCIDENT PREVENTION AND PREPAREDNESS PROGRAMME FOR TANZANIA (CAPP-TZ)**

**NATIONAL INCEPTION WORKSHOP 31 July - 1 August 2013**

**Agenda**

**1st day: 31 July 2013**

| | | |
|---|---|---|
| 09:00 – 09:30 | Registration | |
| 09:30 – 11:00 | 1. Welcome remarks | Prof. S. V. Manyele – CGC, Government Chemist Laboratory Agency |
| | 2. Arrival of a Guest of Honour | Dr. Donald Mbando, Ag. Permanent Secretary, Ministry of Health and Social Welfare, Chairman of the opening ceremony |
| | 3. Opening Remarks<br>- Regional SAICM Focal Point<br>- Swiss Cooperation Office, Tanzania<br>- UNEP ROA | Prof. Jamidu Katima<br>Ms. Géraldine Zeuner, Director, Development Cooperation<br>Mr. Patrick Mwesigye, UNEP ROA |
| | 4. Welcoming Speech | Dr. Donald Mbando, Act. Permanent Secretary, Ministry of Health and Social Welfare, Chairman of the opening ceremony |
| | 5. Opening Speech | |

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| | 6. Vote of Thanks | Mr. Seif S. Rashid, Deputy Minister for Health and Social Welfare<br><br>Prof. David Ngassapa, Chairman, GCLA Ministerial Advisory Board |
| 11:00 – 11:10 | Group photo | |
| 11:10 – 11:40 | Coffee/Tea Break | |
| 11:40 – 12:00 | Overview of the Inception Workshop | Mr. Patrick Mwesigye, UNEP ROA |
| 12:00 – 12:20 | Overview of industry and commerce in the context of CAPP | Dr. Kannan Mangat, Berger Paints International ltd, Confederation of Tanzanian Industry (CTI) |
| 12:20 – 12:45 | Chemicals transportation and infrastructure in the context of CAPP | Mr. Iain Turner, Freight Forwarders Tanzania |
| 12:45 – 13:30 | Tanzanian approach to chemicals accident management<br>Management of Chemical Transportation in Tanzania | Prof. S. V. Manyele, CGC, GCLA |
| 13:30 – 14:30 | Lunch Break | |
| 14:30– 15:00 | Introduction to chemical accidents | Mr. Thomas Plattner, International Technical Support Partner, Switzerland |
| 15:00 - 15:30 | Benefits of improved chemical accident prevention and preparedness | Mr. Luciano Fabbri, Senior Expert, MAHB, EC |
| 15:30 – 15:45 | Coffee/Tea Break | |
| 15:45 - 16:45 | Institutional and legal frameworks related to chemical accidents globally<br><br>CAPP in Switzerland | Mr. Luciano Fabbri, Senior Expert, MAHB, EC<br><br>Mr. Daniel Bonomi, International Technical Support Partner, Switzerland |
| 16:45 – 17:30 | Plenary discussion<br>Setting the scene for the second day | Facilitator:<br>Prof. Samwel V. Manyele |
| End of Day 1 | | |

**2nd day: 1 August 2013**

| | | |
|---|---|---|
| 8:00 – 8:30 | Registration | |
| 8:30 – 8:50 | UNEP's Flexible Framework Initiative for Addressing Chemical Accident Prevention and Preparedness | Ms. Sanja Ursanic, CAPP-TZ Project coordinator, UNEP |
| 8:50 – 9:15 | CAPP-TZ Project Implementation | Ms. Josephine Kalima, GCLA |
| 9:15 – 10:00 | Present situation and experience on chemical accident prevention and preparedness in Kenya *(TBC)*<br><br>Overview of chemicals regulatory framework in Kenya | Mr. Francis N. Kihumba, Chemicals and Wastes Expert, Ministry of Environment and Mineral Resources of Kenya<br><br>Mr. Dickson M. Njora, Principal Compliance and Enforcement Officer, National Environmental Management Authority (NEMA) of Kenya |
| 10:00 – 10:45 | Video Conference on Regional experience:<br>CAPP Project in West Africa: Mali and Senegal (CAPP-WA) | Mr. Franck Prats, CAPP-WA technical support expert, INERIS, France<br>Ms. Johanna Suikkanen, UNEP |
| 10:45– 11:00 | Coffee/Tea Break | |
| 11:00 – 12:30 | Group Work 1:<br>Current situation on chemical accident prevention and preparedness in Tanzania | Facilitators:<br>International experts |
| 12:30 – 13:30 | Lunch Break | |
| 13:30 – 15:00 | Group Work 2:<br>Way forward to implement the CAPP-TZ Project | Facilitators:<br>International experts |
| 15:00 – 15:15 | Coffee/Tea Break | |
| 15:15 – 16:30 | Discussion on way forward and future activities | Facilitators:<br>Prof. Samwel V. Manyele |
| 16:30 – 17:00 | Closing Ceremony | |
| End of Workshop | | |

**Appendix III:**

**ADDITIONAL QUESTIONS / ISSUES FOR CAPP TZ**

Qn. 1: Do drivers need specialized training? What kind of training? What is the existing capacity in the country to conduct such training?

Qn. 2: You have registered the chemical dealers; do you also regulate the harvesting of hazardous chemicals, like Uranium?

Qn. 3: How do you deal with the porous routes across the wide border of Tanzania with other countries?

Qn. 4: How do you handle the contaminated site in the event of chemical accidents?

Qn. 5: Which awareness raising methods can be used in the Tanzanian context?

Qn. 6: How can negligence and irresponsibility among key players be addressed in the CAPP – TZ context?

Qn. 7: What procedures can be used to address the health and safety issues related to cyanide use among small scale miners?

Qn. 8: In your opinion are the Government efforts good enough regarding chemicals management? If not what are the missing links?

Qn. 9: What is the extent of illegal importation of chemicals in Tanzania?

Qn. 10: How is GCLA involving other stakeholders like the Tanzania Revenue Authority in managing importation of dangerous chemicals?

Qn.11: Why are most of the accidents not reported? What should be done?

Qn. 12: How can chemical waste from industry be properly managed? Are there any plans by GCLA on this matter?