MINING INDUSTRY’S COMPLIANCE TO SOCIAL AND ENVIRONMENTAL SAFEGUARDS IN UGANDA

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LIST OF ABBREVIATIONS AND SYNONYMS

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

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

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 the national level stakeholder meeting where the research findings were disseminated.

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’s metallic and industrial mineral sector is increasingly becoming important. Following the electro-magnetic mapping of the country’s mineral sector about 10 years ago, the country has been subdivided into a number of mineral exploration blocks displayed on a cadastre map (http://portals.flexicadastre.com/uganda/) that show the current license holders and stage(s) of development of the different licenses. However, before this was done, a lot of mining activity in the country was being done at artisanal, small- and medium-scale levels focusing on selected minerals mainly Gold. Minerals that have been mined at relatively large-scale, include limestone, wolfram and tin.

This project was designed to investigate whether mining companies were or are complying with established social and environmental safeguards enshrined in national and international policies, legislation, protocols, convention, treaties and agreements. The study also investigated whether the mining companies were causing pollution of the environment and therefore affecting human health. This was done by analysing soil and water samples taken from mining sites and sites where the Gold ore is processed to extract the mineral (“hotspots”) and along the slope to assess the effect/impact of drainage on pollution in soil and water.

The study revealed that Uganda has a number of policies, legislations and institutional frameworks that contain social and environmental safeguards. Similarly, the country has ratified about 300 international conventions, treaties and protocols that have contain social and environmental safeguards. Some of the international provisions are legally binding, while others voluntary having a bearing on social, economic, environmental and political dimensions. While the country is bound to all its policies, legal and institutional frameworks, it is only bound to those international protocols, treaties and convention that have a legal implication. This report highlights some of the national and international frameworks that have a bearing on social and environmental safeguards. It is important to note that not all the frameworks were cited in this report, except those of great significance to social and environmental safeguards.

It was observed that multinational corporations in the mineral sector, especially oil and gas in Uganda, attempt to comply with national and international social and environmental safeguards, albeit to a limited extent on some safeguards such as compensation and resettlement; avoidance of forceful evictions of persons affected by their development projects. On environmental issues, MNCs score highly on compliance. It is the artisan, small- and medium-scale (ASMs) actors that tend to ignore or not comply with national and international social and environmental safeguards inadvertently or by deliberately. It is ASMs that were found to cause environmental pollution and to negatively affect the health of the individuals/communities living in or in proximity to mining operations.

The study discovered that there were varying levels of Cyanide and Mercury Oxide pollution in ASM environments, most of which was thirty to 1000 times above the WHO and NEMA permissible standards. While there were signs among humans of possible chemical poisoning, the study did not undertake a bio-assessment of the effects/impacts of pollution on humans. This is a study anticipated in a subsequent research. There was evidence of people using water that was heavily polluted with Cyanide and Mercury Oxide for cleaning purposes. No evidence was found of persons consuming this water. However, this could not be ruled-out since the pollution was detected a few kilometres away from the mining sites, especially in Mubende district.
The research study was initially designed to investigate the impact of the oil and gas industry. However, at the time the research was being conducted no commercial production of oil & gas started. Also, there was reluctance on the part of Oil Companies to disclose soil and water test results and to allow the research team to take soil samples for analysis from selected sites. A study performed under the auspices of the Civil Society Coalition on Oil and Gas (CSCO), to which WGI was associated, revealed this reluctance. Consequently, WGI opted to focus on the mining sector.

In conclusion, the research recommends that Government needs to continuously monitor and report on mining industry compliance to national and international social, economic and environmental safeguards, including bio-monitoring the effects/impacts of chemicals used in mining operations. Government need to regulate the importation, use and handling of Cyanide and Mercury Oxide in Uganda. The current concept and practice of compensating for land and resettling involuntarily displaced persons needs to be revisited to allow for landowners to release their land to investors as equity, with a clear safeguard to avoid unscrupulous investors cheating the landowners through continuous reporting of business losses.
INTRODUCTION

1.1. Background
Uganda is endowed with a vast array of metallic and industrial minerals that have the potential to be developed commercially (Map 1). The country’s mineral sector is essentially underdeveloped and has been exploited at relatively small-scales mostly by artisan miners using rudimentary skills and tools.

![Map 1: Minerals in Uganda. Source: Department of Geology and Mineral Survey of Ministry of Energy Mineral Development](image)

The country’s mining history dates back to the 1920’s when Tin and Tungsten were mined from small deposits in the south-western part of the country. Later in the 1930s, Gold was discovered in what is today Buhewju district in the southwest and Busia district in the southeast. Gold mining in Buhweju was largely confined to alluvial deposits, while that in Busia was being extracted from deeply weathered Archaean greenstone terrain. The Buhweju and Busia deposits were too small to sustain the establishment of large commercial mines. Other gold occurrences were reported in the districts of Moroto (Rupa Sub-county), Busitema, Kisita, Mubende-Kiboga area and the greater Kigezi region. Iron-ore was mined in the greater Kabale region.

Limestone, copper, tin, wolfram and Gold are the minerals that have for some time been exploited for commercial purposes. However, during the 1971-1986 period mining of copper, tin and wolfram was abandoned due to a slump World commodity prices, dilapidation of mines

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2. Comprised of Rukunigiri, Kabale, Kisoro, Kinkinzi and Kanungu
and equipment becoming obsolete. During and after 2004, extraction of minerals resumed and has continued to grow in response to increasing commodity prices.

The increase in commodity prices triggered a number of processes in Uganda including putting in place policies, laws and institutional frameworks to guide and govern the emerging minerals’ sector; and conducting aerial-magnetic geological studies to determine the mineral deposits in the country. The geological studies resulted in the country being divided into various mineral exploration/exploitation blocks some of which are active today (Map 2). For example, Cobalt, Limestone, Pozollana, Syenitic Aggregate are already being commercially exploited. Iron, Gypsum, Lead, Kaolin, Coltan, Gold and Beryllium are being mined at artisanal scales. Government signed agreements with private companies to revive commercial exploitation of copper, Tin and Wolfram.

Map 2: Mineral Cadastre. Source: Department of Geology and Mineral Survey of Ministry of Energy Mineral Development: The shaded (blue) blocks in the map represent the different licenses across the country.

The active mineral exploration and exploitation blocks are currently being accused of violating social and environmental safeguards that is causing negative impacts on project-affected people/communities. In particular, the mining industries are accused of displacing people from their lands without adequate compensation and rehabilitation for the restoration of livelihoods; causing pollution arising from chemicals used in the mineral extraction processes that are indiscriminately dumped into the environment; violation of human rights, among other abuses. It was against these accusations that Water Governance Institute (WGI) designed a research project to evaluate mining industry’s compliance to social, economic, environmental and political safeguards with a view of informing the stakeholders, so as to trigger appropriate responses and remedial actions from the relevant government Ministries, Departments, Agencies and Local Governments (MDA-LGs).

The research project was funded by the Foundation Open Society Institute (FOSI) in collaboration with its counterpart organisation the Open Society Institute for East Africa (OSIEA). The project was based on the following overall objective and specific objectives.
1.2. **Overall objective**
Evaluate petroleum and mining industry compliance to social and environmental safeguards in Uganda.

1.2.1. **Specific objectives**

1.2.1.1. National and international policy, legal and institutional frameworks evaluated in relation to oil, gas and mining industry’s compliance to social and environmental safeguards.

1.2.1.2. Cross-reference soil and water analysis data from a concurrent study to identify pollution violations in relation to regulatory frameworks.

1.2.1.3. Conduct stakeholder engagements to disseminate study findings in order to trigger appropriate responses and remedial actions from the relevant authorities and actors.

1.3. **Scope of the study**
The scope of the study was to evaluate national and international policy, legal and institutional frameworks in relation to the oil, gas and mining industry’s compliance to social and environmental safeguards. It involved a desk review of relevant literature and other secondary data. The study focused on selected petroleum and gold exploration and exploitation areas in Uganda, specifically Hoima, Mubende and Moroto districts. Considering that artisanal and small-scale mining (ASM) dominates the mining sector, the study evaluated the social and environmental conditions under which ASMs operate. Also, considering that commercial exploitation of petroleum in Uganda had not started by the time of conducting the study, the research focused more on the oil industry’s compliance to social and environmental safeguards during the preparatory operations’ for the initiation of petroleum production that include land acquisition; involuntary displacement and resettlement of project-affected people; compensation and explorations.

1.4. **Justification of the Study**
Mining in Uganda has occurred over the last 8 decades under varying governance regimes, dating back from the colonial times. Mining in Uganda is essentially under-developed, but is increasingly exhibiting growing investor interests, due to emerging international demand for metals and rare-earth minerals. Mining has, for a long time, been dominated by artisan and small-scale mining operations that are gradually transforming into medium-to-large scale. However, this mineral sector growth has been guided by legislative frameworks riddled with gaps and implementation challenges. Consequently, the sector has registered negative social and environmental effects/impacts. For example, miners are exposed to hazardous chemicals; mining operations are conducted in total disregard of health and safety requirements and often violate human rights; involuntary displacement of communities, use of archaic and unsafe technology is rife; and operations often result in pollution and loss of biodiversity and habitat, and overall land degradation.

Petroleum is an emerging sector in the country and has attracted significant government and public attention far above that accorded to the mining sector. While the positive and negative social and environmental impacts of petroleum are known Worldwide and vary from region-to-region, they have not become significantly evident in Uganda, a reason why it was important to analyse the kinds of impacts that are arising from this industry in the country.

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3. Nakapiripit District was included during the research to provide an alternative perspective of Moroto district.
It was on this basis that the study was undertaken to evaluate the effectiveness of the legislative frameworks in governing the oil, gas and mining industry; and the industry’s compliance to legislative frameworks and its ability to safeguard society and the environment from harm.

1.5. Limitations to the Study

The study did not do an in-depth discussion of national and international policies, legislations, procedures, conventions or treaties, but tease-out issues related to social and environmental safeguards only. The assumption, and rightly so, was that details of such policies, legislation, procedures, conventions and/or treaties were already available, but what needed to be explicitly explained were the inferences in relation to social and environmental safeguards.

In addition, although analysis of soil and water samples from the oil operational areas in Hoima was an initial component of the research, it was not done because permission was not granted by the relevant authorities for us to obtain samples from sites of interest, so the research team relied heavily on observations instead of empirical laboratory data. The consolation, however, is that while the analysis would have been beneficial in providing insights into the kinds of pollution that was taking place during the exploration stage, greater pollution impact is envisaged during the production phase and this later stage of development would be of greater interest in subsequent work. It was, therefore construed that it was a bit too early to undertake such an analysis on an industry that was still in its nascent stage of development. WGI is committed to continue pursuing opportunities to analyse soil and water samples from oil operational areas once commercial production commences.
2. APPROACH AND METHODOLOGY

The study used the following methods to generate the required information;

2.1. Literature (Desk) review

The study involved desk review of the national and international policies related to social and environmental safeguards and environmental regulations to identify gaps and implementation challenges enshrined therein and provide recommendations for improvement.

It also involved desk review of the draft mining law to identify gaps and implementation challenges enshrined therein and provide recommendations for improvement. In addition, there was a review of draft mining regulations to identify gaps and implementation challenges enshrined therein and provide recommendations for improvement.

2.2. Field Survey

The research team travelled to Hoima and visited the Oil operational area in the Albertine Graben, including Rwamutonga village and Kabaale Refinery Affected Peoples’ resettlement area in Kyakaboga village, Nyakabing parish Buseruka Sub-country, Hoima district. The team conducted interviews with some of the Refinery Project-Affected Persons to seek their views in respect to the resettlement processes. Observations were made at the oil waste-holding and treatment facilities in the region. The data collected through the interviews and observations was used to make inferences as to whether Oil Companies were complying with the regulatory provisions related to land acquisition; compensation and resettlement of project displaced persons and other environmental issues.

The research team later travelled to Mubende, Moroto and Nakapiripit gold mining sites where interviews with selected residents were conducted. In addition, soil and water samples were obtained from selected sites in the mining area and taken for analysis at the Uganda Industries Research Institute (UIRI). The laboratory tested for the presence of Mercury, Cyanide, Lead, Aluminium and Arsenic in the soil and water samples.

Data collected in the field survey and that from the UIRI laboratories was pooled, analysed and inferences drawn from it that provide insights in the impacts of the oil and mining operations on society and the environment.

2.3. Soil and Water Laboratory Data Cross Referenced with a Concurrent Policy Analysis study to identify Pollution Violations in relation to Regulatory Frameworks

Laboratory data obtained in section 2.2 above was used to determine presence and contamination levels of chemicals commonly used in Gold extraction (i.e. Mercury & Cyanide) and those inherent to mining activities. The presence or absence of these chemicals, especially Mercury and Cyanide, provided an indication of their pollution levels in soils and water; the risks exposed to humans, wildlife and the general ecosystem and the mining companies’ compliance to the regulations of avoidance of pollution. Levels of the The samples were well taken by soil and water scientists and moved to Uganda Industrial Research Institute (UIRI) laboratory for a thorough analysis of concentration levels of mercury, cyanide and other chemicals. In other words the study Undertook a review of the chemicals and systems used by private companies/artisan miners in extraction of Gold and the existing (likely) pollution, land and environmental degradation and impact on host communities in Mubende district in line with available policies, legislation and best practice.
2.4. Stakeholder Engagements/Dialogues
Two community-based stakeholder engagements were separately held in Mubende and Moroto, respectively to provide feedback on the research findings. Another national level stakeholder engagement meeting was conducted in Kampala to share research finding with a view of eliciting appropriate responses and remedial actions from relevant government Ministries, Departments and Agencies (MDAs). The stake holders included officials from Ministry of Water and Environment (MoWE), Ministry of Lands, Housing and Urban Development (MoLHUD), Ministry of Energy and Mineral Development (MEMD), Directorate of Geological Surveys and Mines (DGSM), National Environment Management Authority (NEMA), Ministry of Health, World Health Organization (WHO), Members of Parliament (MPs), Oil Companies, Civil Society Organizations (CSOs) representatives, private sector as well as affected members of the general public.
3.0. SAFEGUARDS

A safeguard is a precautionary measure available to an entity that enables it to protect itself or its interest in case of an attack, threat or infringement of an agreement or rights. In law, it is a restraint on trade or economic development to protect communities from development aggression. It is a protection, a defence or precaution against something. In development, it is a policy aimed at ensuring that people and the environment are protected from potential adverse impacts i.e. being able to identify, avoid, and minimize harm to people and the environment. Government of Uganda has therefore put policies and laws to safeguard the people, the environment and associated interests. This chapter analyses such safeguards with a view of assessing oil, gas and mining industry’s compliance with them. It is not the intention of this study to analyse the effectiveness of the safeguards, but where a gap is identified in the context of the oil, gas and mining industry, it will be highlighted.

3.1. Social and Environmental Safeguards

Social and Environmental Safeguards are therefore safeguards intended to protect society and the environment and they are enshrined in policies, legislation, procedures, conventions, treaties/agreements and institutional frameworks at national and international level. It is important to note that such instruments have evolved; been refined and continue to be improved over the years.

Uganda has signed and ratified a number of international protocols, conventions, treaties and agreements aimed at safeguarding trade, investments, society and the environment. The World Bank⁴; African Development Bank⁵ and United Nations⁶ have taken leadership in designing social and environmental safeguard policies and procedures that should be complied with by the member countries. Such policies have been variously applied across various jurisdictions and they tend to be a reflection of one another with minor deviations. In addition, an increasing number of countries are applying safeguards through a range of investment planning, policies and regulations aimed at achieving more sustainable development. Safeguard policies frequently rely on internationally agreed standards and guidance in an effort to avoid duplication of efforts or conflicting requirements for project sponsors. Recently, there are a range of voluntary standards that have been developed to address environmental and social safeguards necessary for specific sectors, commodities, and actors. Poverty reduction, respect of human rights, justice, transparency and accountability are core objectives of these policies, including involuntary resettlement, participation and inclusion of indigenous peoples, forest-dependent people, and retrenched workers, affordability of public services, and environmental integrity and sanctity.

These safeguards may be summarized as follows:

a) Environmental and Social Assessment Safeguard: ensures that projects are environmentally and socially sound and sustainable.

b) Protection of Natural Habitats Safeguard: ensures that biological diversity is conserved and that sustainable use of natural resources is promoted.

c) Involuntary Resettlement Safeguard: ensures that entities do not involuntarily resettle anyone affected by a project and that involuntary resettlement is the last unavoidable option.

d) Indigenous People Safeguard: ensures that projects foster full respect for indigenous people and their dignity, human rights, and cultural uniqueness.

e) Pest Management Safeguard: ensures that environmental and health risks associated with pesticide use are minimized and managed, and that safe, effective, and environmentally sound pest management is promoted and supported.

f) Physical Cultural Resources Safeguard: ensures that entities do not engage in any projects that adversely impact upon physical/cultural resources.

g) Safety of Infrastructure Safeguard: ensures that entities do not engage in harmful large-scale infrastructure investment projects.

h) Information Disclosure Safeguard: ensures that entities’ approach to information disclosure is guided by openness, with the underlying presumption being that any information concerning entities projects is available to the public, in the absence of a compelling reason for confidentiality.

i) Accountability and Grievance System: ensures that entities have a mechanism for dispute resolution and for ensuring accountability and compliance with its environmental and social safeguards.

3.1.1. Social Safeguards

A review of the national and international policies, legislation, regulations, guidelines, protocols, conventions and treaties/agreements reveal that they cover, in broad terms, the following social safeguard issues i.e:

i. Security of person and property (Safety or Social Protection):

ii. Right to hold property;

iii. Employment Opportunities;

iv. Health;

v. Education;

vi. Respect of human rights;

vii. Compensation and Resettlement of PAPs;

viii. Rehabilitation of PAPs;

ix. Economic development and Benefit sharing

x. Physical Planning.

The above social issues are summarized alongside their attended policies, legislation and institutional frameworks in Table 1 below. The Constitution of the Republic of Uganda is the overarching law affecting all the social and environmental issues discussed in this paper.

The good legislative practice requires that a policy is first draft and approved before a law is enacted accompanied by regulations, guidelines and/or standards. However, there are cases in Uganda where this drafting hierarchical procedure is circumvented to have laws together with their attendant regulations and guidelines in force in the absence of a policy. This risks government doing things without clear guidance and benchmark to measure progress, performance and success. For example, Uganda has a UPDF Act 2005, Prisons Act 2006 and Police Act 1994 that was not initially guided by policy. It is only now that government is considering drafting related policies.
<table>
<thead>
<tr>
<th>Social Issue</th>
<th>Relevant Policies</th>
<th>Relevant Legislation</th>
<th>Responsible Institutions/ Party</th>
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| Security of person and property (Social Protection) | ➢ Explicit Policy on Defence, Prisons and Police Lacking  
➢ Uganda Gender Policy (UGP), 2007  
➢ UPDF Act 2005  
➢ Police Act  
➢ Prisons Act 1958  
➢ Prohibition and Prevention of Torture Act (PPTA) 2012  
➢ Control of Aliens Refugees Act 1960  
➢ Extradition Act 1964  
➢ Anti-Pornography Act 2015  
➢ Building Control Act 2013  
➢ Public Order Management Act 2013  
➢ Transfer of Convicted Persons Act 2012  
➢ Industrial Property Act 2013 | ➢ Ministry of Defence & UPDF  
➢ Ministry of Internal Affairs including Police & Prisons  
➢ Ministry of Gender, Labour & Social Development  
➢ Ministry of Justice and Constitutional Affairs |
| Right to hold property                          | ➢ Land Policy 2013  
➢ Land Acquisition, Resettlement and Rehabilitation Policy (under draft)  
➢ Uganda Gender Policy (UGP), 2007 | ➢ The Constitution  
➢ Land Act 1998  
➢ Land Acquisition Act 1965 | ➢ Ministry of Justice & Constitutional Affairs  
➢ Ministry of Lands, Housing and Urban Development  
➢ Attorney General  
➢ Inspectorate of Government  
➢ Citizens |
| Employment Opportunities                        | ➢ National Employment Policy 2011  
➢ Local Content Policy 2015  
➢ The Workman’s Compensation Act, 2000 | ➢ Ministry of Gender, Labour & Social Development  
➢ Public Service |
| Health                                          | ➢ National Health Policy 2015  
➢ Occupation Health and Safety Act 2007  
➢ Foods and Drug Act 1959  
➢ HIV and AIDS Prevention and Control Act 2014 | ➢ Ministry of Health  
➢ Ministry of Education and Sports  
➢ Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)  
➢ National Food and Drug Authority  
➢ Uganda National Bureau of Standards (UNBS) |
| Education                                        | ➢ Education Policy 1992  
➢ Explicit Policy on Access to Information lacking  
➢ BVET-Act 2008  
➢ Access to Information Act 2005  
➢ Uganda Communications Commission Act 2013  
➢ Computer Misuse Act 2011  
➢ Uganda Communications Act 2012 | ➢ Ministry of Education and Sports  
➢ Ministry of Information and Communications Technology  
➢ Uganda Communications Commission |
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<td>Rehabilitation of PAPs;</td>
<td>Resettlement Policy Framework 2014</td>
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<tr>
<td>Physical Planning</td>
<td>National Urban Policy and the National Housing Policy is still in the offing</td>
<td></td>
<td>The Physical Planning Act 2010</td>
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i. **Security of Person and Property (Safety or Social Protection):**

The social safeguard on security of person and property (safety or social protection) is, in the absence of explicit guiding policy, enshrined in the 1995 Constitution, UPDF Act 2005, Police Act and the Prisons Act 2006. These provisions have mechanisms for controlling, preventing and avoiding crime and violations of the rights of an individual to enjoy safety and property protection. However, occasions have been registered where these safeguards are abused by the very entities entrusted to uphold them or being used to violate the safeguards by unscrupulous individuals or entities with selfish interests. This is increasingly becoming evident in relation to the mining industry (recent cases in Mubende and Moroto). The other laws that address safety of person and property include Prohibition and Prevention of Torture Act (PPTA) 2012; Control of Aliens Refugees Act 1960; Extradition Act 1964; Anti-Pornography Act 2015; Building Control Act 2013; Transfer of Convicted Persons Act 2012 and the Public Order Management Act 2013. Despite being well grounded in Articles 29(1)d and 43 of the Constitution, the Public Order Management Act (2013) is suspect and infamous in that it prohibits the holding of public meetings intended to “discuss, act upon, petition or express views on a matter of public interest”, which is a violation of the tenets of freedom of assembly and expression enshrined in the Constitution.

ii. **Right to Hold Property:**

The social safeguard on the Right to hold property is enshrined in the recent (2013) Land Policy. This is an indication that in the past there was no government policy on land. It is only the land laws that reigned. The Museums and Monuments Policy (2015) also provides rights to historical artefacts and property, even though it does not present an obvious social protection context - it recognizes the need to preserve and protect cultural, religious and historic heritage in all its forms and provides guidance on collection, research and storage or preservation or protection of cultural property. Mining operations tend to disturb historic and cultural heritage sites and properties that need to be preserved and/or protected.

As part of strengthening land (property) governance, government is in the process of drafting a land acquisition, resettlement and rehabilitation policy. The laws that safeguard the right to property include the 1995 Constitution; the 1998 Land Act; and the Land Acquisition Act (1965), together with their associated amendments or bills. The right to Intellectual Property in Uganda is guided by British Law adopted in the Colonial times and the

Article 26(1) of the Constitution states that “Every person has a right to own property either individually or in association with others”. Sub-section 2 of the same article states that “No person shall be compulsorily deprived of property or any interest in or right over property of any description except where the following conditions are satisfied— (a) the taking of possession or acquisition is necessary for public use or in the interest of defence, public safety, public order, public morality or public health; and (b) the compulsory taking of possession or acquisition of property is made under a law which makes provision for— (i) prompt payment of fair and adequate compensation, prior to the taking of possession or acquisition of the property; and (ii) a right of access to a court of law by any person who has an interest or right over the property.”

Article 237 of the Constitution further states “Land in Uganda belongs to the citizens of Uganda and shall vest in them in accordance with the land tenure systems provided for in this

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7. This Act is currently under review through the Land Acquisition, Resettlement and Rehabilitation bill 2013
Constitution.” This article provides the conditions under which land can be compulsorily taken (i.e. only in public interest) or acquired from an owner, including the giving of a “fair and adequate compensation” prior to the taking of the land. The same spirit enshrined in the Constitution is echoed in the new Land Policy (2013), the Land Act (1998) and Land Acquisition Acts.

The consequence of Articles 26 and 237 is that nobody can disenfranchise a landowner of his/her property without a fair and adequate compensation being paid. The other consequence is that projects designed by government, including those sanctioned by law to compulsorily take land, may be delayed or never take-off as a result of the usually slow and protracted negotiations between landowners and Project-Affected-Persons (PAPs). This could be the reason why rumours are rife of attempts to amendment article 26 of the Constitution to allow for government to compulsorily take land or property from the owner without prior payment of compensation to facilitate and ease the establishment of government projects. However, this has been met with stiff resistance among the public.

Article 244 of the Constitution, which is a result of a latter amendment of the 1995 Constitution, vested mineral rights in government on behalf of the Republic of Uganda (the State), which was a shift from “on behalf of the Citizens of Uganda”. While one school of thought believes that this is alright, another school of thought construe this provision as a shift and violation of the spirit that was enshrined in Article 237 of the Constitution. While what constitutes land in the 1995 Constitution was no defined, the spirit in which the Constitution was drafted was believed to have captured everything natural on, within and under land as “Land”. This perception is suggested by the definition of Land in the Mining Act 2003 that states “Land includes land beneath any water, the seabed, and sub-soil of such land”. The vesting of minerals to government on behalf of the State in Article 244 undermined or removed the controlling rights of citizens, limiting access and control of minerals to only individuals/entities that hold exploration or a mining license. This apparent legal contradiction may call for a Constitutional interpretation or explanation.

The consequence of Article 244 of the Constitution is that a landowner under or on whose land the mineral exists has no controlling right to the mineral, unless he/she has a license. This leaves the landowner with only surface rights. This situation has always pitted surface-rights-holders against mineral-rights-holders conflicting over the access to the minerals, because the latter needs clearance from the former to access the mineral underneath the land.

As a consequence of the implementation challenges cited above of access to- and control of-land/property, many cases of conflicts have been registered between the different rights-holders that have resulted in forceful evictions and violations of the laws and human rights.

iii. Employment Opportunities:

The social right to employment is enshrined in National Employment Policy 2011; Employment Act 2006 and the Gender Policy 2007. While there is a suggestion that the policy came after the Act and not the other way round, there is evidence of policy evolution in various forms prior to the Employment Act. Both the policy and law provide for a framework to train and employ youth and other persons in a non-discriminatory manner, including penalties for discrimination on the basis of gender and restriction for employment of children (i.e. under 18 years old). Article 40 of the Constitution provides citizens with economic rights and to be able to work under satisfactory,
safe and healthy conditions. This Constitutional provision is augmented by the Occupational Safety and Health (OSH) Act 2007 that protects workers at all workplaces from injuries, diseases, death and damage to property. The Workman Compensation Act 2000 outlines responsibilities and obligations for both parties (employer and employee) in respect to compensation of workers arising from injuries, accidents health and safety issues. Despite these very good provisions, discrimination in employment; workers not being adequately compensated for injuries sustained while on duty; carelessness by the employer and the employee; and employment of children, especially in the artisan and small-scale mining is occasionally registered. This is further complicated by the weak penalties and mechanism for monitoring such violations.

iv. Health
The social safeguard to health is enshrined in the National Health Policy 2015; the National HIV and AIDS Policy 2004; the Public Health Act 2000; Gender Policy 2007; Occupation Health and Safety Act 2007; the Foods and Drug Act 1959; HIV and AIDS Prevention and Control Act 2014, among other laws. This safeguard is to a large extent complied with by many stakeholders. However, the challenge is that the quality and adequacy of health services in the country is generally very low. Consequently, majority of the “well-to-do” individuals often seek health services abroad.

v. Education
The safeguard to ensure that societies are educated and informed are enshrined in the Education Policy 1992; the Gender Policy 2007; and National ICT Policy 2012. Although there is legislation on Access to information (ATI, 2005), there is no clear evidence of a policy on Access to Information. Article 41 of the Constitution provides right of access to information, especially that in government custody. The article also provides an exception on access to information that could prejudice security or sovereignty of the State and the privacy of persons. The Education Policy is promulgated basing on a number of legislations that have evolved over the years including the Education Act 1970 and its associated amendment 2008; the BVET-Act 2008, among others. Access to information is guided by the Access to Information Act 2005; Uganda Communications Act 2012; the Communications Commission Act 2013; among others.

The current education policy resulted in Universal Primary Education (UPE), Universal Secondary Education (USE) and Vocational training (BVET) being adopted and promoted by government.

vi. Respect of Human Rights
There is no evidence of a Ugandan Human Rights Policy. The country relies on internationally set guidelines and practice, particularly the United Nations’ Universal Declaration on Human Rights (UDHR); the International Covenant on Civil and Political Rights (ICCPR); the African Charter on Human and People's Rights; and the East African Community (EAC) Treaty in Article 3(3)(c), 7(2) and 123(3)(c) requires members states to adopt key human rights principles. In this regard, Uganda dedicated in the Constitution a chapter 4 on Protection and Promotion of Fundamental and Other Human Rights and Freedoms that includes equality and freedom from discrimination; right to life; personal liberty; respect of human dignity; protection from slavery, servitude and forced labour; protection from deprivation of property; right to privacy of person, property and home; right to a fair hearing; freedom of conscience, expression, movement, religion, assembly and association; right to education; rights of the family; affirmative action for marginalised groups; rights of women; rights of children; rights of persons with disability; rights of minorities; rights to
culture; civic rights; right to a clean and healthy environment; economic rights; rights of access to information; just and fair treatment in administrative decisions; and protection from inhuman treatment. The Constitution also recognises the existence of ethnic, religious, ideological, political and cultural diversity. Despite this very good policy and legislative human rights framework and the existence of a specific law criminalising torture, Uganda has been reported to have escalating violations of peoples’ rights that is accompanied with loss of property (Human Rights Watch 2017; Amnesty International 2017; USA, 2015; Foundation for Human Rights Initiative in Uganda, 2016; Uganda Human Rights Commission-UHRC 2016). Inhuman or degrading treatment or punishment or torture remains the most recorded human rights violation in Uganda with the police accounting for a majority of the incidents (UHRC 2016). According to UHRC (2016) report, a total of 1,658 cases of torture were registered between 2012 and 2016.

At the national level, Article 50 of the Constitution of the Republic of Uganda guarantees judicial remedy for human rights violations and in particular stipulates that any person who claims that fundamental or other right or freedom guaranteed under this Constitution has been infringed or threatened is entitled to apply to a competent court for redress which may include compensation.

vii. Compensation and Resettlement of Project Affected Persons (PAPs)
Since colonial times, government of Uganda has not had a specific policy on compensation and resettlement of persons involuntary displaced by development projects (Project-Affected-Persons a.k.a. PAPs).

The 1965 Land Acquisition Act and the 1998 Land Act, Cap 227 provide for the management and administration of land. Section 59 of the Land Act list the functions of the District Land Board, including the need to compile a list of rates for compensation payable in respect of crops, building of a non-permanent nature, and any other thing that may be prescribed. The same section further provides for an annual review of the compensation list and rates, while Section 77 of the Land Act specifically provides guidance on computation of compensation. This notwithstanding, compensation and resettlement of PAPs has for decades been guided by different national- and district-based frameworks that have been crafted by different Government-Valuers. Consequently, the frameworks varied by region and by project. Some frameworks were not updated to rhyme with current social-economic situations and were therefore obsolete or valuation was deliberately lowered at the behest of the developer(s), thus disenfranchising landowners. In addition, the impacts of the frameworks on the PAPs was varied across the country. It is only recent (May 2017) that government is in the process of drafting a Land Acquisition, Resettlement and Rehabilitation

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8 . The Prohibition and Prevention of Torture Act (PPTA) 2012
Policy to guide the acquisition of land from landowners; undertake resettlement and rehabilitation of PAPs in the country. The Land Policy 2013 recognises that while the Constitution empowers the central and local government to acquire land in public interest provided the acquisition is in line with article 26, government has not, in the past, exercised this power responsibly and in the public interest. In addition, the local government did not have sufficient capacity to meet compensation requirements that accompany the exercising of this power extended to them by article 26. Government will require to build capacity at all governance levels to exercise the power extended by article 26 of the constitution, including compensation and rehabilitation of PAPs.

While the policies and legislation emphasize compensation and resettlement, they do not deliberately accord landowners the option to offer their land as capital/share in an investment that maybe government or privately owned, but relegates this decision to the individual landowner who is already challenged by an environment that does not facilitate him/her to make such a decision. This would be a patriotic move and opportunity to improve the economic situation of many landowners/PAPs. In addition to the compensation and resettlement benefits, Government needs to create a conducive environment for landowners to offer their land as share/ capital in investments coming to occupy land and also put in safeguards in such an arrangement to avoid landowners being disenfranchised by unscrupulous companies that continuously declare losses as a strategy to circumvent paying dividends. This is being proposed based on a backdrop that often times land previous exploited by a mining company may be reverted in a form that is no longer economically useful to the landowner. For example, mining operations may involve digging open pits that are many kilometres wide (>1.0km) and deep (>1.0km), such land would essentially be useless, if it is decommissioned and reverted to the landowner without being restored to near its original form.

The safeguard enshrined in Article 26 is currently under threat by the government’s quest to amend it to allow government compulsorily take possession of one’s land without prior payment of compensation and in disregard of whether the landowner consents or not. This quest is being spurred by the political urgency to have “first oil” flowing from Uganda’s oil reserves in the Albertine Graben by 2020, which is only 3 years from 2017. To realise “first oil” by 2020, government will have to fast-track the construction of the necessary roads, refinery, pipelines, railways, waterways, airports/ runways, work-stations and reception point infrastructures in a span of only 3 years. This is generally perceived to be practically impossible under the current bidding and contracting framework, including the reasonable time required to deliver these critical infrastructure. Also, in the absence of a Constitutional amendment, this would compel government to circumvent and violate all the existing key legal provisions (not only Article 26) and trigger a horde of Court Cases that undermine the progress of the projects. This proposed amendment to article 26 will disenfranchise landowners’ rights and undermine their livelihoods. Although government is proposing depositing with court compensation for persons objecting to it, government does not have a good record of prompt and adequate payments. There are many cases of government’s non-payment of obligations that have lasted many years - as a result, there is no confidence that this proposal to deposit compensation with court will be an exception.

viii. Rehabilitation of Project-Affected Persons (PAPs)
Rehabilitation of PAPs has not been a common practice in Uganda, although there are isolated interventions to deal with livelihood improvement of persons affected by Development Induced Displacement (DID) usually enshrined in Resettlement Action Plans and by various non-
governmental organisations and private sector entities through Corporate Social Responsibility (CSR). It is the intention of the proposed Land Acquisition, Resettlement and Rehabilitation Policy (LARRP) to rehabilitate PAPs after they are displaced or resettled. This will require accompanying legislation, regulations and guidelines.

**ix. Economic Development and Benefit sharing**

Article 40 of the Constitution accords economic rights and benefits for citizens through employment – according workers with “equal payment for equal work without discrimination”; “rest and reasonable working hours and periods of holidays with pay as well as remuneration for public holidays”; “right to be a member of a trade union of choice”; “withdraw labour freely according to law” and protection of women employees during pregnancy and after birth.

Uganda’s economic policies have evolved over the years from an economy dominated by export of raw materials and import substitution to one that is based on building domestic industrial capacity and enhancing competitiveness starting with basic consumer goods and a limited range of intermediate goods to replace imports, accompanied with domestic job creation and poverty reduction objectives. The impact of this policy shift has various outcomes that have been registered over the years, including an economic growth rate that has oscillated between 4-7% and a tax-to-GDP ratio that has stagnated been 13-14%. Many factors are responsible to this low economic outturn, including a large informal sector; escalating inflation; political and economic chaos; imbalances in imports and exports; growth not accompanied by production, but dominated by services; among others. This has resulted in hurting the ordinary citizen and widening the gap between the rich and poor. As a consequence, the economic safeguard policies have not entirely delivered the desired outcome, despite having clear legislation that should safeguard citizen’s economic benefits.

**x. Physical Planning**

For a long government has operated without a specific physical planning policy, relying on the physical planning Acts. But currently, a National Urban Policy and the National Housing Policy has been drafted and is before Cabinet for approval. The Physical Planning Act 2010 provides for the making and approval of physical development plans and according permission to undertake the desired physical developments. This implies that no physical structure should be constructed, unless it is approved by the national physical planning board or local government physical planning committees that are guided by the National Physical Planning Standards and Guidelines (2011).

The implication of this physical planning safeguard is that all the shanty structures established in many of the mining areas could not have been approved by law and are therefore in total violation of the law.

**3.1.2. International Social Safeguard Policies and their attendant procedures and guidelines**

The country’s Foreign Policy is to respect such international provisions and obligations. Any treaties, which had been signed, affirmed or in force, prior to promulgation of the Constitution still bind and have the force of law in Uganda. They override Municipal law in case of any conflict arising from domesticated legislation.
Some of the international social safeguard policies, conventions and treaties and associated procedures and guidelines are discussed below:

**i) Security of Person and Property (Social Protection)**

The international social safeguard for security of persons and property (social protection) is enshrined in the UN Charter 1945. The Charter is a multilateral treaty that serves as a constitutional document that distributes powers and functions among the various UN organs. It authorizes the Security Council to take action on behalf of the members, and to make decisions and recommendations. The Charter mentions neither binding nor non-binding resolutions. The primary responsibility of the UN-body is the maintenance of international peace and security.

Articles 104 and 2(5) of the Charter demonstrate that members granted the United Nations the legal authority to exercise its functions and fulfil its purposes as specified or implied in the Charter, and that they had agreed to give the Organization every assistance in any action taken in accordance with the Charter. Article 24(1) of the Charter empowered the organization to act on the behalf of the members while exercising its responsibility for the maintenance of international peace and security as well as respect to human rights; and Article 25 demonstrates the willingness of the members “to accept and carry out the decisions of the Security Council in accordance with the present Charter”. The Charter describes the Security Council’s power to investigate and mediate disputes (Chapter VI); the power to authorize economic, diplomatic and military sanctions as well as the use of military force to resolve disputes (Chapter VII); the possibility to make regional arrangements to maintain peace and security within a given region (Chapter VIII); the UN’s power for economic and social cooperation and entity (Economic and Social Council) empowered to oversee these powers (Chapters IX & X); powers of the International Court of Justice and those of the United Nations Secretariat (Chapters XIV & XV), among others. Members are legally bound by the provisions in the Charter.

Article 23 of the African Charter on Human and People's Rights recognizes the right to peace and security development. The African Charter also provides for the rights to due process concerning arrest and detention (Article 6)’ the right to a fair trial (Article 7 & 25); the right to freedom of religion (Article 8) and freedom of information and expression (Article 9); freedom of association (Article 10); freedom of assembly (Article 11); freedom of movement (Article 12) and freedom of political participation (Article 13)

The consequence of the UN framework is that it has power to exercise political pressure on a non-compliant member indicating or warning that the Security Council is paying attention and further action could follow. Similar provisions are in the African Union Charter, although their enforcement is limited and not punitive.

**ii) Right to Hold Property**

Although there is no specific international convention or treaty on the right to hold property, international law provides safeguards for one to hold property in any jurisdiction. The consequence of this is that any individual has a right to hold property in any jurisdiction, provided they meet the necessary requirements that allow them to hold the property in that given jurisdiction. The African Charter on Human and People's Rights recognizes, in Article 14, the right to property and in Article 21 the right to freely dispose-off their wealth and natural resources.
iii) Employment Opportunities

United Nations Charter, Chapter IX, recognizes the need for persons to be employed internationally without distinction as to race, sex, language, or religion and sets conditions for economic and social progress and development. Also, the African Charter recognizes the need for persons to be employed internationally. The consequence of these provisions is the ability of persons from members States to be employed internationally. The convention Concerning the Abolition of Forced Labour 1957 is one of the International Labour Organization (ILO) fundamental Conventions that prohibits forced labour and punishment for strikes and holding certain political views.

Article 15 of the African Charter on Human and People's Rights states "Every individual shall have the right to work under equitable and satisfactory conditions, and shall receive equal pay for equal work" - which may be understood to prohibit forced or compulsory labour, although this is not explicitly mentioned.
<table>
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<tr>
<th>Social Issue</th>
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<td>➢ International Labour Organization (ILO)&lt;br&gt;➢ International Court of Justice&lt;br&gt;➢ African Court of Justice</td>
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<td>Rehabilitation of PAPs;</td>
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<td>UN-Charter</td>
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Note: PAPs = People's Authorities or People's Assemblies.
iv) **Health**

v) **Education**
Chapter IX of the United Nations Charter recognizes the need for solutions for international cultural and educational cooperation. Also, the African Charter on Human and People's Rights recognizes, in Article 17, the right to education.

vi) **Respect of Human Rights**
There are a number of international and regional social safeguards on respect of Human Rights. The overarching ones that directly affect Uganda are the United Nations Universal Declaration on Human Rights (UDHR) and the African Charter on Human and People's Rights (Banjul Charter) 1986. The others such as the International Covenant on Civil and Political Rights (ICCPR) 1976; African Charter on Human and People's Rights (Banjul Charter) 1986; East African Community (EAC) Treaty; African Charter on the Rights and Welfare of the Child 1990; are intended to augment the two overarching provisions. International Development Institutions such as the World Bank (WB); The African Development Bank (AfDB); European Investment Bank (EIB) also include social safeguards in their project on indigenous peoples; physical cultural resources, involuntary resettlement, among others.

Article 8 of the Universal Declaration on Human Rights (UDHR) provides for a right to an effective remedy for acts violating the fundamental rights guaranteed by the Constitution or by law. The right to a remedy is a secondary right, deriving from a primary substantive right that has been breached. The declaration encompasses the right to: a) equal and effective access to justice; b) adequate, effective and prompt reparation for harm suffered; c) access to relevant information concerning violations and reparatory mechanisms; and d) access to fair and impartial proceedings.

Article 2(2) of the International Covenant on Civil and Political Rights (ICCPR) calls upon State Parties: to undertake necessary steps, in accordance with its constitutional processes and with the provisions of the present Covenant, to adopt such laws or other measures as may be necessary to give effect to the rights such as the right to a fair and speedy trial. At the regional level, the African Charter on Human and People's Rights, requires State parties to commit themselves to recognize human and people' rights, duties and freedoms and adopt legislative measures to ensure that the provisions under the charter are put to effect. At the sub regional level, the Treaty for the establishment of the East African Community (EAC Treaty) provides in Article 3(3)(c), 7(2) and 123(3)(c) for adoption of key human rights principles by member States

The implication of these provisions are that a country or entity that violates human rights can be held responsible for its actions, including the use of sanctions, even force where it is deemed fit.

vii) **Compensation and Resettlement of PAPs**
Although the international social safeguards are not explicit on compensation and resettlement of Project-Affected Persons, their provisions are implied. It is the International Development Institutions that are clearer on issues of compensation and resettlement. The implication is that entities associated with these development institutions are required to comply with the set
standards. A violation of the set standards could result in the development institution freezing or withdrawing its support of the entity.

viii) Rehabilitation of PAPs;
Other than the United Nations provisions for refugees that clearly address rehabilitation, many international policy frameworks are not explicit on rehabilitation of involuntarily displaced persons. Rehabilitation of the lives of person involuntarily displaced/resettled is not an action commonly done by governments and investors. The implication is that affected persons' livelihoods is negatively impact in most development intervention.

ix) Economic Development and Benefit Sharing
Chapter IX of the United Nations Charter deals with international economic and social cooperation. The UN Charter promotes high standards of living full employment and conditions of economic and social progress and development.

Also, the African Union Charter sets grounds for mutual economic development among the majority of African states. The Charter sets goals for the creation of free trade areas, customs union; a single market; a central bank and a common currency that consequently establishes an African economic and monetary union. Although this has not been fully realised, the intentions are good. Article 22 of the African Charter on Human and People's Rights recognizes the right to development.

The 2003 Cotonou Agreement is a treaty between the European Union and the African, Caribbean and Pacific Group of States (“ACP Countries). It replaced the 1975 Lome Convention. The agreement is intended to reduce and eventually eradicate poverty and contribute to sustainable development and to gradually integrate ACP countries into the World Economy. The agreement was revised in 2005 and 2010 to include Non-state Actors, Local Government and Private Sector as key players in the realization of the agreements' objectives. Its 4 main principles are:

- “equality of partners and ownership of the development strategies” i.e. it is up to the ACP countries to determine how their societies and economies develop;
- “Participation” a principle intended to bring on board other stakeholders beyond the central government including CSOs, private sector and local governments
- “Dialogue and Mutual Obligations” requires parts to not only seek money from the agreement, but to agree to respect human rights; peace, security, migration, good governance and avoid corruption, impunity and arms trade (i.e. the agreement is not merely a pot of money). These additional aspects of the agreement would be monitored through dialogue and evaluation.
- “Differentiation and Regionalization” meaning that cooperation agreements would vary according to each partner's level of development, needs, performance and long-term development strategy. Even though there is special treatment to counties considered Least Developed (LDCs) or vulnerable (i.e. landlocked or Island States), this principle implies that more funds would go to good performers and the reverse is true. The agreement introduced Economic Partnership Agreements (EPAs) that, while they propose reciprocal opening up of markets to duty-free access of exports by the parties, it does not make this mandatory on LDCs – a good feature for differentiation.
x) Physical Planning

While there is no specific international convention or treaty on physical planning, this is implicit in the provisions of the multiple conventions and treaties. Through a decision by the African Commission on Human and Peoples' Rights, SERAC v Nigeria (2001), the African Charter on Human and People's Rights is understood to include a right to housing. Multiple International Development Agency provisions recognize the need for physical planning and the right to appropriate housing of citizens.

3.2. National Environmental Safeguards

The national environmental safeguards are enshrined in the policies, legislation and institutional frameworks cited in Table 3 below.

3.2.1. Policies

The 1994 National Environmental Management Policy is the overarching environmental safeguard. It is promulgated by the 1995 Constitution and the National Environmental Management Act Cap 153, 1995 and the associated regulations and standards. In the context of oil, gas and mining, these safeguards are augmented by the 2001 Mining Policy; the 2008 Oil and Gas Policy; and the 2003 Mining Act; Petroleum (Exploration, Development & Production) Act 2013; and Petroleum (Refining, Conversion, Transmission and Mid-stream Storage) Act 2013.

The 1994 National Environmental Management Policy is aimed at promoting sustainable economic and social development, including ensuring a clean and healthy environment. It calls for taking stock of environmental concerns related to development projects at national, district and local levels. The policy requires that projects likely to have significant adverse ecological or social impacts should undertake an Environmental and Social Impact assessment (ESIA) before being implemented. This policy aspiration is promulgated by the Constitution and other attendant legislation. For example, Article 39 of the Constitution provides for “a right to a clean and healthy environment”.

The environmental safeguards require Oil and Mining Companies to ensure that:

- There is a clean and healthy environment by avoiding irresponsible use of- and the careless dumping of solid wastes, effluents and emissions- on, in or under land, water and air resources;
- In the event that the companies pollute the environment, they would be responsible for the clean-up;
- Companies respect the integrity and sanctity of biodiversity, especially the threatened and endangered species;
- Sustainability of ecosystem services is sustained
- They use natural resources sustainably
- They decommission projects that cease to be necessary and restore the environment to as close to original as possible.
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<td>The Uganda National Roads Authority (UNRA) Environmental Policy, 2016</td>
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<td>Sets standards for Environmental compliance</td>
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<td>Integrity and Sanctity of Biodiversity, especially the threatened and endangered species</td>
<td>The Water (Waste Discharge) Regulations S.I No. 152-4</td>
<td>Ministry of Water and Environment</td>
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<td>National Environment Management Authority (NEMA)</td>
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<td>Ministry of Agriculture Animal Industry &amp; Fisheries (MAAIF)</td>
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<td>Plant Protection and Health Act 2015</td>
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The **1999 National Water Policy** provides guidance on development and management of the water resources in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs, with full participation of all stakeholders and mindful of the needs of future generations.

The **2014 Wildlife Policy** recognizes that wildlife is an important socio-economic resource for the country. It also recognizes the need for co-existence of wildlife and human populations done in a manner that ensures that the nation’s biological diversity is not lost i.e. protecting areas with high levels of biodiversity; threatened/ endangered species; and management of wildlife outside protected areas, including wildlife conservation, monitoring, research and participatory management of wildlife resources.

The **2001 Uganda Forestry Policy** provides guidance for the sustainable development of the forest sector – recognising the need for protection and conservation of forest biodiversity; and managing forests in a manner that supports local and national socio-economic development and international obligations, including the rehabilitation and conservation of forests that protect soil and water in the country’s watersheds and river systems.

The **2008 National Oil and Gas Policy** provides guidance on the development of Uganda’s fossil oil and gas reserves discovered in 2006. The policy recognizes the need for this to be done in an environmentally sensitive manner to avoid causing harm to the environment and biodiversity.

The **2016 Uganda National Roads Authority (UNRA) Environmental Policy** is derived from the NEMA’s Environmental Policy and is intended to guide the development of the country’s road infrastructure in an environmentally sensitive manner.

### 3.2.2. Legislations

The above policies are promulgated by some of the following legislations, among others. As cited above the 1995 Constitution is the overarching law on the basis of which all laws, regulations and guidelines are drafted. It empowers the Parliament to enact laws that “protect and preserve the environment from abuse, pollution and degradation; manage the environment for sustainable development; and promote environmental awareness” (Article 245). This requires the State to manage “land, mineral, flora, fauna, air and water resources in a balanced and sustainable manner for the present and future generations”.

The **1995 National Environment Act, Cap 153** stipulates the principles of environmental management and the rights to a decent environment; institutional arrangements; environmental planning, environmental regulations, environmental standards; environmental restoration orders and environmental easements; records, inspection and analysis; financial provisions; offences; judicial proceedings and international obligations. Part II of the Act sets principles that must be adhered with that include a right to clean and healthy environment; participation; use and conserve the environment and natural resources equitably and to the benefit of all; conserve cultural heritage; ecosystem services; reclaim and restore damaged/ interrupted ecosystems; set-up standards; undertake environmental assessments prior to implementation of projects; and ensure that polluter pays for pollution. Article 3 of the Act accords individuals the duty to maintain and enhance the environment.
Section 19(1)(a) requires government and the developer to produce an Environmental and Social Impact Assessment (ESIA) prior to the execution of any development project, while Section 22 requires for environmental audits to be undertaken for project which have had Environmental Impact Assessment (EIAs). The 2006 National Environmental (Audit) Regulations provide guidance on how the audits must be conducted by the developer(s).

Meanwhile, Section 34 prohibits the use of lakes and rivers to elect, reconstruct, place, alter, extend, remove or demolish any structure in, on, under and over the bed. It further prohibits the excavation, drilling, tunnelling or disturbing the bed otherwise or introducing or planting any part of the plant whether alien or indigenous in a lake or river or introducing any animal or microorganism, alien or indigenous in any lake or river or depositing any substance in, on, or under the lake or river bed, if that substance would or is likely to have adverse effects.

Section 36 prohibits the use of wetlands by reclaiming or draining it; erecting, construction, placing, altering, extending, removing or demolishing any structure that is fixed in, on, under or over any wetland or disturbing, drilling or tunnelling in a manner that has or is likely to have adverse effect on the wetland or depositing in, on or under any wetland any substance in a manner that has or is likely to have an adverse effect on the wetland.

The law, however, empowers NEMA to waive in writing any of the above requirements, which may be based on an EIA to determine the effect of the proposed activity and waiver on a lake, river or wetland.

Section 49 (Protection of Natural Heritage sites) provides that the NEMA shall, with the assistance of Local Environment Committees, District Environment Committees and the lead agency, identify those elements, objects and sites in the natural environment which are of cultural importance to the various peoples of Uganda. The Authority is required to maintain a register of all cultural elements, objects and sites identified and shall prescribe measures for their management or protection.

The 1995 National Environment Management Act is augmented by:

i) The 1998 National Environmental Impact Assessment Regulations provide guidance on EIAs preparation and approval process. Section 14 of the regulations stipulates the contents of the Environmental Social Impact Statement (ESIS).

ii) The 2006 National Environment (Audit) Regulations provide for the preparation of environmental audit reports; require developers whose activities are likely to have a significant impact on the environment to establish environmental management systems; provide for enforcement of environmental audits; and encourage voluntary environmental audits and compliance agreements. Section 3 of the National Environmental (Audit) Regulations states that these regulations apply to all environmental audits required by the National Environment (Environmental Impact Assessment) Regulations. Section 31 of the Environment Impact Assessment Regulations provides that “after the environmental impact assessment has been approved by NEMA, the developer shall take all practicable measures to ensure that the predictions made in the project brief, or environmental impact statement are complied with. The Section further states that “Within a period of not less than twelve months and not more than thirty six months after the completion of the project or the commencement of its operations, whichever is earlier, the developer shall undertake an initial
environmental audit of the project, provided that an audit may be required sooner, if the life of the project is shorter than the period prescribed under this sub-regulation”.

iii) The **2000 National Environment (Wetlands, River Banks and Lakeshores Management) Regulations** provide for the protection of Wetlands, River Banks and Lakeshore zones. Section 12(1) prohibits “any persons from carrying out any activity in a wetland without a permit issued by the Executive Director”. The regulations, in Section 23(1), accord an individual who intends to ‘(a) use, erect, reconstruct, place, alter, extend, remove or demolish any structure or part of any structure in, under, or over the river bank or lake shore; and (b) excavate, drill, tunnel or otherwise disturb the river bank or lake shore” to make an application in form A set out in the First Schedule of the regulations to the Executive Director of NEMA. Also, Section 34(1) provides for a developer “desiring to conduct a project which may have a significant impact on a wetland, river bank or lake shore to carry out an Environmental Impact Assessment (EIA)” in accordance with Sections 20, 21 and 22 of the National Environment Act.

iv) The National Environment (Waste Management) Regulations S.I No. 153-1. As the name suggests, these are regulations for Waste Management.


vii) The Water (Waste Discharge) Regulations S.I No. 152-4

In addition to the regulations, the National Environmental Management Act is further assisted by guidelines that include the 1997 Environmental Impact Assessment Guidelines that outline the process and procedures for the ESIA. It is a general policy of government that an ESIA is conducted for planned projects that are likely to have significant impact on the environment, so that adverse impacts can be foreseen and mitigated. In addition to these guidelines, NEMA provided guidelines for project developers, ESIA practitioners; public participation; lead agencies and for monitoring.

The **Water Act Cap 152** in Section 2 restricts the construction of works related to that may affect the investigation, use, control, management or administration of any water or waste or structures, excavations or boreholes partly or wholly situated within or on the bed or banks of any water course or any other source of water by which any structure may be constructed or protected, among others. Sections 18 of Water Act requires persons wishing to carry out construction works on water bodies or to take and use water to apply for a permits. However the Act further warns, in Section 20, that when activities are permitted, damage to the water should be prevented. Section 19 exempts a public authority or a class of persons or works to this rule. However, petroleum and mining operations do not fall in this category of exempted entities. The Act accords the Minister responsible for the sector power to prescribe water which may not be discharged into the environment. The Act also prohibits pollution, unless authorized under a discharge permit.
The **Uganda Wildlife Act, Cap 200** provides for the protection of - and how benefits can be derived from - the wildlife resources. The Act recognises the need for stakeholder participation in wildlife management and permits communities, non-governmental organisations and private sector entities to participate in the management of wildlife and their associated protected areas. Wildlife is defined by the Act to mean any wild plant or wild animal or species native to Uganda and includes wild animals that migrate through Uganda. The Act mandates the Uganda Wildlife Authority (UWA) to manage all National Parks, Wildlife Reserves, and Wildlife Sanctuaries and also provides guidance for Community Wildlife Areas. UWA is also mandated in consultation with NEMA to carry out audits and monitoring of projects likely to affect wildlife. Ordinarily, the Act prohibits the establishment of oil and mining operations in a protect area and considers such as an unlawful activity. However, Section 15(1) & (2) require any developer desiring to establish an otherwise unlawful operation in a wildlife area that may have significant impact on the wildlife species or community to undertake an ESIA in accordance to the National Environment Management Act. Also, Section 24 empowers UWA to authorise an otherwise unlawful act in a wildlife conservation area, a decision that can only be based on evidence presented in an EIA that sanctions such an operations proving that it would not have significant adverse impacts on wildlife. There is evidence worldwide of the coexistence of oil and mining operations with wildlife conservation – often requiring special interventions.

The **1964 Public Health Act, Cap 281** empowers, in Section 7, local authorities with administrative powers to take all lawful, necessary and reasonable practicable measures for preventing the occurrence of, or for dealing with any outbreak or prevalence of, any infectious communicable or preventable disease to safeguard and promote the public health and to exercise the powers and perform the duties in respect of public health conferred or imposed by this Act or any other law. Section 105 of the Act imposes a duty on the local authority to take measures to prevent any pollution dangerous to the health of any water supply that the public has a right to use for drinking or domestic purposes.

The **Historical and Monuments Act 46** provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical, and traditional interest. The Act empowers the Minister with the power to declare a site to be of cultural or historic importance and therefore preserved. Section 10 of the Act spells out the procedures and requirements to declare and inspect newly discovered sites that may have archaeological, paleontological, ethnographical, historical and traditional significance for purposes of protection. In addition, the Act prohibits any person from carrying out activities on or in relation to any object declared to be preserved or protected. However, short of this declaration, many cultural and historic resources are at risk of destruction as a result of development projects. This Act is currently under review and its hope that such a risk will be mitigated.

The **1965 Land Acquisition Act, 226** provides for the compulsory acquisition of land for public purposes whether for temporary or permanent use. The Act requires that adequate, fair and prompt compensation is paid before taking possession of land and property. Dispute arising from the compensation to be paid should be referred to the court for decision if the Land Tribunal cannot handle.

The **1998 Land Act, Cap 227** provides, in Section 44, the protection “of natural lakes, groundwater, natural streams, wetlands and any other land reserved for ecological purposes for the
common good of the citizens”. Section 43 specifically requires the use of land in accordance with the various laws of environmental concern, Section 45 focuses on the control of environmentally sensitive areas.

The 2013 Petroleum (Exploration, Development and Production) Act regulates petroleum activities, including licensing, exploration, development, production, and cessations or decommissioning, among other things. Section 3 requires licensees to comply with principles and safeguards for the management of production, transportation, storage, treatment and disposal of waste arising out of petroleum activities in accordance with the principles and safeguards under the National Environment Act and other applicable laws. A report on the petroleum reservoir and a field development plan are pre-requisites for the approval of any petroleum operation (Section 71) and such report and plan must include assessment of the potential effects of petroleum activities on the environment, social and other relevant activities; safety measures to be adopted in the course of development and production of petroleum, including measures to deal with emergencies; and the necessary measures to be taken for the protection of the environment.

The 2013 Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act enables the development of refining, gas conversion, pipelines, transmission pipelines and midstream storage facilities. A licensee or person, in Section 3, undertaking functions, duties or powers under the Act in relation to midstream operations is required to comply with environmental principles as prescribed by the National Environment Act and other applicable laws.

Similar provisions are enshrined in the international environmental safeguards (Table 4).
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Relevant Policies</th>
<th>Relevant Procedures</th>
<th>Responsible Institutions/ Party</th>
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| A clean and healthy environment                                                   | ➢ The African Charter  
➢ Minamata Convention  
➢ EAC Treaty  
➢ UNEP Environmental, Social and Economic Sustainability Framework 2016  
➢ UNDP’s Social and Environmental Standards (SES) 2015  
➢ Comprehensive Nuclear Test Ban 1999 | ➢ Minamata Convention  
➢ EAC Treaty  
➢ UNEP Environmental, Social and Economic Sustainability Framework 2016  
➢ UNDP’s Social and Environmental Standards (SES) 2015 | ➢ United Nations Food and Agriculture Organization (UNFAO)  
➢ IBRD – World Bank  
➢ IFC – World Bank  
➢ African Development Bank (AfDB)  
➢ United Nations Development Programme (UNDP)  
➢ United Nations Environment Programme (UNEP) |
➢ UNDP’s Social and Environmental Standards (SES) 2015  
➢ UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions 2005  
➢ UNDP’s Social and Environmental Standards (SES) 2015  
➢ The Kampala Convention 2009 | ➢ UNEP  
➢ UNESCO  
➢ UNDP |
| Polluter Pays Principle and is responsible for the clean-up                        | “”                                                                                                                                                                                                                | “”                                                                                                                                                   | “”                                                                                                                  |
| Integrity and Sanctity of Biodiversity, especially the threatened and endangered species | ➢ African Convention on the Conservation of Nature and Natural Resources (Algiers Convention) 2003  
➢ UNEP Environmental, Social and Economic Sustainability Framework 2016  
➢ UNEP Environmental, Social and Economic Sustainability Framework 2016  
➢ African-Eurasian Water-bird Agreement(AEWA) | ➢ UNEP  
➢ UNESCO  
➢ Birdlife International  
➢ International Union for Conservation of Nature (IUCN)  
➢ International Water Management Institute (IWI)  
➢ Wetlands International  
➢ WWF International  
➢ Wildfowl & Wetlands Trust (WWT)  
➢ UNDP |
| “ “ | “ “ | “ “ |
| Decommissioning of projects/ interventions and restoration of the environment to as close to original as possible | Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) - UNESCO (1972) | Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) - UNESCO (1972) | World Bank (IBRD & IFC) | African Development Bank (AfDB) |
The African Charter on Human and People's Rights recognizes, in Article 24, the need for "a generally satisfactory environment.

The Minamata Convention is the first legally binding global agreement to reduce Mercury pollution. It recognizes that Mercury is a global threat to human health, livelihood and the environment and therefore its main aim is protecting the health of current and future generations, food chains and the environment from Mercury pollution, by ending Mercury use and emissions at its primary sources such as small-scale gold mining, coal-fired power plants and cement kilns; and halting the global mercury trade. In addition the treaty aims at identifying and remediating contaminated sites. Article 3 of the Convention specifically proposes reducing global Mercury pollution through complementary measures to minimize Mercury supply and demand. Article 30(para 4) requires State parties or regional economic integration organization(s) to transmit to the Convention Secretariat information on its measures to implement the Convention.

While Mercury is released in small amounts at any given time, the cumulative effect is significant. For example, a total of 32,146kg of Mercury (Hg) is released annually into the environment, which accounts for 19,926kg released into the air – the biggest receptor; followed by 5,633 kg into the land and 3,913 kg into the water per year. These are cumulative amounts that cannot be ignored. Mercury also enters the environment as a by-product plus impurities (i.e. 80kg/yr); as general waste (2,437kg/yr) or sector specific treatment/disposal (157kg/yr).

The major contributors of Mercury to the environment include biomass (agro residues & wood) burning in thermal power or heat production plants/facilities (945kg/yr); informal waste burning that contributes 5,185kg/yr released into the air; Mercury containing batteries that release 4,045kg/yr (i.e. 1,011kg into air, 1011kg into land & 2,023kg as general waste); Gold and Silver extraction using Mercury that contributes up to 18,495 kg/yr to the environment (i.e. 12,136 kg into air, 3,333 kg into water & 3,027kg into land); laboratories and chemical equipment with Mercury release 157 kg/yr (i.e. 52 kg into water, 52 kg as general waste & 53 kg through sector specific treatment/disposal.

Use of Mercury in Gold mining and coal-fired power plants are leading causes of Mercury emissions on the planet. Small-scale Gold mining is an extremely hazardous process that sickens miners, their families and communities. According to the United Nations Environment Program, approximately 15 million people in over 70 countries engage in artisanal small-scale gold mining (ASGM) activities for their livelihood, practices that mainly use mercury. About 1.5million people in Uganda are involved in Artisanal Gold mining.

The National Environment Management Authority (NEMA) reports that the entire Uganda population is at risk of Mercury exposure. However, the greatest exposure risks relates with up to 5% of the children (<18years) and 25-45% of the women among miner communities.

UNEP further observed that although declining, Mercury from illicit sources have been and are still being used in many illegal small-scale Gold mining operations, which is the case in Uganda. While the national environmental regulations are detailed in the context of products containing Mercury, the laws and regulations are very silent on Mercury Oxide importation, handling and storage in Uganda. The majority of developing countries, and countries with economies in
transition, do not issue recommendations to pregnant women on daily intake limits of Mercury-containing food products such fish and rice, with dire consequences. Most developing countries lack limits for Mercury levels in fish. Those that have established limits, often set them lower than relevant limits of developed countries, thus reducing the level of protection of their residents from the adverse health impacts of Mercury. Although Uganda signed the Minamata Convention in 2013, the country has not yet operationalized its provisions\textsuperscript{14}.

Mercury exposure damages the nervous system, kidneys, and cardiovascular system. Developing organ systems, such as the foetal nervous system, are the most sensitive to the toxic effects of Mercury, although nearly all organs are vulnerable. Human exposure to Mercury occurs primarily through the consumption of contaminated fish and through direct contact with Mercury vapour through small scale gold mining practices. Very small amounts of mercury, as little as 1.0 ppm measured in hair, has been recognized by the US EPA as a threshold above which mercury can cause brain damage in developing foetuses. New scientific literature is suggesting that mercury is even more harmful than previously understood, with negative neurological impacts noted at levels above 0.58 ppm. Coal fired power plants, the second greatest source of mercury contamination and a primary contributor to climate change, release atmospheric Mercury which deposits into the world’s water bodies and enters the food chain, accumulating in fish and burdening human health.

The 2009 Kampala Convention (formally the African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa) is a treaty of the African Union that addresses internal displacement caused by armed conflict, natural disasters and large-scale development projects. Article 5(4) specifically provides State responsibility for the protection and assistance of internally displaced persons, whose displacement is the result of “natural or human made disasters, including climate change.

The 1996 United Nations Convention to Combat Desertification (UNCCD) is a convention to combat desertification in countries experiencing serious drought and/or desertification, particularly in Africa and to mitigate the effects of drought through national action programmes that incorporate long-term strategies supported by international cooperation and partnership agreements. It is a legally binding international agreement based on the principles of participation, partnership and decentralization — the backbone of good governance and sustainable development.


The 1992 Convention on Biological Diversity (CBD) also referred to as the Biodiversity Convention, is a multilateral treaty with three main goals i.e. the conservation of biological diversity (biodiversity); the sustainable use of its components; and the fair and equitable sharing

\textsuperscript{14} https://ejatlas.org/conflict/bahi-manyoni-uranium-mining
of benefits arising from genetic resources. Its objective is to develop national strategies for the conservation and sustainable use of biological diversity. It recognized, for the first time in international law, that the conservation of biodiversity is "a common concern of humankind" and is an integral part of the development process. The agreement covers all ecosystems, species and genetic resources. It links traditional conservation efforts to the economic goal of using biological resources sustainably. It sets principles for the fair and equitable sharing of the benefits arising from the use of genetic resources, notably those destined for commercial use. It also covers the rapidly expanding field of biotechnology through its Cartagena Protocol on Biosafety, which addresses technology development and transfer, benefit-sharing and biosafety issues. It is a legally binding Convention. It accords decision-makers guidance based on the precautionary principle which demands that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be an excuse for postponing measures to avoid or minimize such a threat. It also reminds decision-makers that natural resources are finite and sets-out principles of sustainable use while at the same time recognizing that ecosystems, species and genes must be used for the benefit of humans, albeit in a manner and rate that does not lead to the long-term decline of biological diversity.

Article 14 of CBD specifically focuses on development projects and calls for parties to introduce appropriate procedures for ESIsAIs on projects that might have effects on biological diversity. Article 8 puts emphasis to in-situ conservation in Protected Areas (e.g. National Parks, Forest Reserves, etc.) that includes rehabilitation of degraded ecosystems, recovery of threatened species, and protection of natural habitats and maintenance of viable populations of species in natural surroundings. The Convention covers all the protected forest and wildlife habitats in Uganda.

The Cartagena Protocol on Biosafety of the Convention, also known as the Biosafety Protocol, was adopted in January 2000. The Biosafety Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. The Biosafety Protocol makes clear that products from new technologies must be based on the precautionary principle and allow developing nations to balance public health against economic benefits. It will for example let countries ban imports of a genetically modified organisms, if they feel there is not enough scientific evidence the product is safe and requires exporters to label shipments containing genetically modified commodities such as corn or cotton.

The 2010 Nagoya Protocol provides a mechanisms for access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the Convention on Biological Diversity. It is a supplementary agreement to the CBD and provides a transparent legal framework for the effective implementation of fair and equitable sharing of benefits arising out of the utilization of genetic resources of the CBD objectives, thereby contributing to the conservation and sustainable use of biodiversity.

The Agreement on the Conservation of African-Eurasian Migratory Water-birds or African-Eurasian Water-bird Agreement (AEWA) is an independent international treaty developed by the UNEP’s Convention on Migratory Species. It is aimed at coordinating efforts to conserve bird species migrating between European and African nations. Its area of coverage stretches from the Arctic to South Africa and includes the Canadian archipelago and the Middle East as well as Europe and Africa. The agreement focuses on bird species that depend on wetlands for at least part
of their lifecycle and cross international borders in their migration patterns. It currently covers 254 species\(^\text{15}\).

The **1971 Convention on Wetlands of International Importance (Ramsar Convention)** is an international treaty for the conservation and sustainable use of wetlands. Also known as the Ramsar Convention, it especially focuses on habitats for Waterfowl. This Convention works in collaboration with the Convention on Biological Diversity (CBD); Convention to Combat Desertification (UNCCD); Convention on the Migratory Species (CMS); the World Heritage Convention (WHC); and the Convention on International Trade in Endangered Species (CITIES).

It provides a framework for national action and international cooperation for the conservation and wise-use of wetlands and their resources. The convention requires:

- The maintenance of wetland’s ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development’;
- Contracting parties (countries) to formulate and implement their planning so as to promote the conservation of wetlands listed in the convention as Ramsar sites and as far as possible the wise-use of wetlands in the respective territory (Article 3.1).
- Contracting parties to arrange to be informed at the earliest possible time, if the ecological character of any wetland in its territory and listed in the convention has changed, is changing or is likely to change as a result of technological developments, pollution or other human interference’ (Article 3.2).
- Undertaking strategic Environmental and Social Impact Assessments (ESIAs) to inform the parties on development projects/interventions with the potential to alter the ecological character of wetlands in a Ramsar site or have negative impacts on other wetlands within their territories. In such a case it is the responsibility of the Contracting Party to inform the convention secretariat/bureau (in this case the IUCN without delay of any likely changes to a project-affected wetland’s ecosystem for approval of the projects (Article 8);
- Contracting parties promote conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether they are included in the List or not, and provide adequately for their widening (Article 4), including management to increase waterfowl populations on appropriate wetlands

In Uganda, the Ramsar Convention specifically protects the Murchison Falls-Albert Delta Wetland System covering 17,293ha (located at 01°57′N 031°42′E) designated Ramsar site no. 1640. It stretches from the top of Murchison Falls, where the Victoria Nile flows through a rock cleft 6m wide to the delta at its confluence with Lake Albert. This site is in a location likely to be affected by the emerging Oil and Gas infrastructure development in Uganda.

The **1972 United Nations World Heritage Convention** is a legally binding international treaty concerning the protection of World Cultural and Natural Heritage. It recognizes that cultural and natural heritage is threatened globally by intended or untended human or animal trespassing as a result of lack of monitoring and restricted/ controlled access to such sites or outright negligence of local administration, which could make such sites unavailable for knowledge to future generations.

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The Convention further recognizes that certain sites of cultural and natural heritage are of outstanding interest and need to be preserved. Therefore, the Convention is intended to conserve for posterity landmarks of special cultural or historic physical significance (e.g. ancient ruins or some historical structures, buildings, cities, complexes, deserts, forests, islands, lakes, monuments, or mountains that symbolizes remarkable footprint of extreme human endeavour often coupled with some acts of indisputable accomplishment of humanity that serves as a surviving evidence of its intellectual existence on the planet. In Uganda, the Kasubi Tombs, Bwindi Impenetrable National Park and Rwenzori Mountains National Park are the 3 World Heritage recognized sites. Murchison Falls National Park, although not a recognized as a World Heritage Site, it is protected as a Ramsar Site. Negotiations are underway to recognize Murchison Falls National Park as a World Heritage site.

The 1975 Convention on International Trade in Endangered Species (CITIES) is a multilateral treaty to protect endangered plants and animals. It is designed to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild; and it accords varying degrees of protection to more than 35,000 species of animals and plants. Participation in the Convention is voluntary. Also, although the Convention is legally binding on the Parties, it does not replace national laws, but rather provides a framework respected by parties that must domesticate the provisions of CITIES in their respective laws. This is a Convention with limited adherence, because about half of the parties lack one or more of the four major requirement i.e. designation of management and scientific authorities; laws prohibiting the trade CITIES listed species; penalties for such trade; laws providing for the confiscation of specimens. In addition, the convention does not provide for arbitration or dispute resolution in the case of non-compliance. This notwithstanding, the more than 36 years of implementation of CITIES has resulted in strategies to deal with infractions by parties.

The 1992 Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal (Basel Convention) is an international treaty designed to reduce the movements of hazardous wastes between nations and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs). The Convention is also intended to minimize the amount and toxicity of wastes generated, to allow their environmentally sound management as closely as possible to the source of generation, and to assist LDCs in environmentally sound management of the hazardous and other wastes they generate. However, the Convention does not address the movement of radioactive wastes, which could become a major challenge in the near future. Article 4 of the Convention calls for an overall reduction of waste generation and keeping wastes within respective country boundaries as close as possible to its source of generation. Although the Convention criminalizes the illegal movement of hazardous wastes, it does not have enforcement mechanisms. Article 12 directs parties to adopt a protocol that sets liability rules and procedures for damage arising from movement of hazardous wastes across borders. The Convention does not also cover space, since space is not classified as a “country”. This could spur countries to deposit hazardous wastes in non-terrestrial (outer-space) locations.

The 2001 Stockholm Convention on Persistent Organic Pollutants is an international environmental treaty that aims to eliminate or restrict the production and use of persistent organic pollutants (POPs), which are defined as “chemical substances that persist in the environment, bio-
accumulate through the food-web and pose a risk of causing adverse effects to human health and the environment”. Parties to the convention agreed to a process by which persistent toxic compounds can be added to the convention as long as they meet specified criteria of being a persist and/or trans-boundary threat. The Convention requires parties to financial resources and put in place measures to eliminate production and use of POPs intentionally and unintentionally produced and to manage and dispose POPs wastes in an environmentally sound manner, precaution being the cornerstone of the convention. Initially, twelve distinct chemicals were listed in three categories (i.e. elimination, restriction & unintentional production) to be controlled by the convention\(^\text{16}\). The list has been extended to 31 POPs.

The **1979 Convention on the Conservation of Migratory Species of Wild Animals** also known as the **Convention on Migratory Species** (CMS) together with its 1983 revision commonly referred to as the **Bonn Convention** seeks to promote conservation of migratory wild animals recognizing that wild animals are an irreplaceable part of the earth’s system and must be conserved. It also recognizes that conservation and effective management of migratory species of wild animals require the action of all countries within which such species spend any part of their life cycle. The Convention is intended to conserve terrestrial, marine and avian migratory species throughout their range. It is an international treaty concluded under the sponsorship of the United Nations Environment Programme (UNEP) responsible with the conservation of wildlife and habitats on a global scale. CMS/ Bonn Convention and its affiliated agreements determine policy and provide guidance on specific issues through their Strategic Plans, Action Plans, resolutions, decisions and guidelines. Article 2 of the convention requires parties (Member States) to acknowledge the importance of migratory species being conserved and of Range States agreeing to take action to this end "whenever possible and appropriate", "paying special attention to migratory species the conservation status of which is unfavourable and taking individually or in cooperation appropriate and necessary steps to conserve such species and their habitat.” Furthermore, Article 2(3) requires Parties to “take action to avoid any migratory species becoming endangered”, including promoting, cooperating and supporting research related to migratory species; endeavouring to provide immediate protection for migratory species listed in Appendix I of the convention; and concluding agreement covering the conservation and management of migratory species in Appendix II. In addition to the Convention, several Memorandums of Understanding (MoUs) have been signed to date to conserve High Andean Flamingos, Aquatic Warbler, Migratory Birds of Prey in Africa and Eurasia, Bukhara Deer, Dugong, South Andean Huemul, Marine Turtles of Indian and South-East Asia Ocean, Mediterranean Monk Seal, Middle-European Great Bustard, Pacific Islands Cetaceans, Ruddy-headed Goose, Saiga Antelope, Siberian Crane, Slender-billed Curlew, Grassland Birds, Western African Aquatic Mammals (Small Cetaceans & Manatees), West-African Elephant, and Marine Turtles of the Atlantic Coast of Africa.

This convention therefore covers the whole country. It requires an understanding of the habitats of wild animals, their migratory routes and designing mitigation measures before development projects are initiated to avoid or reduce the negative effects/impacts of development project(s) on the migratory species.

The **1972 Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)** was intended to preserve “the world’s superb natural and scenic

\(^{16}\) Persistent Organic Pollutants

areas and historic sites for the present and future generations. The convention is spearheaded by UNESCO. The Convention is legally binding and is supported by the Geneva Convention and the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict and International Law. It is also augmented by the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions.

Specifically Article 53 on the Protection of Cultural Objects and of Places of Worship states that “without prejudice to the provisions of the Hague Convention for the Protection of Cultural Property in Event of Armed Conflict and other relevant international instruments, it is prohibited to a) commit any acts of hostility directed against the historic monuments, works of art or places of Worship which constitute the cultural or spiritual heritage of peoples; b) use such objects in support of the military effort; and c) make such object the object of reprisals”

The World Heritage Convention requires parties to produce and submit periodic data reporting providing the World Heritage Committee with an overview of each country’s implementation of the World Heritage Convention and an overview of the current conditions of the “World Heritage Properties” present in the respective countries.

The 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions is a binding international legal instrument that compliments the 2001 Universal Declaration on Cultural Diversity and recognises the rights of Parties to take measures to protect and promote the diversity of cultural expressions; and impose obligations at both domestic and international levels on Parties. It is a precursor of seven other UNESCO Conventions that deal with four core areas of creative diversity i.e. cultural and natural heritage; movable cultural property; intangible cultural heritage; and contemporary creativity. The seven UNESCO conventions include the 1952 Universal Copyright Convention (including its 1971 revision); the 1954 & 1999 Convention for the Protection and Cultural Property in the Event of Armed Conflict; the 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property; the 1972 Convention Concerning the Protection of World Cultural and Natural Heritage; the 2001 Convention on the Protection of the Underwater Cultural Heritage; the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage; and the 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions.

The Convention is a legally binding international agreement that ensures artists, cultural professionals, practitioners and citizens worldwide can create, produce, disseminate and enjoy a broad range of cultural goods, services and activities, including their own. Articles 8 through 11 clarifies three issues: First, that identity of cultural goods and services, values and meanings should not be treated as economic goods – meaning that although cultural expressions are often conveyed by activities, goods and services which accrue economic benefits, they cannot be perceived purely as objects of trade; Second, that the State has responsibility for the protection and promotion of the diversity of cultural expressions – ensuring the free-flow of ideas and works; and Third, that there needs to be international co-operation. The Convention’s main objective is to strengthen creation, production, distribution/dissemination, access and enjoyment of cultural expressions transmitted by cultural activities, goods and services, with a strong focus on developing countries.

17. Suggesting that it would be a crime to trade in cultural property or expressions without appropriate clearances.
The Convention arose out of mounting pressure on developing countries to waive their right to enforce cultural policies and to put all aspects of the cultural sector on the table when negotiating international trade agreements. The international community chose to put in place a law that would recognize the distinctive nature of cultural goods, services and activities as vehicles of identity, values and meaning and that would recognize that while cultural goods, services and activities have important economic value, they are not mere commodities or consumer goods that can only be regarded as objects of trade. The Convention is not intended to control and restrict cultural expressions, but to promote and protect them.

International Finance Institution (IFIs) Operational Policies and Procedures, although not legally binding, they are expected to be complied with whenever States are in development partnerships with the IFIs. These usually cover Environmental Assessment, Natural Habitats, Pest Management, Indigenous Peoples, Physical Cultural Resources, Involuntary Resettlement, Forests, Safety of Dams, and Performance Standards for Private Sector Activities, Projects on International Waterways, and Projects in Disputed Territories.
In addition to the above review of national and international policies, legislation, protocols, convention and treaties, the project undertook a research to assess mining industry’s compliance to national and international pollution standards in Uganda. This was achieved through analysing soil and water samples taken at and in proximity to mining sites. The laboratory results for water and soils tests are summarized in tables 5, 6, 7 & 8. The results were benchmarked against the NEMA and WHO permissible limits.

4.1. Analysis of the Water Test Results for Moroto, Mubende and Nakapiripit districts

Table 5. Laboratory Results for Water Samples from Moroto and Nakapiripit Gold Mining Sites

<table>
<thead>
<tr>
<th>Sample Name/ Village/Site where sample was obtained</th>
<th>Concentration of Chemical in Water (mg/Litre)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aluminium</td>
<td>Arsenic</td>
<td>Lead</td>
<td>Mercury</td>
<td>Cyanide</td>
</tr>
<tr>
<td>Moroto, Rupa1</td>
<td>&lt;0.04</td>
<td>&lt;0.001</td>
<td>&lt;0.02</td>
<td>&lt;0.0002</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Moroto, Rupa2</td>
<td>&lt;0.04</td>
<td>&lt;0.001</td>
<td>&lt;0.02</td>
<td>&lt;0.0002</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Moroto, Rupa3</td>
<td>&lt;0.04</td>
<td>&lt;0.001</td>
<td>&lt;0.02</td>
<td>&lt;0.0002</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Nakapiripit, Mourita1</td>
<td>&lt;0.04</td>
<td>&lt;0.001</td>
<td>&lt;0.02</td>
<td>&lt;0.0002</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Nakapiripit, Mourita2</td>
<td>&lt;0.04</td>
<td>&lt;0.001</td>
<td>&lt;0.02</td>
<td>&lt;0.0002</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>Nakapiripit, Mourita3</td>
<td>&lt;0.04</td>
<td>&lt;0.001</td>
<td>&lt;0.02</td>
<td>&lt;0.0002</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>NEMA</td>
<td>0.2</td>
<td>0.05</td>
<td>0.1</td>
<td>0.001</td>
<td>0.1</td>
</tr>
<tr>
<td>WHO</td>
<td>0.2</td>
<td>0.05</td>
<td>0.1</td>
<td>0.002</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Photo 1: Mr. Paul Kigala, Consultant collecting water samples in Mourita, Nakapiripit
Table 6. Laboratory Results for Water Samples from Mubende Gold Mining Site

<table>
<thead>
<tr>
<th>Sample Name/Village/Site where sample was obtained</th>
<th>Concentration of Chemical in Water (mg/Litre)</th>
<th>Aluminium</th>
<th>Arsenic</th>
<th>Lead</th>
<th>Mercury</th>
<th>Cyanide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lugonge</td>
<td></td>
<td>0.660</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.030</td>
<td>0.102</td>
</tr>
<tr>
<td>Kalagala</td>
<td></td>
<td>0.870</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.080</td>
<td>0.321</td>
</tr>
<tr>
<td>Lujinji</td>
<td></td>
<td>0.040</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.094</td>
<td>0.022</td>
</tr>
<tr>
<td>Lubali Mine</td>
<td></td>
<td>0.040</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.072</td>
<td>0.020</td>
</tr>
<tr>
<td>Lugonge-Lujinji Road Water</td>
<td></td>
<td>0.250</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>1.692</td>
<td>2.426</td>
</tr>
<tr>
<td>Kampala</td>
<td></td>
<td>0.80</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.062</td>
<td>0.004</td>
</tr>
<tr>
<td>Kabaloro</td>
<td></td>
<td>0.645</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>0.032</td>
<td>0.007</td>
</tr>
<tr>
<td>NEMA</td>
<td></td>
<td>0.2</td>
<td>0.05</td>
<td>0.1</td>
<td>0.001</td>
<td>0.1</td>
</tr>
<tr>
<td>WHO</td>
<td></td>
<td>0.2</td>
<td>0.05</td>
<td>0.1</td>
<td>0.002</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Table 5 & 6 reveals that the permissible standards for the concentration of Aluminium, Arsenic and Lead in water is the same for NEMA and WHO, but only differ in the case of Mercury and Cyanide where NEMA sets a more stringent standard compared to WHO. This implies that the concentration of these chemicals should not exceed the set standard. Based on these standards, it is clear that all the Gold mining sites investigated in Moroto and Nakapiripit were not experiencing pollution from the cited chemicals. Discussions with the artisan miners at these sites revealed that they did not use Mercury or Cyanide in the extraction of Gold. The Miners, however, reported that Mercury and Cyanide was being used at another site called Tupac that the research did not investigate due to limited funds. WGI intends to undertake a similar study at Tupac to benchmark it against Rupa and Mourita Gold mining sites.

Table 6 revealed high concentrations of Aluminium in water (data highlighted in red colour) above the NEMA and WHO standards at Lugonge, Kalagala, Kampala and Kabaloro mining sites in Mubende. Also water samples (i.e. “Lugonge-Lujinji Road Water”) taken from a stream crossing the road 4.6km from Lugonge and Lujinji Gold mines revealed high concentration of Aluminium. Usually Aluminium is not found in such high concentrations in Gold tailings. This was attributed to the Aluminium-based ball-mills used in crushing the Gold tailings. Although the concentration of Aluminium at Lubali and Lujinji mining site was below NEMA and WHO standard, it was found to exceed the standards 4.6km downstream, which was attributed to the cumulative effect from the Lugonge, Kalagala, Kampala, and Kabaloro mining sites upstream.
Mercury (Hg) concentrations in water samples taken at “hotspots”\textsuperscript{18} (Photo 3) and selected sites along the stream(s) draining from mining sites in Mubende exceeded the NEMA and WHO standards by a range of 30-94 and 15-47 times, an indication of high pollution levels.

![Photo 3: “Hot Spot”: Men and Women working without protective gear panning Gold tailings in a puddle where Mercury Oxide is mixed at Kampala mining site in Mubende district](image)

The Hg concentration was even higher (1,692 times the NEMA standard) 4.6km downstream at the point where the river crosses the road (Photo 4), indicating that Mercury was causing pollution downstream. Although it was not clear whether the residents consumed water from this stream or used it to prepare food, there was evidence of using the water for washing (Photo 5).

![Photo 4: Mr. Paul Kigala, Consultant collecting water samples at the Lugonge-Lujinji Road-Water Crossing point, Mubende](image)

\textsuperscript{18} Hotspots are points where the earth tailings are mixed with water and Mercury Oxide to isolate the Gold from the tailings.
The research team found a woman washing clothes and young man washing a motorcycle at this point (Photo 5). Such concentrations of Mercury could easily penetrate the skin of humans. There is no evidence of such effects, since no bio-monitoring of the effects of Mercury on humans has been done in Uganda. WGI, in collaboration with the relevant professionals, intends to undertake a bio-monitoring research on the effects of Mercury and Cyanide on Humans in Uganda, which will also serve as a benchmark for future bio-monitoring studies.

The concentrations of Cyanide in the water was within range of the NEMA and WHO permissible standard at Lubali, Lugonge, Kampala, Lujinji and Kabaloro mining sites. However, the Cyanide concentration at Kalagala mining site was 3.21 times higher than the NEMA and 1.61 times higher than the WHO permissible standard. Similarly, the concentration of Cyanide at the point where the stream crosses the Lugonge-Lujinji Road (Photos 4 & 5) was 24.26 times and 12.13 times higher than the NEMA and WHO permissible standards, respectively. The higher concentrations at the stream-road crossing was attributed to Cyanide accumulation and cumulative impact of the Kalagala mining site upstream attributed to careless depositing of Cyanide-impregnated earth tailings in proximity to the wetland upstream (Photo 6). Also, the team observed that there were no signs of life (e.g. tadpoles, mosquito larvae, etc.) in the water, which could be an indication that the organisms in the water were being killed by the Cyanide.
4.2. Analysis of the Soil Test Results for Moroto, Mubende and Nakapiripit districts

The laboratory results for soil tests are summarized in tables 7 & 8. The results were also benchmarked against the NEMA and WHO permissible limits.

Table 7: Laboratory Results for Soil Samples from Moroto and Nakapiripit Gold Mining Sites

<table>
<thead>
<tr>
<th>Sample Name/ Village/Site where sample was obtained</th>
<th>Concentration of Chemical in Soil (mg/Kilogram)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aluminum</td>
</tr>
<tr>
<td>Moroto. Rupa1</td>
<td>7.700</td>
</tr>
<tr>
<td>Moroto. Rupa2</td>
<td>7.400</td>
</tr>
<tr>
<td>Moroto. Rupa3</td>
<td>6.500</td>
</tr>
<tr>
<td>Nakapiripit. Mourita 1</td>
<td>8.800</td>
</tr>
<tr>
<td>Nakapiripit. Mourita 2</td>
<td>6.900</td>
</tr>
<tr>
<td>Nakapiripit. Mourita 3</td>
<td>7.400</td>
</tr>
<tr>
<td>NEMA</td>
<td>100.000</td>
</tr>
<tr>
<td>WHO</td>
<td>Standard Absent</td>
</tr>
</tbody>
</table>

Photo 6: Large dump of Cyanide-impregnated earth tailings deposited in proximity to the wetland near Kalagala-Lugonge-Lujinji Gold mining sites, Mubende
Table 7 reveals that all the test results were significantly lower than the NEMA and WHO permissible standards for soils, indicating that there was no major Aluminium, Arsenic, Lead, Mercury and Cyanide pollution risks in the soils/land in proximity to Artisan and Small-scale mining operations at Rupa and Mourita in Moroto and Nakapiripit, respectively. This was probably because the miners in these regions were not using similar technology (e.g. Aluminium ball-mills) and chemicals (i.e. Mercury/ Cyanide) as that applied in Mubende. Also the operations were really very small to cause any significant impact on the environment (Photo 7). It was discovered that WHO does not provide any permissible limits for Aluminium and Cyanide in Soil.

Left Photo 7 A female artisan Gold miner panning Gold at a site in Rupa, Moroto district.
Right Photo 8: A female artisan Gold miner panning Gold at a site in Mourita, Nakapiripit district

Photo 9: Mr. Paul Kiggala (left) assisted by Mr. Denis Alinaitwe (right) to collect a soil sample in Mourita, Nakapiripit district
### Table 8: Laboratory Results for Soil Samples from Mubende Gold Mining Sites

<table>
<thead>
<tr>
<th>Sample Name/ Village/Site where sample was obtained</th>
<th>Concentration of Chemical in Soil (mg/Kilogram)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aluminum</td>
</tr>
<tr>
<td>Lugonge</td>
<td>79.710</td>
</tr>
<tr>
<td>Kalagala</td>
<td>231.10</td>
</tr>
<tr>
<td>Kapya</td>
<td>93.980</td>
</tr>
<tr>
<td>Kikadde</td>
<td>105.100</td>
</tr>
<tr>
<td>Kampala</td>
<td>172.88</td>
</tr>
<tr>
<td>NEMA</td>
<td>100.000</td>
</tr>
<tr>
<td>WHO Standard Absent</td>
<td>75.000</td>
</tr>
</tbody>
</table>

Test results of Mubende revealed very high concentrations of Aluminium in soil in the range of 105-231.1mg/Kg soil above the NEMA permissible standard of 100mg/Kg soil at Kalagala, Kikadde and Kampala mining sites. This concentrations were in soil samples obtained from the “Hotspots”. Similarly high concentrations of Mercury (3.251mg/Kg) and Cyanide (11.201mg/Kg) were discovered in soils that were above the NEMA ceiling of 2.0mg/Kg and 10.0mg/Kg for Mercury and Cyanide, respectively. Based on the WHO standards, Arsenic, Lead and Mercury would be considered to be in the normal or permissible range. In such a case, it would be advisable to base on the NEMA standard, which is more restrictive to measure mining industry’s compliance to pollution safeguards in Uganda in respect to Aluminium, Arsenic, Lead, Mercury and Cyanide in soils.

Photos 3 and 6 demonstrate non-compliance by Artisan and Small-scale Gold Miners to health, safety and environmental safeguards enshrined in the national and international policies, legislation, protocols, convention and treaties. National policy and laws require miners to have specialized and designated sites, technology and infrastructure to manner mining wastes (tailings), which was not the case in Mubende. Also, the policies and laws require miners to decommission mining sites whenever operations at a given site have ended. While this was the case with medium-scale Gold miners, the Artisans and Small-scale miners often abandoned sites without decommissioning them, leaving behind many littered gaping holes/ mine shafts (Photo 10 & 11), which are a risk to humans and wildlife.
Left Photo 10: Abandoned Artisan and Small-scale Gold mine shaft in Rupa, Moroto district.
Right Photo 11: Abandoned Artisan and Small-scale Gold mine shaft in Mourita, Nakapiripit district.
5.0. CONCLUSIONS AND RECOMMENDATIONS

While the multinational companies demonstrated willingness to comply with the national and international social and environmental safeguards dealing with involuntary displacement of persons affected by project they (companies) sponsor, government - on the other hand - has not demonstrated that it cares about the welfare of the affected persons. Oftentimes, the compensation and resettlement offered to the displaced persons is inadequate to restore or even improve the lives of the affected persons. Cases are rife in courts of persons dissatisfied with the compensation and resettlement packages and processes. There also many examples in society where individuals displaced by development projects have ended-up poorer than they originally were – the opposite is uncommon. It should be in government’s interests that the well-being of its citizens is bettered.

It is a well-known fact that land is factor of capital, which can be used as equity or collateral in a given investment. However, the manner in which it is handled in cases where government and government-sponsored investors are seeking land for investment is contrary to the fact. In such cases, land is relegated to an item that can be acquired or compulsorily-taken by government or investors by simply paying compensation and resettlement to the landowner – even at rates that are not consistent with the market. This practice is mainly borrowed from the operational policies, procedures and recommendations of International Finance Institutions and Multinational Corporations (MNCs) who are usually reluctant to acquire land in jurisdictions where they invest at prevailing market rates or reluctant to acquire land as equity for the landowner in the investment. This practice of compensation and resettlement has always resulted in impoverishment and/or disenfranchisement of involuntarily displaced persons, which violates the tenets enshrined in the international social and economic safeguards cited above. The concept of compensation and resettlement of project-affected persons needs to be revised fairly.

Artisan and Small-scale miners tend not to be aware of the broad spectrum of social and environmental safeguards and therefore inadvertently violate or do not comply with the safeguards. Even in cases where they may be aware of the safeguards, they may deliberately violate them, especially where there is limited or no enforcement of the safeguards. It is important for Artisans, Small- and Medium- Scale Miners (ASMs) to be educated about the safeguards. For a long time government had ignored ASM, because they were classified as illegal and inconsequential – not warranting government expenditure on them. It is good that government is beginning to recognize the role ASMs play in the mining sector – as “path finders” or “wild cutters”. However, it is not good to leave ASMs as “path finders” only, but to regularise them and give them an opportunity to engage in mining as individuals and collectively as groups or as ASM-mining companies. It will be important for government and other stakeholders to invest in educating ASMs on social and environmental safeguards, including standards of extracting minerals.

The research discovered that while the national environmental laws and regulations recognise and regulate Mercury associated with other compounds (e.g. amalgams) and products (e.g. cosmetics) and there are clear Customs mechanisms for handling such materials, the NEMA laws and regulations, including Customs are silent on Mercury Oxide used in Gold/Silver extraction. Consequently, Mercury Oxide enters the country illegally. As Government revises the national environmental policy, laws and regulations, it is important that regulation of Cyanide and Mercury - in all its forms is enshrined in the legislation. It will also require updating the Customs regulations.
to capture importation, transportation and storage of Mercury and Cyanide used in mining operations.

The mining sector is increasingly becoming important economically, it will require that all stakeholders are prepared to embrace the emerging sector.

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. However, 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 with time. 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. Government needs to continuously monitor and report on mining industry compliance to national and international social, economic and environmental safeguards, including bio-monitoring the effects/impacts of Cyanide and Mercury and other chemicals to the human health.

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. The use of closed-loop water recycling systems to avoid chemical spillage into the environment should be requirement, including the use of wet-gold extraction to control dust pollution and making protective gear mandatory among ASMs
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