RESEARCH FINDINGS DISSEMINATION REPORT

NATIONAL LEVEL STAKEHOLDERS MEETING ON MINING INDUSTRY COMPLIANCE TO SOCIAL AND ENVIRONMENTAL SAFEGUARDS IN UGANDA

29th August 2017

Hotel Africana

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**ABBREVIATIONS AND SYNONYMS**

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<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AMV</td>
<td>Africa Mining Vision</td>
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<td>ASGM</td>
<td>Artisanal and Small scale Gold Miners</td>
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<td>ASM</td>
<td>Artisanal, Small- and Medium-Scale Mining</td>
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<td>CNOOC</td>
<td>Chinese National Offshore Oil Corporation</td>
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<td>CSCO</td>
<td>Civil Society Coalition on Oil and Gas</td>
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<td>CSOs</td>
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<td>CSOs:</td>
<td>Civil Society Organizations</td>
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<td>DWD</td>
<td>Directorate of Water Development</td>
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<td>EAC</td>
<td>East African Community</td>
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<td>EIA</td>
<td>Environmental Impact Assessments</td>
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<td>FOSI</td>
<td>Foundation Open Society Institute</td>
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<td>FPIC</td>
<td>Free, Prior, Informed Consent</td>
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<td>ILO</td>
<td>International Labour Organisation</td>
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<td>IOC</td>
<td>International Oil Company</td>
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<td>MAAIF</td>
<td>Ministry of Agriculture, Animal Industry and Fisheries</td>
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<td>MEMD:</td>
<td>Ministry of Energy Mineral Development</td>
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<td>MEMD:</td>
<td>Ministry of Energy and Mineral Development</td>
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<td>MFPE</td>
<td>Ministry of Finance, Planning and Economic Development</td>
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<td>MNCs</td>
<td>Multinational Corporations</td>
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<td>MoLG</td>
<td>Ministry of Local Government</td>
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<td>MoLHUD:</td>
<td>Ministry of Lands, Housing and Urban Development</td>
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<td>MWE</td>
<td>Ministry of Water and Environment</td>
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<td>NEA</td>
<td>National Environment Management Act</td>
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<td>National Environment Management Policy</td>
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<td>National Forestry Authority</td>
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<td>National Oil and Gas Policy</td>
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<td>OSIEA</td>
<td>Open Society Institute for East Africa</td>
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<td>PA</td>
<td>Petroleum Authority</td>
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<td>PAPs:</td>
<td>Project Affected Persons</td>
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<td>PCR:</td>
<td>Protection of Physical Cultural Resources</td>
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<td>PEPD</td>
<td>Petroleum Exploration and Production Department</td>
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<td>PRMP</td>
<td>Petroleum Revenue Management Policy</td>
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<td>PSA</td>
<td>Production Sharing Agreement</td>
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<td>SEA</td>
<td>Strategic Environment Assessment</td>
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<td>UIIRI</td>
<td>Uganda Industrial Research Institute</td>
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<td>UNBS:</td>
<td>Uganda National Bureau of Standards</td>
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<td>UWA</td>
<td>Uganda Wildlife Authority</td>
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<td>WB</td>
<td>World Bank</td>
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<td>Water Governance Institute</td>
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<td>WMD:</td>
<td>Wetlands Management Division</td>
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ACKNOWLEDGEMENT

Water Governance Institute (WGI) appreciates the views and contribution of the Artisans, Small- and Medium-scale Gold miners of Mubende, Moroto and Nakapiripit districts for sparing their valuable time to talk to the WGI research team during field survey.

Special thanks go to the consultants Mr. Paul Kiggala of Uganda Industrial Research Institute (UIRI) and Mr. Siragi Magara for their undertaking the laboratory analysis of the soils and water samples taken from the mining sites and reviewing the policy legal and institutional frameworks that offer social and environmental safeguards, respectively. Their roles helped us understand more the social and environmental safeguards enshrined in the national and international policies, protocol, conventions, treaties and agreements and how they relate with pollution.

WGI appreciates the collaboration and contribution of staff of Transparency International during the data collection on the impact of chemicals used in Gold mining on water and land.

WGI appreciate the contributions and participations in this research from officials of the Ministry of Energy and Mineral Development. In particular special thanks go to the Minister of State for Minerals Honourable Peter Lokeris for having officiated at this meeting.

WGI appreciates the services and contribution of its staff, without whom it would be impossible for the organisation to realise such milestones.

Finally, special thanks go to the Foundation Open Society Institute (FOSI) and the Open Society Institute for East Africa (OSIEA) for the financial support that made all this work possible and we look forward to a continued working relationship for the betterment of lives in Uganda.
EXECUTIVE SUMMARY

Uganda is endowed with vast potential of mineral resources including minerals such as gold, tin, tungsten, copper, limestone and marble. Over the last decade, Uganda has witnessed a steady growth of the mining sector with the total value of production estimated at 48.7 million dollars in 2014 alone. Across the country, the Artisanal and Small-scale Mining produces more than 90 percent of metallic, industrial and building minerals and provides livelihoods to almost 200,000 individuals – indicating that the mining industry presents significant economic opportunities. However, if poorly managed the sector could present significant negative social, economic, environmental and political effects/impacts. Recognizing this, Water Governance Institute designed a two-year research project to assess mining industry’s compliance to social and environmental safeguards as a measure of how well the sector was being governed. This research was funded by a generous grant from Foundation Open Society Institute (FOSI) in collaboration with Open Society Institute for East Africa (OSIEA).

The research included the need to disseminate research findings to stakeholders engaged during the project at local government and central government levels. This is a report on the dissemination of research findings to national level stakeholders that included officials of the Ministry of Water and Environment (MWE); Ministry of Energy and Mineral Development (MEMD); and the Ministry of Finance, Planning and Economic Development (MFPED).

Research found that Multinational Corporations in the oil and gas sector tended to comply with the social and environmental safeguards, albeit to a limited extent in some cases. Artisan, Small-scale miners did not comply with the safeguards because they either were not aware of the safeguards or they deliberately ignored them.

There are varying levels of Mercury and Cyanide pollution in soils and water among the Gold mining communities in Moroto, Nakapiripit and Mubende districts, which are posing health risks. Mercury gains access in the country illegally.

There is need to regulate Mercury import, movement and use in the country. Also, it will be important to undertake bio-monitoring studies to assess the impact of Mercury Oxide and Cyanide on human health.
INTRODUCTION

WGI implemented a 2-year (2015 – 2017) project on “Promoting Mining Industry Compliance to Social and Environmental Safeguards in Uganda”, funded by Foundation Open Society Institute (FOSI) and Open Society Institute for East Africa (OSIEA).

The main objective of the project is to promote social and environmental safeguards amidst mineral development. The 2-year project was implemented in the districts of Hoima, Mubende and Moroto. The project comprised of two broad components i.e. one to evaluate existing policy, legal and institutional frameworks’ ability to deliver safeguards and benefits to society, the economy, the environment and politics of local communities and the country as a whole. The second component involved testing the levels of Mercury, Cyanide, Arsenic, Aluminium and Lead pollution in soils and water in proximity to mining operations to determine the potential risks this could have on the people directly and indirectly involved in mining operations and those living in proximity to mining areas including the surrounding biodiversity. The project was premised on a number of aspirations and expected best practices in mining including the “need for a clean and healthy environment for people”; and “the need to promote development that does not disenfranchise the affected people” that are enshrined Africa Mining Vision 2040; World Health Organisation (WHO) standards; Uganda Constitution, the National Development Plan II, among other national and international agreements and protocols that require strategic utilization on natural resources for the benefit of all without abusing the environment.

It was on the basis of the above development ideals that this project was designed to assess the levels of mining industry compliance to social and environmental safeguards and to determine whether there are, indeed, cases of violations or policy-legal implementation challenges that need to be addressed going forward.

Rationale

Uganda is endowed with vast potential of mineral resources including minerals such as gold, tin, tungsten, copper, limestone and marble. This mineral wealth is captured in the country’s economic blueprint “Vision 2040” as a driver of growth and development. Over the last couple of years, Uganda has witnessed a steady growth of the mining sector with the total value of production projected at 48.7 million dollars in 2014 alone. Across the country, the Artisanal and Small-scale Mining produces more than 90 percent of metallic, industrial and building minerals and provides livelihoods to almost 200,000 individuals. Therefore, the mining industry presents huge opportunities of spurring economic growth, employment and development.

However, mining operations have the potential to fuel human rights and environmental violations, if not properly governed. For example, during the field visits conducted, WGI discovered several abandoned and gapping mine shafts/pits in Mubende, Moroto and Nakapiripit, which pose significant risks to humans and wildlife and leave the environment badly gouged (up to 4m deep gold mine pits dot the area). Such areas should undergo a clear decommissioning plan that will restore the abandoned mining areas to approximately its

1. Nakapiripit District was included to compare and contrast data obtained from Moroto
2. Persons involved in or affected by mining activities, host-communities living in and within proximity to mining operations, etc.
3. National revenue pool derived from mining
4. Biodiversity and ecosystem services
original state. There were also visible signs of possible pollution that needed to be verified – a reason why soil and water samples were taken for laboratory analyses.

The lab results revealed Mercury and Cyanide pollution levels up to ten times the NEMA and WHO permissible levels in soils and up to 30 times in water in Mubende. This is a serious risk that needs to be addressed – a reason why WGI a stakeholders meeting to inform central government officials so that appropriate responses/ actions could be undertaken by the relevant authorities. The meeting was also informed by the numerous community meetings conducted in the target districts.

**Objective of the Stakeholder Meeting**
Disseminate research findings to stakeholders to trigger appropriate responses/ remedial actions.

**Target Participants**
Central Government Officials in the relevant Ministries, Departments and Agencies (MDAs) Civil Society Organisations (NGOs and CBOs) operating in the localities and area of interest

**Expected outcome**
- Participants aware of the levels of mining industry compliance to social and environmental safeguards;
- Participants aware of the pollution risks associated with the mining activities and drawing strategies to avoid and/or mitigate the risks
- Policy and regulatory mechanisms updated to strengthen mining industry compliance to social and environmental safeguards, including regulation of the importation, transportation and handling of hazardous chemicals and mining waste materials.
MEETING PROCEEDINGS

Official opening remarks and keynote address- Hon. Peter Lokeris, Minister of State for Minerals in the Ministry of Energy and Mineral Development

The state minister of state for Energy and Minerals warmly welcomed the participants to the stakeholders meeting on mining industry compliance to social and environmental safeguards in Uganda. He informed the participants that the Ministry of Energy and Mineral Development (MEMD) is aware WGI has conducted a research on assessing mining industry compliance to Uganda’s social and environmental policies and legislation and further conducted soil and water tests to analyse pollution arising from use of mercury oxide and cyanide in the gold mining industry.

He commended this unique intervention by WGI to undertake scientific research to analyse the pollution effects of mining industrial processes on society and the environment. The minister then encouraged other Non-Governmental Organisations (NGO’s) within similar interest to expand their work in this area.

Honourable Peter Lokeris informed the participants that the oil and mining sectors are taking centre stage in driving and growing many African economies where Uganda is not exceptional. Therefore as government of Uganda they are mindful of these developments and have taken deliberate actions to put in place a conducive environment that will allow Uganda’s oil and gas sectors to emerge and grow.
The 2008 oil and gas policy and associated legislations is in place while environment policy, mining policy 2003 and legislation are currently in the process of being revised with robust institutions already put in place to guide the development of these sectors while committing funds to build the capacity of Ugandans to provide technical skills and services to these emerging sectors. Government is mindful that as these sectors emerge they pose significant social, economic, environmental and political risk and so the country is positioning itself to ensure the mitigation of potential risks.

He appreciated and recognised the work NGO’s are doing in these emerging sectors such as raising awareness on human rights and social protection, economic significances of the sector and the potential environmental risks. He noted that Mercury oxide is a big problem with significant health problems in mining, noting the need to take caution on how some of these chemicals are being used in Uganda. He applauded the contribution of the research to government oversight functions and to the work of NEMA in monitoring the pollution effects of mining.

Presentation on a Policy Paper on the Social and Environmental Safeguards in Uganda-
Mr Henry Bazira-Executive Director-WGI

The presentation covered the Introduction, research Methodology and approach, Social Safeguard Policies and Laws, Environmental Safeguard Policies and Laws, Compliance to Social Safeguards, Compliance to Environmental Safeguards.

The research involved a review of Uganda’s policies, laws and institutional mechanisms to identify the social and environmental safeguards enshrined there in that need to be complied with by oil and mining companies, including international frameworks

An assessment of the chemicals used or found in mining operations’ effects/impacts on people/society and the environment. Particular focus was on Mercury Oxide and Cyanide used in Gold mining operations and Aluminum, Lead and Arsenic that may be associated or found in mining operations. This particular assessment analyzed pollution levels of these chemicals in soils and water within and in proximity to Gold mining operations.

The research focused on oil in Hoima and Gold mining in Mubende and Moroto districts. Nakapiripit district was included in the study to provide a comparative analysis of Gold mining in Moroto and Mubende.

The research involved a desk (literature) review of Uganda’s policies and legislation that provide social and environmental safeguards. This was also analyzed alongside international industry best practice, conventions, protocols and treaties/agreements.

Field surveys were conducted that included taking soil and water samples from mining sites for analysis in the laboratory. Uganda Industrial Research Institute (UIRI) laboratories conducted the soil and water analysis

Social Safeguard Policies & Laws

National and international social safeguards cover but not limited to Security of person and property (Social Protection), Right to hold property, Employment Opportunities, health, education, respect of human rights, Compensation and Resettlement of PAPs, Rehabilitation of PAPs; Economic development and Benefit sharing, Physical Planning
Environmental Safeguard Policies & Laws

National and International Safeguards ensure: A clean and healthy environment; Sets standards for compliance, Polluter Pays Principle and is responsible for the clean-up, Integrity and Sanctity of Biodiversity especially the threatened and endangered species, Sustainability of ecosystem services, Sustainable utilization of natural resources, Decommissioning of projects/ interventions and restoration of the environment to as close to original as possible.

Social Safeguards Complied with by Oil and Mining Companies in Uganda

Usually
- Security of person and property (Social Protection), especially for company staff
- Employment Opportunities
- Health, especially for company staff
- Safety

Occasionally
- Right to hold property
- Health: MNC may provide health services and infrastructure to mining affected people. This rarely happens with ASMs
- Education: A few members of the community may benefit from training programs supported by oil and mining companies;
- Respect of human rights: sometimes PAPs are violently evicted from their lands
- Compensation and Resettlement of PAPs: Often inadequate to restore PAPs lives and livelihoods
- Rehabilitation of PAPs: No evidence yet by Oil & Mining Companies in Uganda. Isolated interventions by NGOs. PAPs rehabilitation Just being introduced in policy & law
- Economic Development and Benefit sharing
- Physical Planning

Environmental Safeguards Complied with by Oil and Mining Companies in Uganda

Usually

Apart from the current Oil Companies that attempt to comply with the environmental safeguards, albeit to a limited standard, no mining company was found to reach the standards set by the safeguards
Occasionally

- A clean and healthy environment;
- Set standards for compliance;
- Polluter Pays Principle and is responsible for the clean-up;
- Integrity and Sanctity of Biodiversity, especially the threatened and endangered species;
- Sustainability of ecosystem services;
- Sustainable utilization of natural resources;
- Decommissioning of projects/ interventions and restoration of the environment to as close to original as possible.

Social Safeguards Not Complied with or Violated by Oil and Mining Companies

Safeguard Not Complied With

- Right to hold property:
- Respect of human rights:
- Compensation and Resettlement of PAPs:
- Employment:
- Economic Development and Benefit Sharing
- Physical Panning

The research findings showed that National and international companies tended to grab project-affected peoples’ PAPs land using cronies and associates to bend the law or cajole or hoodwink landowners to giving-up their land. Occasionally PAPs are violently evicted from their lands yet compensation and resettlement is inadequate to restore PAPs lives and livelihoods. “Ugandans not being put at the center of development”

IOCs were accused of secretively influencing government officials. The case in point is the then Minister of Finance Hon. Syda Bbumba’s signing of PSAs in 2010 that had a clause that barred Uganda to charge Capital Gains Tax on transfer of interests and assets.

Miners working without safety gear especially among ASMs thus compounding the likelihood of poisoning of Miners by chemicals used or associated with the mining operations.

Environmental Safeguards Not Complied with or Violated by Oil and Mining Companies

Safeguards Not Complied With

These include but not limited to:

A clean and healthy environment, Set standards for compliance, Polluter Pays Principle and is responsible for the clean-up, Integrity and Sanctity of Biodiversity especially the threatened
and endangered species, Sustainability of ecosystem services, Sustainable utilization of natural resources, Decommissioning of projects/ interventions and restoration of the environment to as close to original as possible.

Research Findings

International Oil Companies (IOCs) in Uganda were faulted for not disclosing EIAs for public scrutiny, including the PSAs. Access to IOC operating areas to undertake similar third-party studies is restricted/ silently prohibited and IOCs routinely test soils and water for pollution but these results are not disclosed publicly.

Mining companies and individuals, especially ASMs do not meet any of these safeguards/ set standards

Some youth exhibiting symptoms that could be associated with Cyanide and/or Mercury Poisoning

Conclusions

- International Oil Companies are complying to social and environmental safeguards to some extent
- Compensation and Resettlement is not a sufficient model for livelihood restoration or improvement
- Many mining companies and individuals either are not aware of the safeguards or they have deliberately chosen to ignore them;
- There is great likelihood of human poisoning arising from the chemicals used or associated to mining operations

Recommendations

- IOCs need to do better
- Ugandans welfare needs to be central to development. For example, landowners could instead offer their land as capital in the investments
- Government needs to enforce the safeguards
- Need to sensitize miners and local government officials on the risks of chemicals used in Mining Operations

Presentation on the Pollution Levels in Soil and Water in Gold Mining areas of Moroto, Nakapiripit and Mubende districts-Mr Paul Kiggala- Consultant
WGI requested the Minerals and Materials Division under the Product Development Department at Uganda Industrial Research Institute (UIRI) to undertake laboratory tests on soils and water samples within and in proximity to Artisan and Small-scale Gold Mining areas in Moroto, Nakapiripit, and Mubende
The research involved an assessment of the chemicals used or found in mining operations’ effects/impacts on people/society and the environment. Particular focus was on Mercury Oxide and Cyanide used in Gold mining operations and Aluminum, Lead and Arsenic that may be associated or found in mining operations. This particular assessment analyzed pollution levels of these chemicals in soils and water within and in proximity to Gold mining operations.

The research focused on Gold mining in Mubende and Moroto districts. Nakapiripit district was included in the study to provide a comparative analysis of Gold mining in Moroto and Mubende. Field surveys were conducted that included taking soil and water samples from mining sites for analysis in the laboratory. Uganda Industries’ Research Institute (UIRI) laboratories conducted the soil and water analysis.

Soil samples were taken horizontally and along the slope to measure flow effects/impacts.

Water samples were taken at the stream edges and centers to obtain an aggregated sample.

**Water tests:** There were no major chemical risks registered at sites visited in Moroto and Nakapiripit since the figures were below the NEMA and WHO permissible limits. The Aluminum present can also be associated with the wear and tear of some of the equipment in use i.e. pans, cans, balls, etc.

Mercury Oxide and Cyanide risks in soils in Mubende. Aluminum risks majorly caused by wear and tear of equipment used.

**Conclusions**

- Chemical pollution at various levels is occurring at different ASMs sites, especially Gold mining sites.
- Mercury and Cyanide present a significant social and environmental risk among artisan and small-scale miners in Uganda.
- Arsenic poisoning and pollution was not detected in the analysis.
- Lead was slightly below the NEMA and WHO permissible levels at some locations, suggesting that it could become a risk.
- The high Aluminum registered was as result of wear and tear of equipment during the crushing and panning of tailing to prepare them for Gold extraction.

**Recommendations**

- Regulate the importation, use and handling of Cyanide and Mercury Oxide used in Gold Mining.
- Borax could be an option to Cyanide and Mercury Oxide. Studies have been made in other countries e.g. Philippines to support this.
- Use closed-loop water recycling systems to avoid chemical spillage into the environment.
- Use a wet-gold extraction all through to control dust pollution.
- Government needs to enforce the safeguards.
• Make protective gear mandatory among ASMs

Ms Anne Nakafero of NEMA (standing) making presentation to Meeting Participants

Presentation on NEMA’s efforts towards controlling and regulating mercury pollution from the gold mining industry - Ms. Anne Nakafero -NEMA

The presentation covered; overview of the Minamata Convention; current government efforts to regulate the use of mercury and mercury in products and progress towards ratification.

In 2009, the UNEP Governing Council agreed to establish an Intergovernmental Negotiating Committee (INC) to prepare a legally binding international agreement and beginning the process resulting in the Minamata Convention on Mercury. Negotiations commenced in 2010 and took place over five INC meetings.

Following the conclusion of the negotiations, the text was formally adopted and opened for signature at a Diplomatic Conference (Conference of Plenipotentiaries), held in Kumamoto, Japan, from 10th to 11th October 2013. Uganda became a signatory to the Minamata Convention in 2013.

The objective of the Minamata Convention on Mercury is “to protect human health and the environment from the anthropogenic emissions and releases of mercury and mercury compounds.

The areas that the Convention covers include mercury supply sources and trade; mercury-added products; manufacturing processes in which mercury or mercury compounds are used; Artisanal and small-scale gold mining (ASGM); emissions (to air); releases (to land and water); environmentally sound interim storage of mercury, other than mercury waste; Mercury wastes;
contaminated sites; and health aspects. A process for evaluating the effectiveness of the Convention is also included.

The Convention contains obligations related to reporting, where each Party is bound to report on the measures it has taken to implement the provisions of the Convention, the effectiveness of these measures, and the possible challenges in meeting the objectives of the Convention.

The Minamata Convention in its Article 3, seeks to reduce global mercury pollution through complementary measures to minimize mercury supply and demand.

Progress made by government towards reductions of mercury releases and emissions

The National Environment Management Authority (NEMA) on behalf of Uganda is implementing a project entitled “Development of Minamata Convention on Mercury Initial Assessments (MIAs) in Africa” where studies relating to national infrastructure and capacity for the management of mercury, including national legislation; existing studies and sources of information on mercury and mercury management in Uganda; and mercury inventory development using the UNEP mercury toolkit and strategies to identify and assess mercury contaminated sites were undertaken.

On 19th June 2017, national stakeholders reviewed report. From 20th to 22nd June national stakeholders appraised on communication strategy development and later MIAs communication strategy was drafted on 24th June 2017,

On 4th July 2017, NEMA wrote to MDAs, umbrella CSOs, private sector on sector specific mercury pollution reduction action plans.

Other government interventions
There is Mercury desk in NEMA

The National Environment Management Authority implemented the “East African Dental Amalgam Phase Down Project (EADP)-Phase I” in 2012 in relation to the Minamata Convention on Mercury which identifies and describes measures to be taken to phase down the use of dental amalgam taking into account the Party’s domestic circumstances and relevant international guidance. The project was aimed at increasing national capacity to reduce the need; demand and use of dental amalgam; reducing the releases of dental amalgam wastes to water and land in a measureable; equitable and sustainable manner; increasing adoption and use of standardized guidance, resources and tools to reduce the need, demand and use of dental amalgam; and dispose of dental amalgam waste in an environmentally sound manner. The activities included awareness raising, training of dental health staff, production of dental awareness materials, installation of amalgam separators at demonstration sites (Jubilee dental, Mengo hospital and Mulago hospital), documentation of country dental amalgam trade data and waste management practices among others. The project revealed that there was low adaptability of alternatives to dental restorations to dental amalgam by dentists.

Regional project on the Development of National Action Plans for the Artisanal and Small Scale Gold Mining in Africa since October 2016 is also being implemented with the Objective of developing National Action Plans to reduce the use of mercury and mercury compounds in, and the emissions and releases to the environment of mercury from artisanal and small-scale
gold mining and processing is facilitated by the use of scientific and technical knowledge and tools by national stakeholders in participating countries.

Results of the national mercury releases inventory were shared considering Mercury management a cross cutting issue and entire population being at risk of exposure since mercury releases may be in minute levels but the cumulative effect may cause adverse effects. The analysis of the findings indicated that

- Children (<18 yrs) among miners ranges from 0 to 5%
- Children (<14 yrs) among miners ranges from 0 to 2%.
- Women comprise 25% to 45% of miner population

- A total of 32,146 kg of mercury (Hg) is annually released into the environment

- Air is the biggest receptor of mercury (19926 Hg/kg/y) followed by land (5633 Hg/kg/y) and water (3913 Hg/kg/y);

- 80 Hg/kg/y released as a by-product plus impurities; 2437 Hg/kg/y released as general waste; and 157 Hg/kg/y released in sector specific treatment/disposal

Lessons from mercury inventory
- No bio-monitoring of mercury effects on humans in Uganda has been undertaken
- Expectant mothers, children below 17 years are more at risk
- 25% to 45% of women engage in gold extraction processes
- Mercury at ASGMs is very affordable (USD0.18-0.30)
- National monitoring indicators from MDAS are too broad to adequately inform decision making
- Amalgam of less than 10 g is openly combusted whereas a larger amount may be subjected to retort

Challenges with UNEP toolkit
- Quantities of gold extracted by other methods like cyanide was not captured in the UNEP tool kit
- Intentional use of mercury in products like paints, fungicides, pesticides among others was not provided for in the UNEP toolkit
- Information gaps

Recommendations from Mercury Initial Assessments (MIAs) studies
- Institutional measures (tracking systems, training, equipment)
- Legal measures (formalisation of ASGMs, supply, handling, storage and disposal of mercury waste, discouraging open burning of waste, sorting waste at source)
- Advocacy
- Technological measures (chemical free gold extraction measures)
- Open waste burning and emission factors for Africa
- Build partnerships
- Need for validation of input factors used in L2 toolkit (primary metal production, waste water treatment, products and waste)
- Regional assessment of L2 inventories of MAP
- Strengthen national coordination mechanism to oversee chemicals management including mercury

**Key stakeholders to develop strategies in reducing mercury releases and emissions**

1. Uganda Revenue Authority (strategies to prohibit import or export covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions)

2. Uganda Bureau of Standards (strategies to prohibit manufacture, trade of covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions)

3. Ministry of Health (strategies to phase down use of covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions from excluded MAPs at medical facilities; strategies form medical waste handling and safe disposal and strategies for bio-monitoring of persons exposed to mercury)

4. Ministry of Energy and Mineral Development (strategies to phase out use of covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions from exclude MAPs; enhancing air pollution mitigation measures in manufacturing processes that use fossil fuels and biomass for heat production; strategies to phase down mercury use in ASGM)

5. Ministry of Local Government (strategies to phase down use of mercury at ASGM sites, restoration of mine pits, use of PPEs, phasing down and prohibiting open burning of waste, encouraging sorting of waste at source)

6. Ministry of Trade Industry and cooperatives (phasing down and later prohibiting manufacture and trade of covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions)

7. Kampala Capital City Authority (monitoring trade, use and supply of covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions from excluded MAPs; prohibiting open burning of waste; encouraging sorting of waste at source)

8. Ministry of Education, science, technology and Sports (strategies for phasing down and prohibiting use of covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emission from excluded MAPs in school equipment, facilities including laboratories; promoting ESD in relation to chemicals management)
9. Umbrella of Civil Society Organization (strategies to enhance advocacy for government strategies to phase down and phase out covered MAPs including others that are not listed but deemed hazardous and strategies for reducing emissions from excluded MAPs; promotion of Mercury free methods for gold extraction)

10. Ministry of Finance Planning And Economic Development (strategies to fund sector interventions on phasing out covered MAPs, reducing releases from excluded MAPAs)

Uganda’s roadmap to ratification

The Minamata Convention will come into force on 16th August 2017 which will be 90 days after the ratification of the 50th country. 70 countries have ratified with 29 from Africa.

The first COP is slated for September 2017 thus COP1 opens 24 September closes 29 September and regional meetings will be held from 23 and 24 September 2017.

The Venue for COP1 will be in Geneva, Switzerland.

After 2020, no more importation or exportation of mercury containing products by signatory countries. However, the existing stock can be used after applying for a period of exemption.

Plenary sessions

Mr. Paul Kiggala (Right), Ms Anne Nakafero (center) and Mr. Bazira Henry during plenary Session
Resettlement and compensation model does not lead to improvement in livelihood. It was suggested that Government should allow citizens to offer their land as capital so as to improve livelihoods. Alternatively, people can be given opportunity to convert their land into shares so that they also have shares in the company especially the mining, Oil and Gas industry.

Is there a clear framework for handling mercury (i.e., storage, usage, control) or Government only waiting for the ratification before action? There is no independent frame work to restrict specifically mercury except general laws that restrict hazardous chemicals. All mercury in the country is smuggled until there is specific law that apprehends the culprit. Blanket chemical laws are being used as per now to deal with victims.

Is it fair for big mining companies to push out the locals yet the land is for the people? The challenge is that the Artisanal small and medium miners operate on individual basis however they can form get organized for instance in associations so that they are registered and licensed by NEMA.

Do the miners know or have information about the chemicals used, their impacts? The findings of the report were shared with the local communities who now appreciate the adverse effects of these chemicals.

What is the climate change relatedness to the mining issues? The effects of the mining activities are adverse being that chemicals like mercury are used whose interaction with the air forms mercury oxide which contributes to the depletion of the ozone layer. Further actions in the future to be considered.

Where has Government been all this time when all this mercury related damage is occurring, Government has not been making money/revenue from the mining sector that is why there is an overlap thus little attention paid.

Does NEMA follow up the Environmental Impact Assessments compliances, environmental Audits on mining companies? There are still gaps in the legality and operation of the Artisanal miners in the Ministry of Energy and Mineral Development (MEMD). Informal Artisanal miners who move from one place to another have not been licensed so there is no compliance.

Generally, mining has been informal even the companies that apply to NEMA do that only when they intend to use cyanide although NEMA has been advocating for a free chemical extraction of minerals.
RECOMMENDATIONS
Broader research on mercury related issues should be done to include large and small scale enterprises dealing in mercury related products like cosmetics.

Uganda National Bureau of Standards (UNBS) need to develop and publicly share a Mercury reduction plan, including a plant to check and regulate the Mercury-based ingredients in products on the imported or manufactured in Uganda and those already on the market.

In the future the project could take up human mapping with the help of professional medical personnel so as to assess the impacts of the Amalga.

All mining areas can be mapped so that the recommendations can be pursued for further study.

CLOSING REMARKS BY MR. FRANCIS IWA BOARD MEMBER WGI
In his remarks he commended the Executive Director WGI (Mr. Bazira Henry) for evidence based work on mining, oil and gas industry and called for collective responsibility to mitigate the mercury related issues since pollution is a trans-boundary issue. Francis appreciated the participants for the active involvement in the presentations and plenary sessions.