
Oil Governance in Uganda and Kenya:

A review of efforts to establish baseline indicators on the impact of the oil sector in Uganda and Kenya



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Authors: This report was prepared by Ruth Golombok (Lead Author), and edited by Matt Jones. Maps were prepared by Environmental Research and Assessment

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Abbreviations

Abbreviation	Definition
ARDSP	Albertine Region Sustainable Development Project
ASAL	Arid and Semi-Arid Lands(Kenya)
BAP	Biodiversity Action Plan
BMU	Beach Management Unit
BP	Bank Procedure (World Bank)
CDIP	County Development Investment Plans(Kenya)
CFR	Central Forest Reserve (Uganda)
CGIAR	Consultative Group on International Agricultural Research
CH	Critical Habitat
CIA	Cumulative Impact Assessment
CNA	Capacity Needs Assessment
CNOOC	China National Offshore Oil Corporation
CPF	Central Processing Facility
CPI	Corruption Perception Index (Transparency international)
CSD	Conservation and Sustainable Development
CSO	Civil Society Organisation
DFID	Department for International development (UK)
DRC	Democratic Republic of Congo
DWRM	Directorate of Water Resources Management (Uganda)
EA	Exploration Area
EHS	Environmental Health and Safety
EIA	Environmental Impact Assessment
EIAAR	Environmental Impact Assessment and Audit Regulations (Kenya)
EITI	Extractive Industry Transparency Initiative
EMCA	Environmental Management and Coordination Act (Kenya)
EMP	Environmental Management Plan
EMPAG	Environmental Monitoring Plan for the Albertine Graben
E&P	Exploration and Production
ESIA	Environmental and Social Impact Assessment
FMP	Forest Management Plan (Uganda)
FoLT	Friends of Lake Turkana
FPIC	Free Prior and Informed Consent
GBIF	Global Biodiversity Information Facility
GEF	Global Environment Facility
GIS	Geographic Information System
GN	Guidance Note
GoU	Government of Uganda
HCV	High Conservation Value

Abbreviation	Definition
HRIJ	Human Rights and International Justice
IBA	Important Bird and Biodiversity Area
IBAT	Integrated Biodiversity Assessment Tool
ICOC	International Code of Conduct (for Private Security Service providers)
IFC	The International Finance Corporation
IIED	International Institute for Environment and Development
ILO	International Labor Organisation
IPIECA	International Petroleum Industry Environmental and Conservation Association
IPIS	International Peace Information Service
IUCN	International Union for Conservation of Nature
KNCHR	Kenya National commission on Human rights
LAPSSET	Lamu Port and South Sudan Ethiopia Transport ()
MFNP	Murchison Falls National Park
MoLHUD	Ministry of Land Housing and Urban Development (Uganda)
MP	Member of Parliament
NaFiRRI	National Fisheries Resources Research Institute (Uganda)
NBSAP	National Biodiversity Strategy and Action Plan (Uganda)
NDP	The National Development Plan (Uganda)
NEA	National Environment Act (Uganda)
NEMA	National Environment Management Authority (Uganda and Kenya)
NFA	National Forestry Authority(Uganda)
NGO	Non-Governmental Organisation
NLC	National Land Commission (Kenya)
NMK	National Museum of Kenya
NOCK	National Oil Company Kenya
NORAD	Norwegian Agency for Development Cooperation
NRC	Natural Resources Charter
OGP	International Association of Oil and Gas Producers
OECD	Organisation for Economic Development and Cooperation
OMCT	World Organisation Against Torture
OP	Operational Policy (World Bank)
PEAP	Poverty Eradication Action Plan (Uganda)
PEPD	Petroleum Exploration and Production Department (Uganda)
PMP	Petroleum Management Plan (Kenya)
POM	Public Order Management (Uganda)
PPP	Private Public Partnership
PS	Performance Standard
PSA	Production Sharing Agreement
PSC	Production Sharing Contract
QENP	Queen Elizabeth National Park
SEA	Strategic Environmental Assessment
SSAE	School of Statistics and Applied Economics Makerere

Abbreviation	Definition
STAR	Sustainable Tourism in the Albertine Rift
TBI	Turkana Basin Institute
THF	Tropical High Forest
UBOS	Uganda Bureau of Statistics
UNHCR	Uganda Human Rights Commission
TOUP	Tullow Oil Uganda Operations Pty Ltd
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNEP-WCMC	United Nations Environment Programme - World Conservation Monitoring Centre
UNGP	UN Guiding Principles
USAID	US Agency for International Development
UWA	Uganda Wildlife Authority
VEC	Valued Ecosystem Components
WCMA	Wildlife Conservation and Management Act (Kenya)
WCS	Wildlife Conservation Society
WMD	Wetlands Management Department (Uganda)
WR	Wildlife Reserve (Uganda)
WRI	World Resources Institute
WRMA	Water Resource Management Authority
WWF	World Wide Fund for Nature

Glossary of terms¹

Term	Definition
Critical Habitat	Critical habitats are areas with high biodiversity value, including (i) habitat of significant importance to Critically Endangered and/or Endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes. (IFC Performance Standard 6 2012).
Ecoregion	An ecoregion is a large unit of land or water containing a geographically distinct assemblage of species, natural communities, and environmental conditions.
Ecosystem	A dynamic complex of plant, animal and microorganism communities and their non-living environment interacting as a functional unit (Convention on Biological Diversity 1992)
Ecosystem service	Benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as regulation of floods, drought, land degradation, and disease; supporting services such as soil formation and nutrient cycling; and cultural services such as recreational, spiritual, religious and other nonmaterial benefits. (Millennium Ecosystem Assessment: Ecosystems and Human Wellbeing 2005)
Exploration Area	Concession awarded by the Government of Uganda and in which oil and gas exploration may take place.
Important Bird Area	Key sites for the conservation of bird species, identified through the BirdLife International IBA programme. Sites are chosen because of their significant for the long-term viability of naturally occurring bird populations, across the geographical range of those bird species for which a site-based approach is appropriate. These sites are priority areas for conservation of globally threatened, range restricted, biome restricted and congregatory species as identified Birdlife International.
Keystone species	Species whose influence on ecosystem function and diversity are disproportionate to their numerical abundance. Although all species interact, the interactions of some species are more profound and far-reaching than others, such that their elimination from an ecosystem often triggers cascades of direct and indirect changes on more than a single trophic level, leading eventually to losses of habitats and extirpation of other species in the food web (Soule & Noss 1998).
Land use	A characterisation or definition of the use to which land is put. For example, a forest might be used for hunting, tourism or strict preservation, although the land cover in all three cases might be identical.
Mitigation	Measures which aim to reduce impacts to the point where they have no adverse effects (BBOP & UNEP 2010). Examples of mitigation measures include <u>avoidance</u> of sensitive sites or disruptive work at sensitive times (e.g. breeding seasons), translocation of species to temporary or permanent alternative sites, post-project site <u>restoration</u> and re-colonisation/stocking and the creation of similar <u>habitats</u> to offset <u>residual impacts</u> .
Modified habitat	Areas that may contain a large proportion of plant and/or animal species of non-native origin, and/or where human activity has substantially modified an area's primary ecological functions and species composition (IFC Performance Standard 6 2012). (This excludes habitat that has been converted in anticipation of the project). Modified habitats may include areas managed for agriculture, forest plantations, reclaimed coastal zones, and reclaimed wetlands.
National Park	A natural area of land designated to a) protect the ecological integrity of one or more ecosystems for present and future generations, b) exclude exploitation or occupation inimical to the designation of the area and c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities.
Natural Habitat	Areas composed of viable assemblages of plant and/or animal species of largely native origin, and/or where human activity has not essentially modified an area's primary ecological functions and species composition (IFC Performance Standard 6)
Net gain	See no net loss below
No net loss	The point at which the project-related impacts on biodiversity are balanced by measures taken to avoid and minimize the project's impacts, to understand on site restoration and finally to offset significant residual impacts, if any, on an appropriate geographic scale (e.g. local, landscape-level, national, regional) (IFC Performance Standard 6, 2012) Where the gain exceeds the loss, the term 'net gain' may be used instead of no net loss.
Protected Area	A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. (IUCN 2008)
Ramsar Site	Wetlands of international importance as designated under the Ramsar Convention.

¹ For further detail on definitions and associated references see The Biodiversity A-Z (<http://www.biodiversitya-z.org/>)

Executive Summary

This report presents the results of a study undertaken by UNEP-WCMC for the MacArthur Foundation, from November 2013 to May 2014 and updated in January 2015, to:

- identify the data required to monitor the impact of the emerging oil sector in the Ugandan Albertine Graben and Kenyan Turkana Basin on the environment and the socioeconomic livelihoods of affected people and communities in those areas; and
- establish the suitability of data currently being, or proposed to be, generated, to meet such needs.

The purpose of the study is to inform the subsequent development of an indicator framework that can be used by the MacArthur Foundation to monitor and evaluate both the impact of oil development on the environment and socioeconomic livelihoods of people, as well as the performance of its own grant making in achieving the changes it seeks to facilitate in oil governance in the Great Lakes Region of Eastern Central Africa.

The study was implemented through a desk based exercise and interviews with key informants, to provide the following:

1. Identification and cataloguing of relevant aspects of policies, laws and standards relevant to governance, and social economic and environmental performance of the oil sector in Uganda and Kenya.
2. Analysis of such policies, laws and standards in the context of the specific conditions and trends in the Albertine Graben and Turkana Basin, to inform the derivation of environmental, social, and governance objectives to be achieved when operating in such areas.
3. Identification of current or planned data generation in each country, and an assessment of their quality and potential to be applied to the monitoring of performance of the oil sector against the derived environmental, social and governance objectives.

It is recognised that the situation with respect to all three of the above is fast moving, influenced among others by the activities of oil companies, emerging legislation (including that being developed specifically to address the needs of the oil sector), and evolving monitoring activities. While the interviews and majority of the desk-based exercise were carried out in late 2013 and early 2014, a rapid review of legislation was also undertaken in December 2014 to update this aspect of the report to include key changes that have occurred since the initial analysis was undertaken. The situation is anticipated, however, to remain subject to change, and requiring regular review as oil development progresses in the Great Lakes Region.

Legislation, policy and standards

The discovery of oil is relatively new to both Uganda and Kenya. The first licences in Uganda were granted to Tullow Oil in 2004 and the commercial threshold to develop was exceeded in 2009. The legislation to manage and regulate the industry is therefore still in a state of evolution. It also needs to be set within the context of wider legislative changes arising from the new Constitutions in each country.

The Ugandan Constitution (1995 as amended in 2005), provides for a clean and healthy environment, citizen participation in development, and rights to property and compensation for associated losses. These requirements are being implemented through, for example, the National Land Policy (2013) and various amendments to the Land Act. The National Development Plan (republic of Uganda, 2010) envisions the private sector driving economic growth and specifically recognises the need to strengthen the policy, legal and regulatory framework for the oil and gas sector. The Oil Policy (2008) and Oil and Gas Revenue Management Policy (2012) set out the framework for oil development and for managing revenues, including requiring the highest standards of transparency, and a commitment (although not yet delivered) to joining the Extractives Industry Transparency Initiative (EITI). While the Public Finance Bill (2012) aims to implement the Revenue Policy, significant concerns have been raised regarding its initial draft. The two (upstream and midstream) Petroleum Acts (both 2013) regulate the industry and include provisions relating to licensing, protecting the environment, and maximising local benefits.

The new (2010) Constitution of Kenya sets the scene for substantial legislative reforms including those relating to land tenure, environmental protection, citizen participation and benefit sharing, transparency and access to information, which are all of relevance to oil development. These are being addressed through a raft of new policies and legislation including: Vision 2030 (Republic of Kenya, 2007), and its second implementation plan (Republic of Kenya 2013) which identify that oil development is for the benefit of the people with priority given to local communities; the Access to Information Bill (2013); Amendments to the Environmental and Coordination Act (2013); the New Wildlife Policy, Wildlife Protection Act and Draft Wetlands Policy (all 2013) as well as the Land Act and Land Registration Act (both 2012) and the Community Land Bill (2013). In order to address the specific needs of the oil sector, Kenya also published in 2013 its National Energy Policy, Energy Bill and the Natural Resources (County Royalties) Bill.

Various aspects of existing and evolving legislation in both Uganda and Kenya are potentially conflicting and there is uncertainty as to the final form of the legislation and how both the existing and new laws will be applied, notably in relation to: areas excepted from access to information provisions; the level of benefit sharing of oil revenue; the authority vested in institutions and individuals for management of revenues, and allocation of licenses etc. Some of the environmental legislation in both countries is relatively old and may need to be amended to address requirements of the new Constitutions and the specific impacts of the oil sector, for example waste management, regulation of air emissions, protection of wildlife.

Both Kenya and Uganda are signatories to numerous international agreements and conventions, which are designed to protect aspects of the environment and society, including biological diversity, natural resources, wetlands, culture and human rights among others. It is, however, noted that neither country has as yet signed the EITI).

While the recent changes in legislation in both countries are encouraging signs of the establishment of a policy and legal framework for oil and gas exploration and production, there are still significant gaps in the specific implementation instruments. This means that, in certain areas of governance, both countries may as yet remain unprepared for the management and regulation of that sector.

Environmental and Socioeconomic context

The Albertine Graben and Turkana Basin are both situated within one of Africa's most important regions for biodiversity conservation. They overlap with four global 200 ecoregions as well as numerous areas protected for wildlife, as well as International Bird Areas, Ramsar Sites and World Heritage Sites. The Turkana Basin is also situated within the East Asia/East Africa Flyway.

Both regions are highly dependent on the water regime for maintaining ecosystems, and hence both the biodiversity resources that depend on them, and the range of domestic and livelihood activities, notably fishing in the numerous lakes within them.

Socio-economic conditions are highly influenced by the remote locations of both the oil regions, with high poverty and natural resource dependency levels, and low levels of education and health. Livelihood activities in the Albertine Graben are predominantly subsistence agriculture and fisheries, with some livestock grazing, while in the Turkana Basin there is a spectrum of activities, ranging from pastoralism through agro pastoralism to mixed livestock and farming. All are therefore highly dependent on ecosystem services. Economic activities such as cash crop farming, commercial fisheries, bee keeping and timber production are also predominantly natural resource based. The secondary (manufacturing) sector only plays a very small role. There is some evidence in Uganda that the arrival of oil has led to increased levels of delinquency and "drop out" from education as well as abandonment of women and children by household heads as a result of the increased levels of cash in the economy.

The high dependency on land and natural resources results in particular vulnerability to environmental fluctuations such as drought, as well as to land pressures from high population growth and influx, all of which are already giving rise to tensions over access to resources. This is particularly so in Turkana where ethnic tensions have historically resulted in endemic conflict, including across national borders, and has recently become more severe in its consequences as a result of the proliferation of arms.

Land tenure in both areas has until recently been predominantly customary, with significant areas of communal land. Recently however, there has been evidence of trends towards more formal registration in both countries, possibly influenced by increased pressure on land, an increase in sedentary agriculture (in south Turkana) as well as moves to secure customary rights and land grabbing in anticipation of the arrival of oil (in the Albertine Basin).

Certain groups are likely to be more vulnerable to, and disproportionately lose out from, these pressures and changes, including women and certain ethnic and other marginalised groups.

Data availability and quality

Governance and institutional framework

Monitoring of the legislation and standards, and status and performance of institutions applicable to the management and regulation of the oil sector in both Kenya and Uganda is primarily undertaken by

Non-Governmental Organisations (NGOs) and Civil Society Organisations (CSOs). This has to date focused on the evolving institutional framework and legislation specific to the oil sector and directly associated procedural aspects notably: transparency and access to information; accountability; and revenue allocation and management. Some NGOs and CSOs have begun monitoring the broader governance framework of relevance to the sector for example with respect to human rights issues, which in some cases also touches on socioeconomic and environmental safeguards - for example the land legislation. There has however been little monitoring of the adequacy of the broader environmental legislation and its implementation to address the impacts on biophysical resources, although as identified in this report, gaps are likely to exist (notably frameworks for management and regulation of related waste, wetlands etc.)

Environmental and socioeconomic data - government led initiatives

The key responsibility for environmental monitoring in both Uganda and Kenya rests with each country's National Environmental Management Authority (NEMA) although various other government agencies also have mandates in this area, notably for water resources, biodiversity and cultural heritage resulting in several potential source of environmental data that could be used for monitoring. Responsibilities for socio-economic monitoring are less clear with the most consistent government source of such data likely to be the census. In Uganda, however, the Uganda Human Rights Commission has recently undertaken a review of the oil sector performance in this area. The limited government resources (technical and financial), lack of integration between agencies and remote nature of the oil rich areas in both countries however, means that to date such regions have been largely neglected in terms of monitoring. This has resulted in an acute shortage of data. Data that have been generated to date are generally piecemeal in terms of spatial coverage, parameters covered, consistency of methods used and frequency of surveys, thus limiting their applicability to monitoring of change.

There are, however, several areas where integrated approaches have potential for informing more scientifically robust monitoring, for example the International Biodiversity Assessment Tool (IBAT) initiative which collates information on protected areas and biodiversity from various sources and the National Museum of Kenya (NMK) inventories which record all archaeological and biological data collected in Kenya. The increased availability of remote sensing imagery could also address some needs of ongoing monitoring of the oil sector, although its use would require additional analysis and interpretation to harness its value.

The need for a more robust approach to environmental and socioeconomic data collection, following the discovery of oil, is being addressed to some extent in Uganda, where the Norwegian government has funded development of the Environmental Monitoring Plan for the Albertine Graben,(EMPAG) (NEMA, 2012).

A review of the Ugandan EMPAG and interviews with various informants, undertaken for this study, identified that, while many of the proposed measures, if implemented, could potentially generate the data required to monitor the impact of the oil sector, in several areas the proposals appear to be highly ambitious and aspirational and may not in practice be achieved. The review also identified various potential limitations including in relation to: technical and spatial scope (addressing landscape level, indirect and cumulative impacts), sampling strategy, standards to be applied and compatibility of components to be monitored with requirements of relevant policies, legislation and standards. There

are also indications of potential capacity and funding gaps that may constrain delivery of the EMPAG. It is recognised that such gaps may be addressed by current capacity building initiatives notably that are currently being undertaken by USAID, but these are still in early stages, so the outcomes cannot as yet be anticipated.

In Kenya, while exploration activities are progressing, and are likely soon to move on to production there are as yet, no known plans for government led monitoring of environmental and social performance of such activities. As in Uganda there is a need to consider both the induced as well as cumulative effects of oil development, in addition to direct and indirect effects. A particular challenge in developing monitoring proposals in Turkana will be in determining how, and indeed if, the monitoring impacts of oil development can take due account of the other significant infrastructure proposals in the area, for example the Lamu Port and South Sudan Ethiopia Transport (LAPSSET) corridor and various, power and tourism developments. A further complexity arises from the international dimensions of such infrastructure development, notably the Gibe Dams and irrigation proposals in Ethiopia, which will have major implications for the water regime in Lake Turkana in Kenya, on which the livelihoods of many communities depend and the access to which is a source of livelihood security and hence a potential catalyst for local conflict.

Environmental and socioeconomic data – NGOs and research agencies

A number of NGOs, aid agencies and research institutes have been active in the oil development regions in both Uganda and Kenya and have produced some good quality data. The short term nature of funding cycles however, constrains generation of long term data sets, while the lack of integration (and hence compatibility of data that is generated) between such initiatives, and with those that are government led, limits their application to the monitoring of the performance of the oil sector. This is particularly so for socio-economic data where there is more variability over methods used (which are also generally more qualitative than those adopted for environmental monitoring) and hence offer less potential for integration of data from different sources. The spatial coverage of such initiatives is also generally very limited and, as a consequence, potentially biased and non-representative, for example focussing on wildlife protected areas (for example studies of the Wildlife Conservation Society in Uganda), sites already known to have high archaeological potential (Turkana Basin Institute in Kenya) or sites or that that can be readily accessed, rather than based on a more systematic sampling strategy and comprehensive coverage.

The discovery of oil has also influenced the data collection activities of several NGOs and CSOs, for example International Alert and the Wildlife Conservation Society have undertaken surveys relating to socioeconomic conditions and biodiversity respectively in relation to performance of the oil sector in the Albertine Graben, while the Friends of Lake Turkana have mapped grazing migration routes in parts of the Turkana oil development area. Although these provide useful “snapshots” of some of the vulnerabilities to oil development, it is not known whether the studies will be extended and/or repeated over time, and hence whether such initiatives can be relied upon for ongoing monitoring of oil sector performance

Corporate initiatives

At the corporate level, through their commitment to International Finance Corporation (IFC) compliance, all three oil companies with a current interest in the Albertine Graben and the Turkana Basin will be required to implement substantial monitoring programmes both to inform the

Environmental and Social Impact Assessments (ESIAs) for their developments, and as part of the subsequent implementation of the associated Environmental and Social Management Plans (ESMPs). It is understood that the three operators in Uganda are already collaborating to generate such data, including at the landscape level to consider induced and cumulative impacts. In Kenya, Tullow Oil has undertaken a Strategic Environmental Assessment (SEA) and is now progressing various ESIAs, as well as further data collection in Turkana. While such activities may in principle generate the data required for ongoing monitoring, data provision to third parties may be subject to government approvals. The generation of such data may also be constrained by the tight time frames, and could potentially be affected should the license rights be sold on to other companies, as IFC compliance is not understood to be a condition of production license award.

Summary of data available for monitoring

Various government agencies, NGOs, aid agencies and research organisations are collecting some data in the Turkana Basin and Albertine Graben, which are useful in providing a snapshot of key issues in certain locations. While some studies are in principle long term (e.g. some government programmes for water monitoring) in practice many of these are not fully implemented and at best have generated interrupted data sets, over various monitoring locations. The lack of coordination and systematic approaches both within and between such studies therefore significantly limits their applicability for longer term monitoring across the areas of influence of oil related activities in both regions. The increased availability of remotely sensed data may enable this challenge to be addressed in some areas, although significant data gaps would still remain. While in Uganda the proposed EMPAG outlines a more coordinated approach to address this gap, some constraints and limitations in this plan have been identified. No such plan has as yet been identified for the Turkana Basin. The commitment of the oil companies to adhere to IFC Performance Standards, and the implications of this in terms of ongoing monitoring, should, however provide a more robust set of data. The scope of such monitoring has not yet been confirmed and it is not clear whether once generated these data would be made available to third parties.

Table 1 below shows a high-level summary of the data availability, and applicability to monitoring and evaluating oil sector performance with respect to environmental and social safeguards and governance in Uganda and Kenya.

Recommendations

While development of an indicator framework and specific indicators for monitoring the oil sector is outside the scope of this report, the outputs of the analyses undertaken and reported in this document should directly inform such an exercise. Several recommendations for potential actions that could facilitate monitoring of the oil sector have also been identified through the study:

- ***In Uganda, promoting collaboration and integration between NEMA and oil company monitoring*** in some, if not all, elements of such activities. This may present both opportunities and challenges. The former will be the ability to share data and resources resulting potentially in a more efficient approach to a large task and hence greater coverage. In terms of challenges, the EMPAG is unlikely to meet the oil company requirements particularly in terms of monitoring IFC and corporate compliance, yet NEMA may not be in a position to deviate from this programme. Quality control of field activities and data management may also be an issue although such collaboration may offer opportunities, to raise government capacity in this area. Thirdly, as outlined below there may be resistance within the Ministry of Environment and Mineral Resources (MEMD), to making corporate data available to third parties. Therefore while such collaboration may have limitations there may be areas which could be pursued (e.g. common monitoring needs) where it could be mutually beneficial. Measures to embed such collaboration in the various bilateral programmes (e.g. NORAD, USAID) which include components to enhance government monitoring capacity may also be appropriate in this respect.
- ***In Kenya promoting and supporting initiatives to develop and implement government led monitoring*** of the oil sector and the associated capacity building that will be required to underpin this. At the time of writing, unlike in Uganda, there were no known bilateral initiatives in these areas. Noting the lessons learned from Uganda, and carrying these over to the Kenyan context at an early stage might enable a realistic and actionable government monitoring programme in Kenya but also one that complies with international and corporate standards and may set the benchmark for consistent monitoring across the region.
- ***Promoting a more systematic approach to NGO efforts*** may enhance their applicability for long term basin-wide monitoring in both countries.
- ***Securing broad access to company generated data*** would most likely go a considerable way to generating the required data enabled monitoring of the performance of oil sector development both by the government and other interested parties. While individuals within the companies working in the region have expressed their willingness to make the data they collect available to third parties, in Uganda to date there appears to be some constraints to releasing this outside of the MEMD. Measures to overcome such constraints would be likely to have significant benefits to both government agencies and other stakeholders with an interest in such information.
- ***Addressing needs for additional baseline data and analyses*** to enable monitoring of compliance with national standards, e.g. mapping of areas which qualify as wetlands or rivers, or for other protection under national legislation, but which have not yet been defined, so that protection of such areas can be applied and monitored. This would be a tangible step to fill a key recognised information gap and enable effective targeting of future monitoring efforts.

- ***Promoting the adoption of landscape approaches to monitoring*** to include tracking of:
 - fragmentation of habitat
 - unplanned consequences of development (notably in-migration and its resultant impacts)
 - cumulative impacts arising from the combined incremental contributions of oil activities and additional foreseeable development in the area
 - other natural and human stressors on valued environmental and social components.

Table 1: High-level indicative summary of applicability of data available for monitoring and evaluation of environmental and social performance and associated governance of the oil sector

Theme	Measure	Uganda				Kenya			
		Technical & Spatial coverage	Ease of Use	Updated over time	Robust	Technical & Spatial coverage	Ease of use	Updated over time	Robust
Governance	National petroleum legislation and commitments consistent with good practice in relation to that sector, and institutions with capacity to implement them	Light Blue	Dark Blue	Light Blue	Dark Blue	Light Blue	Dark Blue	Light Blue	Dark Blue
	Environmental legislation addresses oil sector needs	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Oil companies have corporate standards consistent with international good practice	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Transparency accountability, access to information	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Participation in policy making, decision making and monitoring relating to the oil sector	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Revenue allocation and investment	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Biodiversity	Wildlife Protected Areas (PAs)	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Other areas designated for biodiversity	Dark Blue	Dark Blue	Light Blue	Dark Blue	Dark Blue	Dark Blue	Light Blue	Dark Blue
	Areas qualifying as critical or natural habitat	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Main ecosystem services	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Water resources	Avoiding development around protected rivers and lakes and safeguarding their upstream catchments	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Maintain water quality and hydrology	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Safeguarding of groundwater resources	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Safeguarding wetlands	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Waste and Soils	Erosion control	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Maintenance of soil productivity	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
General socioeconomic	Demographics	Dark Blue	Light Blue	Light Blue	Dark Blue	Dark Blue	Light Blue	Light Blue	Dark Blue
	Protect community health well being	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Enhance social Infrastructure	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Livelihoods	Retain access to property, assets and land and water based livelihood	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
	Economic opportunity	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue
Human Rights	Human rights	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Cultural heritage	Safeguard archaeology, paleo archaeology, other tangible and intangible cultural heritage	Light Blue	Light Blue	Light Blue	Light Blue	Dark Blue	Light Blue	Light Blue	Dark Blue

Note: the above table is a highly synthesised version of more detailed information presented in Table 7 and Table 8. It should be read in conjunction with the notes on its interpretation, applicability and constraints on its use. (see page 76) . Colour coding provides an indication only, where darker colours denote better applicability to monitoring (grey cells indicate not enough information to support a conclusion).

1 Introduction

1.1 Background

East Africa's rift system is one of the most prospective oil and gas regions in the world, with exploration activity stretching from the Red Sea through Ethiopia, Kenya, Uganda, Tanzania and down to Mozambique. In recent years significant onshore oil and gas reserves have been discovered in the Albertine Graben² in Uganda and the Turkana Basin³ area of Kenya (Figure 1). If managed properly, exploitation of such resources can be an important driver in reducing poverty, while helping to catalyse sustainable economic development and growth. Recent experience of oil development, notably elsewhere in Africa has however, shown that such exploitation has often only benefited a limited (often elite) section of the population and resulted in the phenomenon known as the 'resource curse,' where regions with an abundance of oil experience slower economic growth and development than other countries without such resources. The Great Lakes Region of Africa, where access to natural resources is often associated with environmental degradation and human rights violations, is particularly susceptible to this effect.

1.2 MacArthur Foundation grant making

The MacArthur Foundation grant making is focusing on interventions underpinned by the following principles:

- Environmental, social, economic and human rights safeguards are closely linked to the achievement of the objectives of sustainable development and avoidance of conflicts. The control and management of the former is therefore critical to the latter, requiring coordination between the two;
- Transparency by the government and the private sector are key in achieving the above objectives in terms of both sustainability and avoidance of conflicts;
- Civil society has a key role to play in achieving the above objectives, notably in participation both in decision making and in monitoring of governance practices in delivering them; and,
- A peaceful, safe situation, where rights are protected, creates an enabling environment for achieving the above outcomes.

At a project level the Foundation is focussing its grant making in three thematic areas:

²The Albertine Graben or Albertine Rift is the western branch of the East African Rift, covering parts of Uganda, the Democratic Republic of the Congo (DRC), Rwanda, Burundi and Tanzania. It extends from the northern end of Lake Albert to the southern end of Lake Tanganyika.

³ The Turkana basin is an area of geological subsidence extending from southern Ethiopia into northern Kenya at the centre of which is Lake Turkana

1. **Transparency and access to accurate information:** It recognises that access to information by civil society can be a key strategy to reduce unsustainable natural resource exploitation and advance transparency which combats corruption.
2. **Laws and policies:** While there are generally existing national laws relating to environmental social and human rights safeguards, there is often a lack of their effective implementation. This may arise from a combination of factors including absence of regulations and standards, capacity, political will, protocols, resources, as well as monitoring, reporting and accountability including legal redress. There is often also a lack of knowledge of international and corporate standards and their implications for development.
3. Strengthening the **private sector's** commitment to considering the social and environmental impacts of their investments. The oil sector's activities can help break the links between natural resource exploitation and conflict by increasing transparency and implementing appropriate safeguards, notably those of international agencies such as the International Finance Corporation (IFC), although in some cases the private sector itself may also require assistance where there is a need.

The Great Lakes⁴ of East Central Africa is an area vulnerable to the dynamics of the “resource curse” described above. A key factor in this is the potential for corruption, combined with non-transparent and non-participative exploitation of natural resources. This could in turn result in degradation of ecosystems and environmental and human rights abuses. The Foundation has also identified:

- a current window of opportunity in this Great Lakes area to help impact policies and practices before oil production begins;
- evidence that some governments in the region could be interested in a more coordinated approach to policies and practices addressing the oil sector; and
- a constituency of local civil society organizations mobilizing on issues related to the oil sector that could benefit from technical and advocacy capacity building.

The Foundation has therefore prioritised the oil sector for its grant making in the Great Lakes region, and has to date awarded several grants to fund a series of studies and activities aimed, at amongst others, engaging governments, civil society and the private sector in oil sector development underpinned by the principles of good governance.

⁴ The Great Lakes of East Africa comprise series of lakes in and around the East African Rift comprising Lake Albert, Lake Edward, Lake Kivu, Lake Malawi, Lake Tanganyika, Lake Turkana, and Lake Victoria

1.3 Study Objectives

The aims of the study are to help create a common understanding about metrics, laws, policies and standards that exist in relation to environmental and social impact of the oil sector in Kenya and Uganda as well as of the gaps that, if filled, would improve monitoring in such areas. A key intended outcome of the project is support for a framework to monitor and evaluate both the impact of the oil sector on the environmental and socioeconomic livelihoods of people and the extent to which the MacArthur Foundation, through its own grantmaking, contributes to achieving the changes it seeks in oil governance, with a focus on the three thematic areas identified in Section 1.2 above. This outcome is to be achieved through a two part process as outlined below:

Part A: Identifying, cataloguing and analysing the efforts in Uganda and Kenya to establish baseline indicators relating to the impact of the emerging oil sector and associated infrastructure development on the environment and the socioeconomic livelihoods of affected people and communities. This has been achieved through:

1. Cataloguing the laws, policies and standards relating to governance and to environmental and social safeguards that are applicable to the oil sector in both countries, including best practices in international frameworks and standards and, where available, relevant policies of oil companies active in these countries;
2. Analysis of such laws polices and standards and the conditions in each country to identify the objectives to be achieved in each, in relation to the environment, and socioeconomic livelihoods of people in affected areas, and to governance measures;
3. Documenting existing and planned data collection and collation initiatives, the outputs of which, are, or could be used, to populate indicators to measure the impact of oil sector development in achieving such objectives;
4. Undertaking an analysis of the quality of such data.

Part B:

1. Recommending additional metrics that might enhance monitoring the oil sector's environmental and socioeconomic impact;
2. Recommending indicators and corresponding methods for monitoring the impact of the Foundation's investments that aim to advance responsible, inclusive, and sustainable management of the oil sector in both countries;

Such recommendations will include indicators relating to processes and mechanisms that enable change as well as more traditional outcome performance metrics.

UNEP- WCMC was commissioned to undertake Part A, which is the subject of this report.

1.4 Report Structure

Following this introduction this report is structured as follows:

- Section 2 provides a summary of the methodology adopted.
- Section 3 outlines the main components of oil field development and activities in the Albertine Graben and Turkana Basin, and their spatial and temporal scope.
- Section 4 summarises national policy and legislation as well as international standards for social, environmental and governance safeguards that may be applicable to the oil sector in Kenya and Uganda.
- Section 5 provides an identification and overview of the quality of current or planned monitoring initiatives in Uganda and Kenya.
- Section 6 identifies a set of objectives relating to governance mechanisms and the environmental social and outcomes to be achieved in each country. The identification is based on an analysis of both the policy, legislation and standards applicable to the oil sector in Uganda and Kenya (documented in Section 4) and the conditions in the development areas. It also provides a summary of the applicability of available data (as identified in Section 5) to inform the monitoring of performance in achieving each objective.

2 Methodology

The methodology adopted comprised:

1. Initial information collation and analysis

A review was undertaken of the likely **nature and spatial extent of the proposed oil related development** occurring both on-site (i.e. in the immediate vicinity of the oil fields and their component infrastructure for example well pads, intra field pipelines, processing facilities, camps, quarries waste facilities) and offsite (i.e. located some distance from the oil fields, comprising for example feeder and export pipelines, refineries, oil cities etc). This enabled a determination of the likely impacts - positive and negative, direct and indirect, induced and cumulative -of oil development on the environment and social and economic livelihoods and conditions of affected people, and of the required governance mechanisms to manage such resources effectively.

A review was undertaken of **policies, legislation and standards** relating to environmental and social economic conditions that could be affected by oil related development as well as to the associated governance mechanisms. Such instruments included:

- International standards (e.g. IFC PS, UN, OECD, IPIECA, EITI, the Natural Resource Charter, the Global Witness Checklist);
- International Conventions which Uganda or Kenya have acceded to or ratified;
- National policies, legislation and standards, comprising: overarching policies as set out for example in national Constitutions, sectoral policies and plans; sector-specific legislation and supporting regulations and guidelines; and
- Where available, the standards the oil companies operating in the Turkana Basin and Ugandan Albertine Graben intend to apply.

Publicly available material relating to **environmental, social, economic conditions** and the means of **their governance** in Uganda and Kenya was sourced and reviewed to determine current status, trends, and sensitivities to oil related development in both countries. Such material typically included data and reports from Ugandan and Kenyan Government departments and agencies, intergovernmental agencies, NGOs, CSOs research institutes, internal observers and academia and funding agencies.

A full reference list and bibliography is provided in Section **Error! Reference source not found.**

2. Supplementary data collation from a grantee workshop and through qualitative interviews

Attendance at a MacArthur grantee workshop in Dar El Salaam (January 2014) provided a valuable opportunity to verify, and fill gaps in the initial analyses. The ability to interact with civil society who are active both in reviewing and influencing emerging legislation and in liaising with, and hence understanding concerns of and issues faced by local communities, provided a constructive focus and input to the ongoing analyses.

Further qualitative interviews (by telephone and face to face) were undertaken with a range of stakeholders undertaking similar work and with a knowledge of current and planned efforts to establish baseline conditions and indicators, the quality of such efforts and gaps that might exist. Interviewees included individuals from: the oil companies; government agencies and departments, research institutes, academia; NGOs, CSOs and consultants.

Details of interviewees who contributed to the study are provided in Appendix A: Informants.

3. Detailed analysis

Based on the above, the environmental social and governance objectives and outcomes relevant to the oil sector in Uganda and Kenya were determined, drawing particularly on the legal analysis and determination of the environmental and social conditions in each region. The data and monitoring required to evaluate the achievement of such objectives were compared against existing or planned activities in each country and key gaps were identified and prioritised.

3 Overview of oil sector development

3.1 Exploration areas

3.1.1 Uganda - Albertine Basin

Over the past decade, the Ugandan government has signed contracts with a number of international companies to engage in exploration and testing. The first licences in Uganda were granted to Tullow Oil plc in 2004 and the commercial threshold to develop was exceeded in 2009. In March 2011, following successful exploration activities Tullow Oil signed contracts with Total, and China National Offshore Oil Corporation (CNOOC Ltd), each of which acquired a one-third interest in exploration areas (EAs) 1, 2, and 3A within the districts of Nebbi, Nwoya, Buliisa, Hoima and Kibaale, (Figure 1). These three companies have formed a partnership with equal interests in the three EAs, with Total assuming operatorship of EA₁, Tullow Oil of EA₂, and CNOOC of EA_{3A}. While oil production is still several years away, 58 of the 64 exploration and appraisal wells drilled in the country to date have encountered oil and/or gas highlighting the Albertine Graben's significant potential. These exploration efforts have led to the discovery of 20 oil and gas fields with the petroleum resources identified in Uganda to date estimated at over 2.5 billion barrels of oil equivalent.

Two exploration licenses have previously also been granted for each of EAs 4b and 5 but have since expired while a further four EAs (3b, c, d and 4a) remain open. Although outside the scope of the study it is noted that there are numerous further License areas to the west of, and contiguous with, those in Uganda, notably in the eastern parts of the Democratic Republic of Congo.

3.1.2 Kenya - Lake Turkana

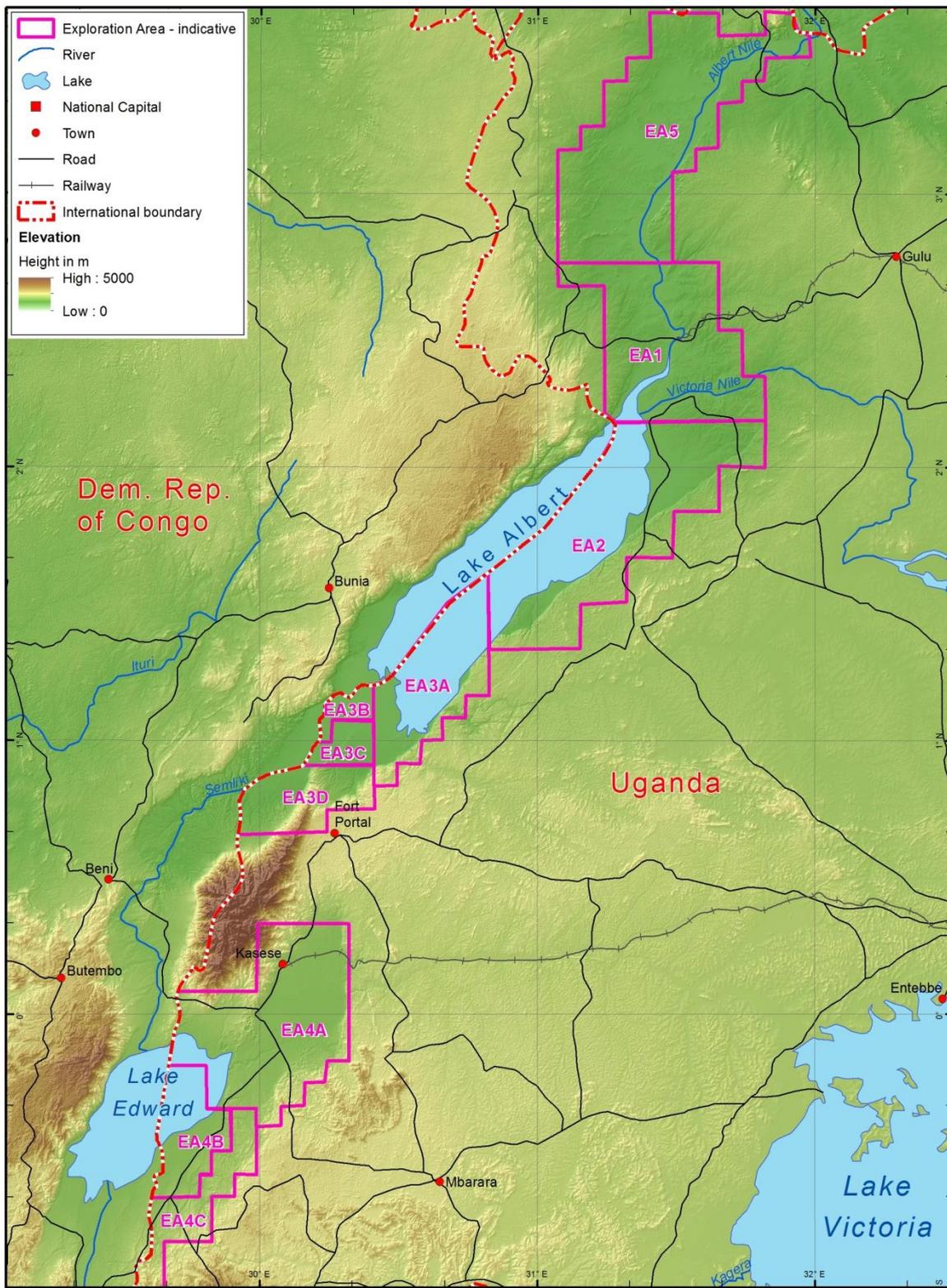
Tullow Oil with its consortium partners (Africa Oil and Centric Oil) has bought into 6 blocks (5 in Kenya and one in Ethiopia) in the Turkana Basin (Figure 2) in 2010, and have since announced four significant new discoveries. At present the areas of exploration all lie along the west side of Lake Turkana in the counties of Turkana, West Pokot and Baringo the west of Lake Turkana and Marsabit to the east.

Again it is noted that there are further licensed oil exploration areas outside of, but contiguous with those in Kenya notably in southern Ethiopia, which are currently also under license to Tullow Oil and likely to share infrastructure e.g. pipeline with future development in Kenya and affect similar areas and resources, notably Lake Turkana and communities in its vicinity, with the potential to result in cumulative impacts.

3.2 Nature of development and activities

The nature and location of development in both areas will be dependent on where viable discoveries are found but are likely to comprise some or all of the elements described in Section 3.2.1 and 3.2.2 below.

Figure 1: Albertine Graben exploration areas



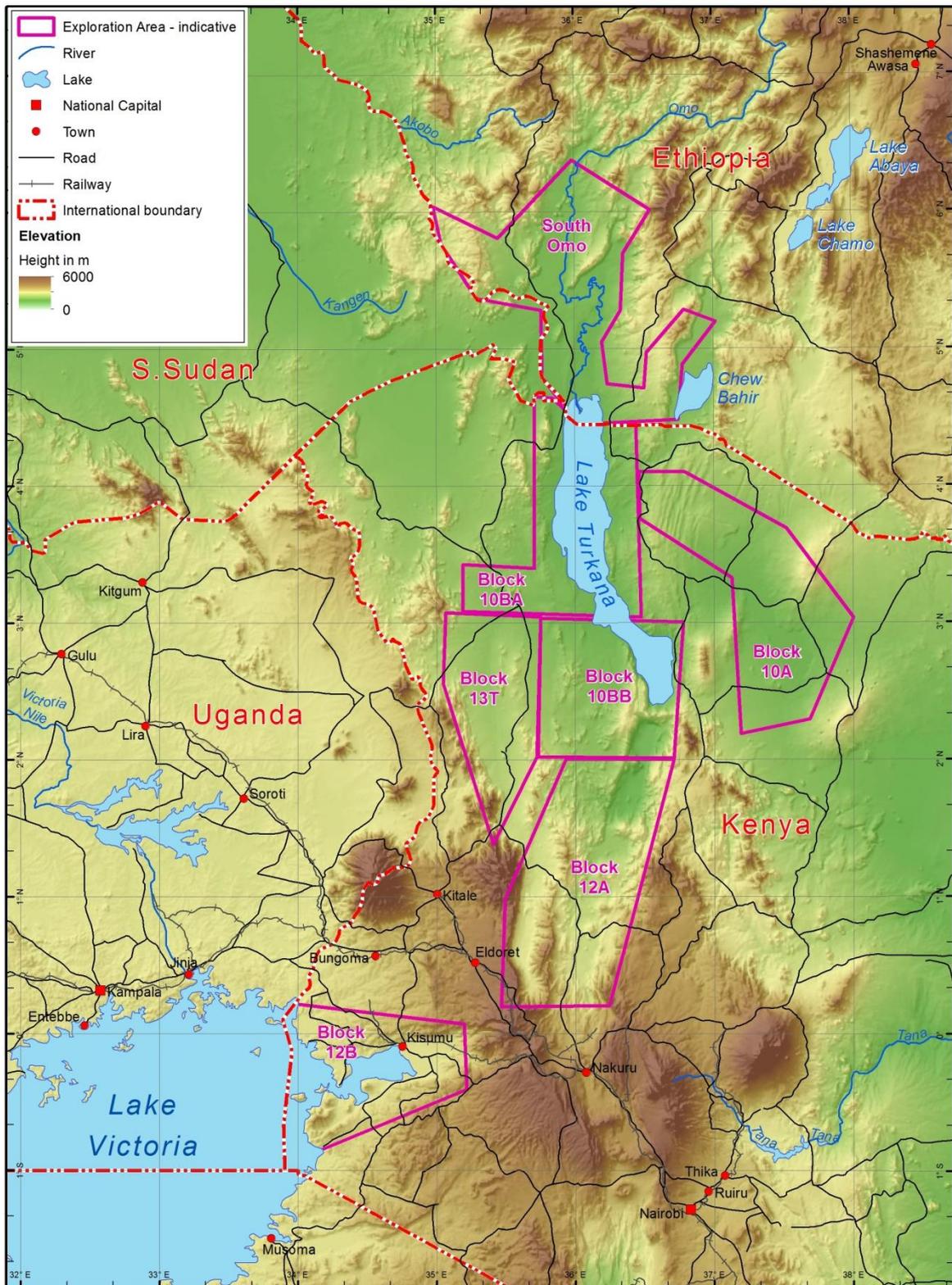
Map Number: Issued: 05 Jun 2014
 Drawn by: KL; Checked by: KL; Approved: CMH
 Projection: UTM Zone 36N; Datum: WGS84
 Data sources: Populated places: ESRI Data & Maps (2013);
 Lake, River, Road, Railway, Int. boundary:
 Natural Earth 1: 10 M (Version 2.0.0);
 EA: digitised orthorectified map;
 Source: <http://cheim.nemaug.org/wp/>;
 DEM & Hillshade: SRTM DEM.

Figure 1:
 Albertine Graben
 Exploration Areas

Scale 1:2,000,000 at A4
 0 50 100
 Kilometers



Figure 2: Turkana Basin exploration areas



Map Number Issued: 05 Jun 2014
 Drawn by: KL; Checked by: KL; Approved: CMH
 Projection: UTM Zone 36N; Datum: WGS84
 Data sources: Populated places: ESRI Data & Maps (2013);
 Lake, River, Road, Railway, Int. boundary:
 Natural Earth 1: 10 M (Version 2.0.0);
 EA: digitised off georeferenced map -
 Source: <http://www.howwemadeintheafrica.com/>;
 DEM & Hillshade: SRTM DEM.

Figure 2:
 Turkana Basin
 Exploration Areas

Scale 1:4,000,000 at A4
 0 100 200
 Kilometers



3.2.1 Physical infrastructure

Core development areas

Typically, several field developments may be created in each basin (Turkana Basin and the Ugandan Albertine Graben), within each of which would be located:

- A central processing facility (CPF) - an industrial facility that separates oil from water and gas and usually also includes provision for water treatment and a power plant. This facility typically covers an area of approximately 2-5 km²;
- 10-40 well pads, each of which typically covering an area of 150 x 150m;
- a network of roads and underground pipelines between the pads and CPF;
- water abstraction and distribution infrastructure to provide injection water to the wells; and
- Support facilities such as waste management sites, storage areas, workers camps, airstrips, quarries etc.

Offsite infrastructure

A substantial amount of offsite infrastructure would be required typically including:

- crude and refined feeder and export pipelines and/or rail route to convey oil from the development areas to refineries and ports;
- a refinery;
- transport and communications links, for example ports, logistics terminals, telecommunication facilities and access roads from the nearest main towns to the core development areas;
- power generation and transmission lines; and
- regional “oil cities”.

Induced development

Oil development typically results in significant induced development. Notably this includes that associated with population influx of job seekers, those seeking benefits from social investments funded by the oil company or by the government, and from local commercial and industrial development resulting from improved infrastructure such as roads as well as increased cash in the economy. One such example may be development funded in part by the World Bank under the Albertine Region Sustainable Development Project (ARSDP) (GoU, December 2013) which involves three components including: Road Improvement, Priority Economic Infrastructure provision and Business, Technical, Vocational Education and Training. (Such development is difficult to predict and control but if not well planned and managed can have substantial impacts on the environment and communities (e.g. pressure on land and land based resources, as well as on social infrastructure, resulting in

environmental degradation and conflicts). Conversely, if well planned it can bring considerable benefits to the local economy.

3.2.2 Activities

In addition to oil extraction, processing, refining, and transport there are numerous related activities which may impact the environment and communities. Key among these are:

- Water abstraction for injection purposes;
- Waste generation, management and disposal;
- Presence of a workforce from outside the project areas including foreign workers etc.;
- Increased traffic levels;
- Supply chain activities to support the oil industry creating opportunities for local contractors; and;
- Social investment activities.

3.3 Area of influence

While the direct impacts of oil development are likely to be most felt within the Albertine Graben and Turkana Basin respectively there will be other directly affected areas beyond these. For example: corridors within which feeder and export pipelines and roads will be located, the areas impacted by the presence of an operation of refineries and ports, and the catchments from which injection water will be abstracted. A wider area of influence may also be affected by unplanned but predictable development (not least in migration) and by facilities, and activities which are not funded by the oil companies but would not have been constructed or expanded if the development had not occurred, for example oil cities, power plant expansions etc. Finally, depending on the framework for managing, investing and allocating resource revenues, the wider area of macroeconomic influence of oil development in the Albertine Graben and Turkana Basin may extend over the entire countries affecting all citizens of Uganda and Kenya now and in the future.

4 Legal, standards and policy review

4.1 Introduction

This section presents an overview of the policies and laws governing the oil sector in Uganda and Kenya (Sections 4.2 and 4.3) and requirements arising from international standards and best practice (Section 4.4)). A key underlying theme highlighted by the review is that, until recently, the legal and institutional framework in both countries has been, and still remains to some extent, unprepared for oil development. This has resulted in a raft of recent or imminent legislation. Many of these new legal instruments will also require subsidiary regulations and standards, or amendments to those in existence, to address the specific implications of oil related development.

4.2 Uganda

4.2.1 Overview

The Ugandan Constitution (1995 as amended in 2005), sets the scene for the national **governance framework**. It provides for a clean and healthy environment, citizen participation in development, rights to own, and compensation for losses of property.

The National Development Plan sets the development priorities for the period to 2015. It envisions the private sector driving economic growth and specifically recognises the need to strengthen the **governance framework for the oil and gas sector**. This is being addressed through the Oil Policy (2008) and Oil and Gas Revenue Management Policy (2012). The former sets out the framework for oil development while the latter addresses the management of revenues, including requiring the highest standards for transparency and a commitment (although not yet delivered) to joining the EITI. The two (upstream and midstream) Petroleum Acts (both 2013) implement the Oil Policy through regulating the industry, and include provisions relating to licensing, protecting the environment, and maximising local benefits. While the Public Finance Bill (2012) aims to implement Revenue Policy, significant concerns have been raised regarding its initial draft.

Some aspects of the Constitution that relate to the management and regulation of both the **biophysical environment** and **socioeconomic conditions** are being addressed through, for example, the National Land Policy (2013) and various amendments to the Land Act. The environmental legislation, including the National Environment Act (1995), Wildlife Act (1996), Water Act (1997) and implementing regulations have, however, not been updated for some time and may require amendments to address the needs presented by the oil sector.

Further details of the national governance and oil governance frameworks and the legislation applicable to management of the biophysical environment and socio economic conditions are provided in Sections 4.2.2 - 4.2.4 and summarised in Figure 3 below.

Figure 3: Summary of key national policies and legislation in Uganda

Overarching		Ugandan Constitution of 1995 (as amended in 2005)
		National Development Plan (2010)
		Physical Development Plan for the Albertine Graben (2013)
		Access to Information Act (2005)
		Public Order Management Act (2013)
Oil Governance		National Oil & Gas Policy (2008)
		Oil and Gas Revenue Mgt Policy (2012)
		Public Finance Bill (2012)
		Petroleum (Upstream) Act (2013)
		Petroleum (Downstream) Act (2013)
Biophysical	General Environment	National Environment Mgt Policy (1994)
		National Environment Act (1995)
		Environmental Impact Assessment Regs (1998)
	Biodiversity	Uganda Wildlife Policy (1999)
		Uganda Wildlife Act (1996)
		Forestry Policy (2001),
	Water	National Water Policy (1999)
		National Environment (Wetlands [etc] Mgt) Regs (2000)
		National Environment (Waste Management) Regs (1999)
		Public Health Act (1964)
		National Policy for the Cons. & Mgt Wetland Resources (1995)
	Waste and Soils	National Environment (Waste Mgt) Regs (1999) & draft Amendment (2014)
		National Environment ([...] Mgt of Soil Quality) Regs (2001)
		National Environment (Mountainous [...] Mgt) Regs (2000)
		Draft National Land Policy (2011) Land Act (2012)
		Land Act (2012)
	Air and Noise	National Environment (Noise [...]) Regs (2003)
		Draft National Environment (Noise and Vibrations Standards and Control) Regulations (2013)
		Draft National Air Quality Regulations (2013)
	Socioeconomic (NB. Many safeguards incorporated in overarching legislation)	General socioeconomic
National Gender Policy (2007)		
Livelihoods		National Fisheries Policy (2004)
		National Land Policy (2013)
		Land Act (1998)
		Land Acquisition Act (2000)
Human Rights		Employment Act (2006)
Cultural Heritage		Historical Monuments Act (1968)

NB: Uganda has also acceded to or ratified numerous international conventions and agreements which supplement national-level legislation. See section 4.4.

4.2.2 Governance framework

Overarching framework

The Ugandan Constitution of 1995 (as amended in 2005) is the supreme law. It states that every Ugandan has a right to a clean and healthy environment and that important natural resources including water, wetlands, minerals, oil, fauna and flora will be protected on behalf of the people of Uganda. It provides for sustainable development of land, air and water resources, and for the involvement of people in the implementation of development plans that affect them. It recognizes that *'all land belongs to the people'*, and promotes environmental awareness and environmental preservation (Kasimbazi and Alexander, 2001).

The Constitution prohibits discrimination of ethnic and minority groups (Article 36) and assures them specific protection. Objectives III and VI prescribe cooperation and tolerance for the various customs and traditions resident in the country, as well as gender balance and fair representation of marginalized groups, ethnic minorities and indigenous people. It provides (Article 32) for affirmative action in the participation of such groups in local governments. While it stipulates that *"the State shall be guided by the principle of decentralisation and devolution of governmental functions and powers to the people...where they can best manage and direct their own affairs"*, such decentralisation is guided by the Local Governments Act (1997), which within its Second Schedule stipulates that national government retains responsibility for, among others, mineral and water resources, and the environment.

The Constitution does however recognise the role of participation in that the State *"shall be based on democratic principles which empower and encourage the active participation of all citizens at all levels in their own Governance"* and (in Article 41) provides every citizen with access to information in possession of the state, although this is subject to confidentiality requirements.

The Constitution also provides every citizen with a right to their own property but empowers the government to acquire private land in a compulsory manner for specific public interest purposes. In such circumstances, prompt payment of fair and adequate compensation prior to the taking of possession or property is required. Article 237 provides for four land tenure systems: a) customary; b) freehold; c) mailo; d) leasehold, with the lawful or bona fide occupants of mailo land, freehold or leasehold land enjoying security of its occupancy.

Control of petroleum is vested, by Article 244, in the government; which is thus solely responsible for leasing out rights to explore and exploit petroleum reserves. In relation to revenues the Constitution requires the Finance Minister to advise the President on matters relating to the above measures required by the distribution of revenues between the national and local governments.

Despite the provisions of the Constitution, it is considered unlikely that Uganda has, as yet, the policy and legal framework required to implement appropriate actions and regulate them.

The National Development Plan (NDP) (Republic of Uganda, 2010), is designed to guide the country's development programmes until 2015. It is envisaged as the first in a series of six plans that will transform Uganda from a peasant society to a modern and prosperous country in 30 years. The government anticipates Uganda will become a middle income country by 2015, with a substantial

increase in annual income and reduction in people living below the poverty line (Daily Monitor, 20 April 2010).

The plan envisages that the private sector will drive economic growth and development, with the government focusing on investment in infrastructure, and human resource development in areas of education, health, water and sanitation. The NDP is viewed as combining the poverty eradication and enhanced social services priorities of the earlier Poverty Eradication Action Plan (PEAP) with an emphasis on economic transformation and wealth creation, entwining sustainable economic growth with poverty eradication.

Among the oil and gas-related provisions of the NDP are strengthening of the policy, legal and regulatory framework.

Following declaration of the Albertine Graben as a special planning area, the Ministry of Lands, Housing and Urban Development (MoLHUD) has embarked on the development of **Physical Development Plan for the Albertine Graben**, supported by the UK Department for International Development (DFID) through the World Bank. The plan will address: alternatives for land use development (industries, infrastructure, agriculture, housing, environmental conservation and other activities arising from the oil industry and associated population growth, key environmental management strategies; internal transportation network (NEMA, 2013).

The **Access to Information Act (2005)** in principle applies to information and records of all government bodies at the national, regional and local level and explicitly recognises the link between the provision of timely, accessible and accurate information and transparent, accountable and participatory governance. Its significance is however diminished by a lack of clarity in drafting, and the envisaged scope of application and insufficient procedural guarantees. The exceptions to the right of access are also rather wide and open to interpretation and could be used to reduce existing rights to information anticipated in the Constitution.

The Public Order Management (POM) Act (2013) places prohibitions on open political discussion and peaceful demonstration and is likely to constrain civil society and reduce Uganda's diminishing political space, through for example control rather than regulation of activities such as public meetings as well as what is discussed therein, and holding organizers criminally liable for criminal acts committed by the participants at such meetings. This is likely to limit civil society's ability to inform and influence development and monitor the institutional framework and legislation and well as wider aspects of oil related development, as anticipated in the Constitution.

The Observatory for the Protection of Human Rights Defenders, a joint programme of the World Organisation Against Torture (OMCT) and the International Federation for Human Rights (FIDH) has called upon the Uganda's Constitutional Court to repeal the POM Act on the basis that it stifles freedom of association and expression and thereby undermines civil society.

Oil governance

The **National Oil & Gas Policy (2008)** aims to use the country's oil and gas resources to contribute to early achievement of poverty eradication and create lasting value to society. Among its stated objectives are to ensure collection of the right revenues and use them to create lasting value for the entire nation, including for supporting strategic areas of the national economy such as:

- education and research and development of infrastructure to provide intergenerational equality;
- participate in the Extractive Industries Transparency Initiative (EITI);
- promote state and national entrepreneurs' participation, employment of Ugandans, and use of the country's materials, goods and services;
- to ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity, including requiring oil companies and their contractors/subcontractors to use self-regulation and best practices.

It presents transparency and accountability as guiding policy principles. Openness and access to information are described as fundamental rights, and the importance of disclosing information *“that will enable stakeholders to assess how their interests are being affected”* is stressed. *“The policy shall therefore promote a high standard of transparency and accountability in licensing, procurement, exploration, development and production operations as well as management of revenues from oil and gas.”*

The Policy refers to Article 237 of the Constitution, the Land Act (1998), the National Land Use Policy (2004) and the Land Sector Strategic Plan 2001-2011 in matters of land ownership and use and states that oil companies may need to enter into agreements with landowners regarding their surface use interests, but that the government will, where necessary and in accordance with the Constitution, acquire land in the public interest to support oil and gas activities.

It recognises that many areas with potential for petroleum production coincide with areas of importance for biodiversity and forestry and aims to reduce infrastructure in such areas. It also recognises that there are significant public expectations as well as anxieties relating to oil development and there is a risk of significant in-migration. Enforcement of regulations restricting population movements and settlements in wildlife protected areas will be supported, and only a minimum of required infrastructure will be allowed in such protected areas. It also addresses specific forms of environmental risk through for example, supporting gas utilisation rather than wastage and discouraging venting, and flaring.

Further it notes that it will be necessary to support efforts to design and implement physical planning in pace with, or preferably prior to, the development phases of oil and gas activities and that community participation should be ensured in both planning and implementation. Its treatment of participation is however limited to a short statement on involvement of *“civil society and cultural institutions”* that can *“contribute to holding the different players accountable ... and participate in getting*

the voices of the poor into” the design, monitoring and implementation of programmes. It does not provide any further detail or guidance on how that might be undertaken.

To date, the following policies and legislation have or are being formulated based on the 2008 Oil & Gas Policy:

The **Oil and Gas Revenue Management Policy (2012)** sets out a framework managing the anticipated revenues and integrating these into the existing Government systems while maintaining macroeconomic stability and avoiding risks (the “resource curse”) associated with natural resources wealth. It therefore includes measures for: assessment and collection of revenues, governmental fiscal transfers, macroeconomic policy management, fiscal rules for managing revenues and oversights and controls (Byakagaba, 2013). Notably it proposes a fiscal anchor to manage volatility in oil and gas revenues to mitigate the risks to the economy from natural resource wealth. It does this by setting out the level of oil and gas revenues to be integrated on an annual basis within the overall fiscal framework, in a manner that limits the impact on other sectors of the economy. It also notes that the highest standards of transparency should be observed and that the Government should make the necessary arrangements to facilitate the joining of EITI. It is however noted that this has not yet taken place.

The Public Finance Bill of 2012 stated aims are to implement the above **Oil and Gas Revenue** policy through providing for, among others: a petroleum fund into which revenues payments are made; certification of withdrawals; safeguards to avoid encumbrance of assets through loans etc.; and establishment of a petroleum investment reserve to support future generations, and transparency and accountability in the above. Under the Bill 7% of revenues from royalties will be shared among local governments, with the remaining 93% retained by the Government. Significant concerns have been raised regarding the initial draft of this Bill (Byakagaba, 2013) including:

- inadequate Parliamentary oversight including the purpose to provide the Finance Minister with full responsibility for the revenue management of the Petroleum Fund;
- its limitation to sharing of royalties and lack of inclusion of other oil related revenues;
- proposals to share funds between central governments and districts without any provisions for local councils;
- exclusion of land owners from the sharing formula;
- inclusions of districts that would not produce oil in the revenue sharing and a preference for those with high population levels as well as caps in revenues districts can receive;
- lack of accountability for recoverable costs;
- lack of adequate provisions for cultural institutions in revenue sharing; and
- an absence of funds to address future environmental impacts.

The **Petroleum (Exploration, Development and Production) Act 2013** (the ‘Upstream Act’) regulates the licensing and participation of commercial entities in Uganda’s petroleum activities and includes amongst others: provision for an open, transparent and competitive process of licensing; to create a conducive environment for the promotion and exploration of Uganda's petroleum potential and to provide for efficient and safe petroleum activities which ensure public safety and the protection of public health as well as liability on licensees for pollution damage without regard to fault (Section 130). It requires (Section 151) the government to make available details of agreements licenses and amendments. It is understood the new Production Sharing Agreement (PSA) model will emerge from this Act and will include procedures for allocation of licenses.

The **Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act 2013**, aims amongst others to provide for an open, transparent and competitive process of licensing by the Minister responsible for petroleum; to provide for health and safety environment. It also requires priority to be given to competent citizens and entities in Uganda for the provision of local goods and services. The Act has, however, been criticised for granting the minister sole powers to award, suspend and initiate the development and implementation of policies concerning midstream operations among others.

4.2.3 Bio physical aspects

The **National Environment Management Policy (1994)** aims to establish sustainable social and economic development in Uganda. The policy intends that such development should maintain or enhance environmental quality and resource productivity (Kasimbazi and Alexander, 2011). It provides a framework for sectoral and cross-sectoral policy harmonisation, and forms the basis for Ugandan environmental legislation, as incorporated in the **National Environment Act (1995)** (NEA).

The **NEA** sets out the principles of environmental management and sustainable development to guide both conservation and use of environmental resources in Uganda. Among the principles are those to encourage maximum participation by the people of Uganda in environmental management stating that people have the “*freedom of access to any information*” relating to the implementation of the Act; to reclaim lost ecosystems and reverse degradation; and to ensure that the costs of environmental pollution are borne by the polluter. It establishes NEMA as the authority responsible for ensuring implementation of these principles. The Act requires NEMA to establish a suite of subsidiary Regulations and standards including for ambient air quality, water quality, effluent discharge noise and vibration standards, soil quality, and solid waste disposal standards, among others. These are described below. The Act also makes it a legal requirement to undertake EIA for certain activities including oil exploration and production. Audit regulations are currently being drafted which will require every oil site to be monitored by a third party.

The **Environmental Impact Assessment Regulations (1998)** state that “[t]he developer shall take all measures necessary to seek the views of the people in the communities which may be affected by the project”. The Regulations also state that a project developer is required to publicise the intended project, its anticipated effects and benefits through the mass media in a language understood by the affected communities.

Biodiversity

The **Uganda Wildlife Policy (1999)** generally promotes conservation of wildlife and biodiversity, and seeks to maximise the benefits to the people of Uganda in terms of ecology, economy, aesthetics, science and education. It has as one of its strategies the exclusion of mineral exploration and extraction from Wildlife Protected Areas⁵.

The **Uganda Wildlife Act (1996)** provides for sustainable wildlife management and establishes the Uganda Wildlife Authority (UWA) as the body responsible for coordinating, monitoring and supervising wildlife management including recommending areas for declaration as Wildlife Conservation Areas, and establishing the associated management plans. It emphasises the importance of public participation in wildlife management. The prospecting for minerals or mines is specifically listed as an offence in Wildlife Conservation Areas in general, but the Act also provides for authority to be given (by UWA) to undertake otherwise unlawful acts, with the caveats that they be subject to EIA and that they be "*in the interests of better wildlife management*". Furthermore, in Wildlife Management Areas the sustainable exploitation of natural resources by permit is listed as an aim, provided that it is in a manner "*which is compatible with the continued presence in the area of wildlife*". While the Act makes provision for the declaration of protected species, no such species have as yet been declared in the Act.

The **Forestry Policy (2001)**, as subsequently implemented through the **National Forestry and Tree Planting Act (2003)**, commits government to protect and sustainably manage the Permanent Forest Estate. A forest reserve must be managed in a manner consistent with the purpose for which it is declared, which may be either for production or protection, and a permit is required for any development in such areas.

As identified above, the National Oil & Gas Policy (2008) aims to minimise infrastructure in areas designated for wildlife and forestry.

Water and wetlands

Under the **Nile Basin Initiative (8/2002)** project planning must ensure there is agreement between riparian countries of the Nile to develop and manage resources in a sustainable manner.

The **National Water Policy (1999)** has the objective of management and development of Uganda's water resources in an integrated and sustainable manner. Water is treated as an economic, social and environmental 'good', and as a finite resource that contributes to economic development and supports natural ecosystems. The principles of the policy are included within the **Water Act (1997)** and include requirement for a permit for any polluting discharge and polluter liability for any clean-up and remediation (also a requirement of the **Petroleum, Exploration, Development and Production Act (2013)**).

⁵ The Uganda Wildlife Act (1996) defines two different types of Wildlife Conservation Areas "Wildlife Protected" and "Wildlife Managed" areas. Within Wildlife Protected Areas, uses of the land are generally restricted to biodiversity conservation, recreation, scenic viewing, scientific research and permitted economic activity. Within Wildlife Management Areas it is possible for wildlife to be protected, notwithstanding the continued use of the land and the sustainable exploitation of wildlife in the area by people and communities ordinarily residing there.

The National Environment (Wetlands, River Banks and Lake Shores Management) Regulations (2000) afford protection to, and requirements for permits and EIA for activities in areas within 30m of highpoints of rivers, within 100m of the River Nile and within specified distances of certain named lakes, including Lakes Albert, George and Edward in order to protect banks and shores from erosion, siltation and pollution. The definition of a ‘river’ however is somewhat unclear, as many river channels only run during monsoonal conditions.

Any abstraction from lakes, rivers or groundwater is regulated and licensed through **the Water Resources Regulations (1998)** which requires consideration of other uses including those downstream. Discharges are controlled through the **Water (Waste Discharge) Regulations 1998** and the **National Environment (Standards for the Discharge of Effluent into Water or on Land) Regulations (1999)**. National drinking water quality standards are available through the **1994 Standard Specification for Drinking (Potable) Water**. Whilst Ugandan standards exist for drinking water and effluent/waste discharge, environmental quality standards for receiving water bodies as mandated by the NEA (1995).are generally missing nationally.

The **Public Health Act (1964)** requires local authorities to take measures to prevent pollution dangerous to health of any water supply that the public has a right to use for drinking or domestic purposes (NEMA, 2004b).

The **National Policy for the Conservation and Management of Wetland Resources (1995)** was formulated as a result of concerns over the over-exploitation and destruction of wetlands, which comprise about 10% of Uganda's land area. It aims to end the draining of wetlands, promote their sustainable use and equitable distribution of benefits from their use, and improve environmental management of wetlands. It complements the protection of Ramsar sites especially as waterfowl habitat.

Under the **National Environment (Wetlands, River Banks and Lake Shore Management) Regulations (2000)** there is a requirement for “*sustainable use of wetlands*” and special measures and fully protected status is afforded to site classified as of national or international importance which are deemed to be “fully protected” and may be subject to significant restrictions on development. It is an offence to “*destroy, damage or disturb any wetland in a manner that has or is likely to have an adverse effect on any plant or animal or its habitat*”, or to “*deposit in, on, or under any wetland a substance in a manner that has or is likely to have an adverse effect on a wetland*”.

Waste and Soils

The **National Environment (Waste Management) Regulations (1999)** require waste disposal in a way that would not contaminate water, soil, and air or impact public health. According to the regulations, waste haulage and disposal should be done by licensed entities. The owner or controller of a facility that generates waste is obliged to adopt cleaner production methods.

The draft **National Environment (Waste Management) (Amendment) Regulations (2014)**, apply specifically to “*all categories of hazardous and non hazardous waste related to oil and gas exploration, extraction, refinery, transportation and other related matters; storage and disposal of such hazardous*”

waste and its movement in or out of Uganda; and all oil and gas disposal facilities, land fills, sanitary fills and incinerators.” It sets out obligations for oil field operators and waste contractors in the handling storage, treatment, transportation and disposal of various waste streams associated with the above as well as for well abandonment and for operation of pipelines carrying oil.

The **National Environment (Minimum Standards for Management of Soil Quality) Regulations (2001)** establish and prescribe the minimum standards to maintain, restore and enhance the long-term productivity of the soil; to establish standards for management of soil quality associated with agricultural products; and to establish criteria and procedures for measuring and determining soil quality (Kasimbazi and Alexander, 2011).

Under the **National Environment (Mountainous and Hilly areas Management) Regulations 2000**, it is a policy that every land owner or occupier shall while utilizing land in a mountainous and hilly area carry out soil conservation measures and measures for the protection of water catchment areas. Any activities in areas where slopes exceed 15% must be permitted by the environment committee of the local government.

The **draft National Land Policy (Ministry of Lands, Housing and Urban Development, 2011)** requires “*sustainable and optimal use of land and land-based resources*” and advocates the development of a National Agricultural Policy which will “*regulate... practices that degrade the quality of agricultural land*”, and calls for development of a National Soils Policy. Policy issues associated with agricultural compensation are described within the socioeconomic livelihoods analysis (Section 4.2.4) below.

Air and Noise

The **National Environment (Noise Standards and Control) Regulations (2003)** establish permissible noise levels for a range of activities and receptors. The standards are geared to urban settings and only refer to absolute levels rather than differential in noise resulting from development. Nor do they not take account of the nature of noise and hence actual level of disturbances (for example current standards are often exceeded particularly at night in rural locations due to natural background noise associated with wildlife).

The draft **National Environment (Noise and Vibrations Standards and Control) Regulations (2013)** addresses for the first time strategies for the control of noise and vibrations relating to “*petroleum activities including exploration, production, development, pipelines, refineries*”. While they establish absolute standards, they also consider incremental changes as well as the sources and nature of noise and vibration.

The **Draft National Air Quality Regulations (2013)** sets out restrictions, licensing and monitoring requirements as well as standards for both ambient air quality and point emissions. They include consideration of the “*petroleum exploration and production industry*” including burning of oil through flaring (Clause 20).

4.2.4 Socioeconomics

Other than the land policies described above, there are in general few policies or legal instruments directed specifically at socioeconomic issues and livelihoods with such safeguards rather being incorporated in overarching legislation, notably the Constitution, and sectoral policies. The relevant aspects have been identified and reviewed above and include among others.

1. The right to a clean and healthy environment - specified in the Constitution.
2. Protection of natural resources including water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda –specified in the Constitution.
3. Protection and promotion of rights of ethnic and minority groups as well as gender balance – specified in the Constitution.
4. Access to information and participation in decision making - specified in the Constitution, Access to Information Act, National, Oil and Gas Policy, the National Environment Act, the Environmental Impact Assessment Regulations, Uganda Wildlife Act.
5. Right to own property and recognition of different tenure systems and land uses and to appropriate compensation – specified in the Constitution, National Oil and Gas Policy National Policy for the Conservation and Management of Wetland Resources, National Environment (Minimum Standards for Management of Soil Quality) Regulations and the Land Act.
6. Economic and infrastructure development and a reduction in poverty levels (including at community level) driven by private sector development– NDP, Albertine Graben Development Plan, National Oil and Gas Policy, Public Finance Bill, Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act.
7. Community Health and Safety – specified in the Constitution, National Oil and Gas Policy, The Petroleum (Exploration, Development and Production) Act, The Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, The National Environment Act, the Water Act, National Environment (Waste Management) Regulations, Public Health Act National Environment (Noise Standards and Control) Regulations and Draft National Air Quality Standards.

In addition the following two policies as well as the policies and legislation listed under “Livelihoods of people and communities” below apply more specifically to local populations.

The **Draft National Health Policy (2009)** notes that more than 75% of the burden of disease in the country are preventable diseases, where access to safe water, sanitation and living conditions are poor, particularly in rural areas.

The **National Gender Policy (2007)** is designed to establish a clear framework for identification, implementation and coordination of interventions designed to achieve gender equality and women's empowerment in Uganda. The policy is a guide to all stakeholders in planning, resource allocation, implementation and monitoring and evaluation of programmes with a gender perspective. The policy places responsibilities on the private sector which include ensuring that corporate policies and practices incorporate gender equality principles; providing incentives and support to female entrepreneurs; broadening corporate social responsibility initiatives and interventions that promote gender equality; and instituting and implementing affirmative action measures.

Livelihoods of people and communities

The **National Fisheries Policy (2004)** provides strategies to ensure sustainable exploitation of fisheries resources, maintaining fish availability for both present and future generations without undermining the environment. It provides for decentralisation and community involvement in fisheries management. The Fisheries Sector Strategic Plan includes creation of a national network of Beach Management Units (BMUs) for improved management of fisheries resources.

National Land Policy (2013) sets the framework for development and use of Uganda's land resources for the next decade to ensure efficient, equitable and optimal utilization and management of Uganda's land resources for poverty reduction, wealth creation and overall socioeconomic development". It addresses among others: the need for creation of a customary register to facilitate registration of customary rights; strengthening women's land rights; overhauling the existing institutional framework for land administration and land management through decentralisation of land services and bringing them nearer to the populace; the re-institution of administrative Land Tribunals to handle escalating land conflicts and land evictions; and the legal recognition of the dual operation of both customary system and statutory system in land rights administration, land dispute resolution and land management by empowering customary authorities to perform their function.

Uganda's **Land Act 1998** was the first new law which attempted to bring major reforms in the land sector following the Constitution which recognised customary land, The Act reversed land nationalisation by stipulating that land belongs to the citizens of Uganda and shall be vested in them in accordance with four forms of tenure. Essentially customary tenure became recognised on a par with freehold, leasehold and mailo. Although the Act provides for both individual and collective (community) rights it does not resolve the tensions between these and the recognition of customary rights alongside more formal, state-backed property rights, a certain degree of legal pluralism. The Act was not backed by any policy framework until 2013 making its implementation complex. The subsequent Amendments to the Act in 2001, 2004 and 2010 are indicative of the problems in its implementation but have nonetheless further strengthened the security of tenure for tenants through controlling land rents and protecting tenants from eviction. The 2010 Amendment in particular addresses widespread evictions related to land grabbing of customary and mailo land and, thus, enhance tenure security.

The **Land Acquisition Act 2000** provides for recognition of customary ownership as well as communal ownership and defines "lawful occupant" and "bona fide occupant", both of which refer to occupants with no registered right to occupy the land. Recent case law has nullified Section 7 of the Act, which allowed the government to acquire land before compensation, as unconstitutional. Anticipated changes likely to emerge from enactment of the **Land Acquisition Bill (2013)** are a requirement for the government to promptly pay fair compensation after which it may take possession of the land.

There are however significant barriers in how the framework is interpreted and implemented in practice. In the absence of specific regulations, determination of how compensation is made remains to a large extent subject to prejudices, stereotyping and lack of resources and capacity, with village committees often comprised of a controlling elite.

Human Rights

Chapter 4 of the **Constitution** provides for the protection and promotion of fundamental and other human rights and freedoms, Specifically, Article 244 of Constitution provides that all minerals and petroleum in, on or under any land or waters in Uganda are vested in the government on behalf of the people of Uganda.

As a member state of the United Nations, Uganda is obliged under the **UN Guiding Principles on Business and Human Rights** (Principle 1 and 2) to protect its citizens from human rights abuses and if these occur provide active remedy (Principle 25). It is also obliged to protect its citizens from human rights abuses by third parties, including business enterprises engaged in the extraction, production and sale of oil.

Uganda has ratified many Human Rights Conventions and agreements and has thus has made binding international commitments to adhere to the standards laid down in them. These include: The Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of All forms of Discrimination against Women, the Convention on the Rights of Children and its Optional Protocols, the Convention on the Elimination of Racial Discrimination and the Convention on the Rights of Persons with Disabilities. Uganda is also a party to the core International Labour Organization conventions. At the regional level Uganda has ratified the African Charter on Human and People's Rights and its Protocol on the rights of women in Africa; the African Charter on the Rights and Welfare of the Child; and the Kampala Convention on Internally Displaced Persons.

Other human rights instruments include the Rio Declaration on Environment and Development; the UN Global Compact; the International Finance Corporation Sustainability Framework; the Natural Resource Charter; and the Voluntary Principles on Security and Human Rights, among others.

In Uganda civil society organisations are drawing on the UNGPs. For example ActionAid International Uganda and IPIS Research are publishing a series of briefings on human rights and the oil sector in Uganda and using the UNGPs as a framework against which to make recommendations for government and company actions (Wass and Musiime, 2013a and 2013b). In particular these reports have identified that although Uganda's petroleum legislation is now in place, there is concern that it does not strengthen the sector nearly as much as it could have done and that the lack of transparency, democracy and openness that they have created does not foster a climate conducive to respect for human rights.

The **Employment Act** (2006) mandates labour officers to regularly inspect working conditions to ascertain that the rights of workers and basic provisions are made and workers' welfare is attended to. The Act also provides for the freedom of association of workers, permitting them to join labour organizations. This provision is also supported by the **Labour Unions Act** 7, (2006), which provides elaborate guidelines and regulation for membership. Other laws concerning workers' safety, social security and protection include the **Labour Disputes (Arbitration and Settlement) Act** (2006), the **Workers' Compensation Act**, the **Interpretation Act**, **Occupational Safety and Health Act** (2006), the **National Social Security Act** and the **Labour Unions' Act** (2005).

Cultural heritage

The **Historical Monuments Act (1968)** provides for the preservation and protection of historical monuments and objects of archaeological, paleontological, ethnographical and traditional interest. It gives power to the appropriate minister to declare objects of interest to be protected, and also allows for the acquisition of land (subject to the Land Acquisition Act) necessary to ensure preservation or protection of an object. The Act prohibits any person from carrying out activities which may damage a protected object. The discovery of objects that may reasonably be considered to be of interest (as defined by the Act) must be reported to the authorities.

4.3 Kenya

4.3.1 Overview

The new (2010) Constitution of Kenya establishes the national **governance framework** and sets the scene for substantial legislative reforms including those relating to land tenure, environmental protection, citizen participation, benefit sharing, transparency and access to information, which are all of relevance to oil development. These are being addressed through a raft of new policy and legislation including: Vision 2030 and its implementation Plans, which identify that oil development is for the benefit of the people with priority to be given to local communities; the Access to Information Bill (2013).

In order to address the specific needs for **governance of the oil and gas sector**, Kenya published in 2013 its National Energy Policy, Energy Bill and the Natural Resources (County Royalties) Bill. There are however various conflicts in the legislation, for example in the level of benefit sharing of oil revenue as well as concerns over the authorities vested in institutions and individuals for management of revenues, and allocation of licenses etc.

The legislation governing management and regulation of **biophysical environment** and **socioeconomic conditions** has also been updated to reflect the recent new Constitution. To date this has involved amendments to the Environmental Management and Coordination Act (2013); the New Wildlife Policy and the Wildlife Protection Act and Draft Wetlands Policy (all 2013) as well as the Land Act and Land Registration Act (both 2012) and the Community Land Bill (2013) Legislation for some further aspects, for example waste may yet need to be introduced or amended to address requirements of the of the oil sector.

Further details of the national governance and oil governance frameworks and the legislation applicable to management of the biophysical environment and socio economic conditions are provided in Sections 4.3.2 - 4.3.4 and summarised in Figure 4 below.

Figure 4: Summary of key national policies and legislation in Kenya

Overarching	Constitution (2010)	
	Vision 2030 (2010)	
	Country Government Act (2012)	
	National Policy for the SD [of...] Arid Lands	
	Access to Information Bill (2013)	
	Statute Law (Miscellaneous Amendments) Bill 2013	
	Public Benefit Organisation (PBO) Act, 2013	
Oil Governance	National Energy Policy (2014)	
	Petroleum Exploration and Production Act (1986)	
	Energy Act (2006)	
	Energy Bill (2014)	
	Petroleum (Exploration and Production) Act (1986)	
	Mining Bill (2014)	
	Natural Resources (Counties Royalties) Bill 2013	
Petroleum Master Plan (PMP) (in dev.)		
Biophysical	General Environment	Environmental Mgt and Coordination Act (1999) and (2013)
		EIA and Audit Regulations (EIAAR) (2003)
		Draft EMCA (Deposit Bonds) Regulations (2014)
	Biodiversity	Wildlife Policy (2013)
		Wildlife Conservation and Management Act (2013)
		Land Act of 2012
		National Museums and Heritage Act (2006)
	Water	Water Policy (1999)
		Wetland Policy (2013)
		Water Act (2002)
		Wetland Regulations
		Water Quality Regulations
	Waste and Soils	EMCA (Waste Management) Regulations (2006)
	Air and Noise	EMCA (Noise [...]) Control Regulations of 2009
		EMCA (Air Quality Standards) Regulations of 2007
Socioeconomic (NB. Many safeguards incorporated in overarching legislation)	Livelihoods	Land Act (2012)
		National Land Commission Act 2012
		Land Registration Act of 2012
		Community Land Bill (2013)
		[...]Assistance to Internally Displaced Persons [...] Act (2012)
	Human Rights	Bill of Rights
		Private Security Bill (2014)
Cultural Heritage	National Museums and Heritage Act (2006)	

NB: Kenya has also acceded to or ratified numerous international conventions and agreements which supplement national-level legislation. See section 4.4.

4.3.2 Governance framework

The new **Constitution (2010)** resulted in major reforms including;

- introduction of an upper house, the Senate ,
- devolution to two levels of Government - National - and County with equitable sharing of resources between the two;
- expenditure control and transparency in all governments;
- transparency and provision to the public of timely accurate information;
- ending of gender discrimination and moves to ensure gender equity in elected bodies;
- an advanced Bill of Rights and Human Rights and creation of an Equality Commission;
- an Equalization Fund to address needs of marginalized people;
- creation of an independent National Lands Commission (NLC) to oversee all public Land including improving land management and dispute resolution; and
- recognition of Environmental Rights and Freedom of the Media.

It also promotes citizen participation in the management of the environment (Article 69d) and in benefit sharing, and states that public land including minerals and mineral oils “*shall vest in and be held by a county government in trust for the people resident in the country*”.

Notably it addresses land tenure for the first time (Chapter 5, Part 1), makes provisions for environmental protection (Chapter 5, Part 2); citizen participation in benefit sharing (Chapter 12) and states that public land including minerals and mineral oils shall vest in and be held by a county government in trust for the people resident in the county (Chapter 5).

The Constitution is considered to be innovative in the obligations it makes with respect to natural resources as well as the human aspects of environmental management embedded in Article 42 which states “*every person has the right to a clean and healthy environment*” and Article 69(h) “*The state shall utilize the environment and natural resources for the benefit of the people of Kenya*” (Akello, 2007).

Article 35 states that every citizen has the right of access to information held by the State; and information held by another person and required for the exercise or protection of any right or fundamental freedom.

Article 225 states that Parliament shall enact legislation to ensure both expenditure control and transparency in all governments and establish mechanisms to ensure their implementation. Furthermore, it states that the values and principles of public service include transparency and provision to the public of timely, accurate information.

Article 56 notes that the State shall put in place affirmative action programmes designed to ensure that minorities and marginalised groups participate and are represented in governance and other spheres of life.

Article 202 states that revenue raised nationally shall be shared equitably among the national and county government; an extended list of factors to be considered in calculating equitable shares is also given (Article 203).

Article 71 subjects the exploitation of natural resources to further scrutiny by Parliament, thereby increasing control on the use of natural resources in the country. The Constitution provides for the establishment of the National Land Commission (NLC) and for ratification of grants of rights or concessions regarding the exploitation of natural resources by parliament. The NLC is currently in the process of being constituted under the National Land Commission Act, which came into force in May 2012 (Kaplan and Stratton, 2013).

Article 40 provides that every person has the right, either individually or in association with others, to acquire and own property of any description and in any part of Kenya and notes that provision may be made for compensation to be paid to occupants of land acquired for development or other purposes who may not hold title to the land.

Article 63 defines community land to include, among others, land lawfully registered in the name of group representatives under the provisions of any law; land lawfully transferred to a specific community by any process of law; any other land declared to be community land by an Act of Parliament and land that is lawfully held, managed or used by specific communities as community forests, grazing areas or shrines; ancestral lands and lands traditionally occupied by hunter-gatherer communities; or lawfully held as trust land by the county governments. It states that such land shall vest in and be held by communities identified on the basis of ethnicity, culture or similar community of interest. This Article strengthens various provisions in the National Land Policy regarding the recognition of all modes of tenure.

The Constitution acknowledges that existing legislation with respect to ensuring environmental safeguards is deficient, and that additional legislation will be required to adequately effect its provisions. Article 72 requires Parliament to enact this within four years.

Vision 2030 (Republic of Kenya, 2010) sets out Kenya's long term national planning strategy. It emphasises the need to achieve economic growth in a sustainable manner and proposes specific strategies to protect the environment. They include: promoting environmental conservation; improving pollution and waste management through the design and application of economic incentives; commissioning of public-private partnerships (PPPs) for improved efficiency in water and sanitation delivery; enhancing disaster preparedness in all disaster-prone areas; and improving the capacity for adaptation to global climate change. The oil sector is not identified as a key driver of economic growth (it had not yet been discovered in 2007 when the strategy was published) although Tourism including a resort city at Isiolo and promotion of under visited wildlife areas could have relevance for the Turkana area. The **Second Medium Term Plan 2013-2017** (Republic of Kenya, 2013) which implements Vision 2030 however incorporates oil as one of the six priority sectors under that strategy, stating that its development will be undertaken for the benefit of the people of Kenya with priority given to local communities and counties. It also addresses security of land tenure as well as security at a personal and national level while maintaining the constitutional requirements and human rights. It envisages a tourist resort city at Lake Turkana.

The **Country Government Act 2012** required the County Development Investment Plans (CDIPs) to be aligned with the content of Kenya Vision 2030. However, it appears that no CDIP are available at this time.

The **National Policy for the Sustainable Development of Northern Kenya and other Arid Lands** highlights the Government's commitment to develop Kenya's Arid and Semi-Arid Lands (ASALs) which occupy more than 80% of the country and support 70% of the livestock yet have the lowest levels of development.

The **Access to Information Bill (2013)** is proposed to give effect to Article 35 of the Constitution, providing a framework for proactive and systematic information disclosure by public entities and private bodies. The Bill notes a number of cases where the right of access will be limited (for example in matters of national security and infringement of commercial interests) but states that even in these cases disclosure may be required where public interest outweighs the protected interests.

The **Statute Law (Miscellaneous Amendments) Bill 2013**, which went through the second reading in Parliament in late November 2013 posed serious questions over the right to freedom of association in Kenya. It potentially undermined the **Public Benefit Organisation (PBO) Act 2013** by limiting the funding NGOs could receive from external donors and as was likely to jeopardize the ability of civil society organisations to carry out their activities effectively, independently and free from governmental interference. Following lobbying and advocacy activities it was announced in early December 2013 that the amendments targeting Public Benefit Organisation would be withdrawn.

Oil Sector

In response to requirements of the Constitution and the discovery oil, Kenya is in the process of updating its legislation applicable to the oil sector. The current and emerging legislative instruments are outlined below.

National Energy Policy (2014) sets out a framework for facilitate provision of “clean, sustainable, affordable, reliable and secure energy services at least cost while protecting the environment.” through achievement of several objectives. Those of specific relevance to oil development comprise: 1. Provisions of sustainable quality energy services for development; 2. Utilize energy as a tool to accelerate economic empowerment for urban and rural development 6. Promote development of indigenous energy resources 7. Promote energy efficiency and conservation as well as prudent environmental, health and safety practices. The Policy also states that following the discovery of petroleum the Government shall adopt and implement the Extractive Industries Transparency Initiative (EITI) (described in Section 4.4.4 below).

The current **Petroleum Exploration and Production Act (1986)** makes provision, via the **Petroleum Exploration and Production Regulations (1984)**, for the negotiation by the Government of agreements relating to the exploration, development and production of petroleum. It states that all petroleum is vested in the government, consistent with the 2010 Constitution, which states that all minerals and mineral oils shall vest in the national government in trust for the people of Kenya. However under the Constitution, the administration of minerals and mineral oils is to be vested in the

National Lands Commission (NLC). It is not yet clear how this will affect the powers of the Minister of Energy which at present, are set out in the current Petroleum Act and includes authority to enter into petroleum agreements on behalf of the government and to make ancillary Regulations (Freshfields 2013). At present the key institutions involved in regulating the oil and gas sector are the Ministry of Energy and the National Oil Corporation of Kenya Limited (NOCK). There is no separate industry regulator.

Although the current **Energy Act (2006)** has a short section on petroleum, its main focus is on electricity.

The **Energy Bill** when enacted will repeal the Petroleum (Exploration and Production) Act and provide an integrated legal instrument to regulate the petroleum sector. It will set out the terms for award of new oil licences and the overall legal and regulatory framework guiding the oil industry. It is understood that this will also aim to ensure that oil revenue is equitably shared between the national government, county government, and communities using a fair share formula. In addition it is anticipated that the Act will propose a clear delineation of roles in policymaking for the upstream, midstream, and downstream sectors.

Under the **Energy Bill**, a Sovereign Fund will be established to receive revenue from the proceeds of petroleum. One purpose of this fund will be to provide an endowment to support development in future generations when petroleum reserves may have been depleted. The Bill when enacted will establish the National Energy Regulatory Commission; part of the remit of which will be to regulate the exploration, production, importation, refining, exportation, transportation, storage and sale of petroleum and petroleum products. It requires the Commission to ensure effectiveness, inclusivity and participation of the people in performing its functions. The Cabinet secretary may also adopt acceptable international standards in the management of resources provided that such standards are not inconsistent with provisions of the Bill.

Until the **Energy Bill** is enacted, it is assumed that the **Petroleum (Exploration and Production) Act (1986)** will continue to regulate the negotiation and conclusion of petroleum agreements relating to the exploration for, development, production and transportation of, petroleum.

The **Mining Bill** approved late January 2014 applies to mining but sets out principles that may also be adopted in the forthcoming Energy Bill including in relation to licenses, taxes and royalties, and terms of PSCs.

The **Natural Resources (Counties Royalties) Bill 2013** (also referred to as the Senate Bill) makes provision for the apportionment of royalties and other accruing benefits to counties. It should be noted that the Bill is being drafted at national level, without involvement of Turkana county, yet includes provisions for community funds with committees chaired by MP.

Provisions for revenue allocation are anticipated in the existing and forthcoming legislation. There are however disparities between these, for example: The **Energy Bill** proposes 5%, 15% and 80% of revenue to local people, local and national government respectively while the **Mining Act (2013)** and **Natural Resources (County Royalties Bill (2013)** propose 5%, 20% and 75% respectively.

The World Bank is letting a contract to develop a **Petroleum Master Plan (PMP)**, which will integrate all elements of the oil and gas value chains - from exploration, production, transport, processing, storage and distribution, and usage in domestic and export markets - and that presents strategic alternatives, policy options and implementation plans for the Government of Kenya to maximize value arising from oil and natural gas development (financial, social, and environmental) in Kenya.

4.3.3 Biophysical aspects

The primary environmental legislation comprises **Environmental Management and Coordination Act (EMCA)** (1999) and **Amendments** (2013) which replaced section 2 of EMCA and the **Environmental Impact Assessment and Audit Regulations (EIAAR)** (2003) which notes the importance of public consultation and participation. EMCA provides for the establishment of a legal and institutional framework for the purpose of managing the environment and matters connected with it, including environmental policy, planning, protection and conservation as well as environmental impact and audit, quality standards, protection orders, inspection, institutional coordination and conflict resolution. Part VIII lays down provisions pertaining to environmental quality standards including water and air quality, waste management (Sections 70, 71, 78, 86) and states (clause 3.1) that every person in Kenya is entitled to a clean and healthy environment. It also requires legislative proposals where Kenya is a party to an international convention, treaty or agreement and makes provision for citizens to apply to a court for redress and provides for establishment of the relevant institutions to enable this.

The draft **EMCA (Deposit Bonds) Regulations, 2014**, when implemented will apply to “*Exploration of oil and gas activities*” and “*Exploitation/extracting of oil and gas activities*” requiring that a Bond Assessment Report is submitted as part of the Environmental Impact Assessment prior to commencement of operations. In their current form the draft regulations would require the terms of reference for the report to be agreed in advance with NEMA and for the report to include, “*a remediation, post care and maintenance plan including the required standards of remediation works, the activities involved, time frame... cost and the monitoring mechanism; the amount of deposit bond payable; and details of the operator/proponent... responsible for... successful remediation works.*” The draft regulations also give NEMA powers under certain conditions to increase and/or withhold all or part of the bond.

Other subsidiary legislation has already been enacted to support EMCA, including Regulations relating to Noise and Vibration; Wetlands, Riverbanks, Lake Shores, and Sea Shore Management; Air Quality Standards; Controlled Substances; Waste Management; Water Quality; Conservation of Biological Diversity; and Fossil Fuel Emission Control. Those of most relevance are further described below.

Biodiversity

The **Wildlife Policy** (2013) recognises that much of Kenya’s wildlife exists or is dependent on areas outside those that are protected, and therefore on community or private land. It also recognises that there has been a rapid change in tenure and land use in wildlife rangelands from communal to private ownership which, together with an increase in human wildlife conflicts, has brought about a need to define wildlife issues in regard to user rights, incentives, benefit sharing mechanisms, compensation and poaching deterrents in a way that previous legislation failed to do. It proposes institutional

reforms, access of communities to Kenya Wildlife Service (KWS), and the conservation of wildlife both inside **and** outside of protected areas. It considers wildlife as a national resource which can bring equitable benefits including wealth creation, and recognises the need for participative approaches in achieving this.

The key legislation implementing the policy is the recently enacted **Wildlife Conservation and Management Act (WCMA) (2013)** which introduces significant penalties for wildlife offences. Under clause 45 any mining and quarrying can only be approved in a national park if the area does not contain endangered or threatened species, it does not comprise critical habitat or an ecosystem for wildlife, is not an important catchment area or source of springs and an environmental impact assessment has been carried out in accordance with relevant Kenyan regulations. Under the Act oil or gas exploration or production in such areas can only occur with the consent of the Cabinet Secretary, and with the prior approval of the National Assembly.

Under the **Land Act of 2012**, public land that falls within forest and wildlife reserves, mangroves, and wetlands or fall within the buffer zones of such reserves or within environmentally sensitive areas should not be allocated to other categories.

Although the **National Museums and Heritage Act (2006)** applies primarily to cultural heritage it also applies to certain features of natural heritage which including those of value from the aesthetic or scientific point of view; geological or physiographical formations of special significance, rarity or beauty; areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science, conservation or natural beauty; or areas which are or have been of religious significance, use or veneration. It would apply for example to the protection the paleoecology features which are present in the Turkana Basin.

Water and wetlands

The **Water Policy (1999)** provides guidance on development and management of the water resources of Kenya 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 draft **Wetland Policy (2013)** recognises that the absence to date of a suitable agency responsible for Wetlands Management has resulted in the absence of an integrated framework for effective management of such areas. It states that the government shall encourage public participation in the management and conservation of wetland resources in country. The key legislation applicable to wetlands is the EMCA (Section 420 the Wildlife Policy and the Water Act (2002).

The management of water resources including lakes, rivers wetlands and groundwater are regulated through in the **Water Act (2002)** and subsidiary legislation contained in various Rules and the EMCA and the subsidiary Regulations notably the **EMCA (Wetlands, River banks, Lake Shores and Sea shore Management Plan) Regulation, 2009** and the **EMCA (Water Quality) Regulations**.

Under the **Water Act, Rules**, a number of activities are proscribed on riparian land unless authorised by the Water Resources Management Authority in consultation with other relevant stakeholders. The definition of what constitutes a watercourse is unclear and particularly whether this applies to the numerous luggas in the dry environment around Lake Turkana.

Under the **Wetland Regulations** (clause 10), all wetlands are to be mapped by 2015 and the Minister responsible for environmental matters may also declare an area to be a protected wetland where such area has national and international significance. In such wetlands, the only permitted activities are research, eco-tourism, restoration or enhancement of the wetland or any other activities identified in the wetland's management plan. They require the sustainable use of wetlands, river banks, lake shores and sea shores and require an Environmental Impact Assessment of any project likely to affect these and special measures, including prevention of soil erosion, siltation and water pollution. They also state the principle of public participation in the management of all wetlands in Kenya.

The third schedule of the **Water Quality Regulations** outlines the standards of effluent discharge to be allowed into the environment; there are however no standards for receiving water quality.

Waste and Soils

The **EMCA (Waste Management) Regulations, 2006** provide for the regulation of wastes, including industrial, hazardous, radioactive and toxic substances. They do not make any specific provision for petroleum industry related wastes.

Kenya at present does not have any standards for soil quality although, under the Land Act (2012,) the Land Commission shall ensure that any public land that has been identified for allocation is not subject to erosion or earth slips.

Air and noise

Environmental Management and Coordination (Noise and Excessive Vibration Pollution) Control Regulations of 2009 do not make specific reference to the petroleum industry. However, the First Schedule defines maximum permissible noise levels for anyone wishing to engage in any commercial or industrial activity; these levels are comparable to levels defined by the World Health Organisation. The **Environmental Management and Coordination (Air Quality Standards) Regulations** of 2008 provide for emission standards and controls. They have been in draft form since 2008 but are anticipated to be implemented in the near future.

4.3.4 Socioeconomic

As in Uganda, other than for land there are in general few policies or legal instrument directed specifically at socioeconomic issues and livelihoods with such safeguards rather being incorporated in overarching legislation, notably the Constitution, and sectoral policies. The relevant aspects of such instrument have been identified and reviewed above and include:

- The right to a clean and healthy environment, specified in the Constitution and EMCA;
- Public land and natural resource including mineral and revenues arising thereof used for the benefit the people, specified in the Constitution;
- Gender equality, rights of ethnic, minority and marginalised groups, specified in the Constitution;
- Human Rights, enshrined within the Constitution;
- Access to information and citizen participation in decision making and benefit sharing - specified in the Constitution, Access to Information Bill, Energy Bill Environmental Impact Assessment and Audit Regulations, Wetland Policy, Water Act;
- Land and water management and dispute resolution and addressing conflicts including over land, between communities and wildlife protection, specified in the Constitution, Wildlife Policy, Wildlife Act, Water Policy;
- Right to own property and recognition of different tenure systems including community land and land uses (including by those who do not hold titles) and to appropriate compensation, specified in the Constitution;
- Economic growth in a sustainable manner through private public partnerships with a focus on ASAL, specified in the Constitution, The National Policy for the Sustainable Development of Northern Kenya and other Arid Lands, National Energy Policy, and the Energy Bill;
- Community Health and Safety, specified in the Constitution (Right to a clean and healthy environment), National Energy Policy, EMCA (Noise and Excessive Vibration Pollution) Control and (Air Quality Standards) Regulations;
- Revenue sharing at local level, specified in the Constitution and Energy Bill;

In addition the following sections apply more specifically to local communities and human rights aspects.

Livelihoods of people and communities

Various pieces of legislation have recently been, or are in the process of being enacted to implement the provisions of the Constitution including Clauses 40 and 63 (see above) to realign to land rights, including to community land. These include:

Land Act (2012) addresses equitable access to land as well as the process for compulsory acquisition of land is managed by the Commission of Lands, created under the **National Land Commission Act 2012** with the award of compensation to the land owner made prior to the Government taking possession of the land. The Commission is expected to promulgate rules to regulate the assessment of just compensation.

The **Land Registration Act of 2012** requires all land in Kenya, whether private, public or community land, to be registered. However, substantive provisions on the administration and management of community land will be enacted by 2015 as required by the Constitution. Land may be acquired compulsorily if the Land Commission certifies, in writing, that the land is required for public purposes or in the public interest as related to and necessary for fulfilment of the stated public purpose. Under Article 111 when land is so acquired just compensation shall be paid promptly in full to all persons whose interests in the land have been determined.

The **Community Land Bill (2013)** provides for the recognition, protection, management and administration of community land; to establish and define the powers of Community Land Boards and management committees, to provide for the powers of county governments in relation to unregistered community land and for connected matters.

Under the constitution all rivers, lakes and other water bodies as defined by an Act of Parliament are considered public land (**Article 62, Constitution of Kenya**).

The allocation of public land that is along watersheds, river and stream catchments, public water reservoirs or lakes may be prescribed.

Under the **Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act of 2012**, displacement and relocation due to development projects shall only be lawful if justified by compelling and overriding public interests and in accordance with this Act and the conditions and procedures in Article 5 of the Great Lakes Protocol on Protection and Assistance to Internally Displaced Persons (2006), United Nations Guiding Principles 7-9 on Internal Displacement.

Human rights

Chapter 4 of the Constitution, the **Bill of Rights** sets out the rights of all people and provides a framework for implementing them. It covers among others the rights: to life, a fair trial, freedom of expression and to be free from torture, of people in custody, of access information, to fair labour practices, health care services, housing, freedom from hunger, and social security. It also allows people to go to court if their rights are infringed and gives courts the power to declare laws and actions invalid if they infringe rights.

As in Uganda as a member state of the United Nations, Kenya has obligations under the **UN Guiding Principles on Business and Human Rights** (Principle 1 and 2) to protect its citizens from human rights abuses, if these occur provide active remedy (Principle 25) and to protect its citizens from human rights abuses by third parties, including business enterprises involved in the oil sector.

Kenya has ratified many Human Rights Conventions and agreements and has thus made binding international commitments to adhere to the standards laid down in these universal human rights documents. These include: the International Covenant on Civil and Political Rights; the Covenant on Economic, Social and Cultural Rights; International Convention on the Elimination of All Forms of Discrimination Against Women; the Convention on the Rights of the Child; the African Charter on Human and Peoples' Rights (also known as the Banjul Charter); the African Charter on the Rights and Welfare of the Child.

The '**Nairobi Process: A Pact for Responsible Business**' has been developed by the Institute for Human Rights and Business in collaboration with the Kenyan National Commission for Human Rights to embed human rights considerations in the emerging oil and gas sector in Kenya. It brings together various extractive industries and works with them to commit to adopting such practice through the application of the UN Guiding Principles on Business and Human Rights as well as other relevant guidance such as the EC Oil and Gas Sector Guidance and IPIECA guidelines. It has developed specific mechanisms, for example a framework for managing human rights risks in exploration and production activities in Kenya.

The **Private Security Regulation Bill (2014)**, which aims to regulate licensing and monitoring of this sector was passed in December 2014, although not without substantial objection from the opposition, and will be enacted once signed by the President. While measures have been proposed to respond to increased threats from Islamist militant groups, there is growing concern regarding restrictions of media freedom and human rights groups. It is not yet clear how this legislation will address both public and private security and security in practice. In Kenya this requires careful consideration, in particular as regards co-ordination and cooperation between Private Security Companies and the police force to enable it to act as a 'force multiplier' increasing security for all sections of society rather than intensification and deepening of existing inequalities. Key elements in this respect will be how the Act deals with wages and use of the public police force (Abrahamsen and Williams, 2005). The Nairobi process has sought to align the Bill with the existing International Code of Conduct for Private Security Service Providers.

Cultural heritage

The **National Museums and Heritage Act (2007)** is the main law relating to the identification, protection, conservation and transmission of the cultural and natural heritage of Kenya, which includes monuments, antiquities, works of humanity and works of humanity and nature combined. The Act makes provisions, among others, for the declaration of monuments, the issues of licenses to explore for buried antiquities or monuments, for the requirement for detailed records to be provided to the NMK of any finds in designated or protected areas. Under the Act activities which are considered to have the potential to damage a monument or object of archaeological or paleontological interest therein are forbidden (Part IV).

4.4 International standards and best practice

International standards and best practice for environmental and social management can be considered to be best represented by the various guidelines, policies, performance standards and directives developed by the International Finance Corporation (IFC) and World Bank Group (WBG). While IFC and WBG outputs are a leading example of international standards, independent international organizations, anti-corruption/transparency initiatives and the ongoing development of human rights standards and the oil and gas industry have also made significant contributions. These have added to the depth and breadth of the standards available and also to the understanding of how such standards can be successfully implemented. The following section briefly reviews the most significant components of international standards and best practice.

4.4.1 IFC and World Bank Group

The IFC is a member of the World Bank Group. Over several decades the IFC has developed guidelines, policies, performance standards and directives to ensure that environmental and social safeguards are integrated into the planning and implementation of the projects it finances. These are widely considered to set the international benchmark standards across a range of industries, with transparency, disclosure and effective stakeholder engagement underpinning the guidance.

The eight IFC Performance Standards (PS) on Social and Environmental Sustainability (IFC, 2012) are with the assistance of the accompanying guidance notes, applied to projects to manage social and environmental risks and impacts. They were updated in January 2012. A summary of the standards highlighting the aspects of relevance to oil development in Uganda and Kenya and their relevance to this project is provided below:

PS 1 (Assessment and Management of Environmental and Social Risks and Impacts) provides guidance on the environmental and social management system process, including impact assessment, community engagement, management planning and monitoring. Its broad objectives are to:

- identify and assess environmental and social impacts, both adverse and beneficial, in the project's area of influence;
- avoid, or where avoidance is not possible, minimise, mitigate, or compensate for adverse impacts on workers, affected communities and the environment;
- ensure that affected communities are appropriately engaged on issues that could potentially affect them;
- Promote improved social and environment performance of companies through the effective use of management systems; and
- Address the potential for cumulative impacts with uncertain and/or irreversible consequences, which may arise from a project's incremental contribution to selected impacts on areas or resources generally recognized as important. This includes those that could be impacted by the project, and from other existing, planned or reasonably defined

developments at the time the risks and impacts study for the project is undertaken. The accompanying guidance suggests that a Cumulative Impact Assessment (CIA) should be undertaken if the project may contribute to existing threats or pressure on one or more valued environmental component.

PS 1 requires that social and environmental performance be managed through the life of a project and sets out detailed considerations for the social and environmental assessment to be undertaken for a project. It requires effective community engagement using disclosure of project-related information and a transparent process throughout. PS1 emphasises the attention necessary and the use of differentiated measures when engaging with marginalised, vulnerable and disadvantaged groups.

PS2 (Labour and Working Conditions) addresses labour and working conditions, and aims to establish, maintain and improve worker-management relationships. It promotes the fair treatment, non-discrimination and equal opportunity of workers and requires that a safe and healthy work environment be provided, and that steps be taken to prevent accidents, injury and disease.

PS3 (Resource Efficiency and Pollution Prevention) aims to avoid or minimise pollution from project activities. It specifically promotes the reduction of emissions that contribute to climate change. It also requires that when a project is a potentially significant consumer of water, the project should manage water usage so that other water users do not suffer significant adverse impacts. Pollution prevention and control techniques are expected to be consistent with good international industry practice, which is defined as “*the exercise of professional skill, diligence, prudence and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally*”. The IFC’s Environmental Health and Safety (EHS) Guidelines are also referenced (see below).

PS4 (Community Health, Safety and Security) covers project-related activities such as infrastructure and equipment safety, environmental and natural resource issues and emergency preparedness and response in case of the broader community. It seeks to avoid or minimise the risks to local communities from routine and non-routine circumstances, including potential impacts caused by natural hazards arising from project-related land use changes. PS4 also covers communicable diseases that may be associated with the influx of temporary or permanent labour. It also addresses impacts on provisioning and regulating ecosystem services (such as the provision of freshwater) that may result in adverse health and safety risks and impacts on communities affected by a project.

PS5 (Land Acquisition and Involuntary Resettlement) covers compensation and benefits for displaced persons, community consultation, grievance mechanism, resettlement planning and implementation to ensure appropriate displacement of people where required in collaboration with governments. It seeks to avoid or minimise involuntary resettlement (using negotiated settlements instead) and to mitigate adverse social and economic impacts from land acquisition. It requires appropriate disclosure of information, consultation, and the informed participation of those affected, and allows for the provision of compensation for loss of assets. Where involuntary resettlement cannot be avoided, displacement should be minimised, compensation should be paid for lost assets, adequate replacement housing should be provided and livelihoods and standards of living of displaced people should be restored or improved. PS5 notes that displaced persons include those that who do not have formal legal rights to land or assets, but have a claim to land that is recognised or recognisable under

national law and also those that have no recognizable legal right or claim to the land or assets they occupy or use.

PS6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources) provides guidance on the avoidance of adverse impacts on biodiversity and ecosystem services. Any conversion or degradation should be mitigated with the aim of managing renewable natural resources in a sustainable manner. Critical habitat, natural habitat and modified habitat are concepts developed in PS6 to facilitate the identification of areas of high biodiversity value. The intention of delineating such habitat is to identify areas that would be particularly sensitive to development and to place a number of strict conditions on developments in these areas. PS6 specifies that development:

- in natural habitat has no viable alternative and is subject to achieving “no net loss” of biodiversity;
- in critical habitat has no viable alternative and is subject to achieving “net gain” of biodiversity;
- in tier 1 critical habitat is very difficult to implement and offsets are generally not possible except in exceptional circumstances. Offsets in critical habitat can only occur after application of the mitigation hierarchy.

IUCN categories Ia, Ib and II protected areas are likely to qualify as critical habitat (CH) while categories III-VI may also qualify depending on the biodiversity values inherent to those sites. Depending on the population levels, compared to those occurring globally, the presence of Critically Endangered, Endangered, endemic/restricted range or migratory species may trigger critical habitat.

PS6 requires that projects in legally protected and internationally recognised areas consult with management authorities, sponsors and affected communities. It also requires that when affected communities are likely to be impacted by adverse changes to ecosystem services, they should participate in the determination of priority ecosystem services.

PS7 (Indigenous Peoples) provides guidance on the avoidance of adverse impacts on indigenous communities and promotes effective communication. It requires the Free Prior and Informed Consent (FPIC) of such people in a number of circumstances including where impacts occur on, or relocation cannot be avoided from lands and natural resources that are subject to traditional ownership or customary use and where significant project impacts on critical cultural heritage are unavoidable.

PS8 (Cultural Heritage) aims to protect irreplaceable cultural heritage according to internationally recognised practices for its protection, field-based study, and documentation. According to PS8, critical cultural heritage should not be removed, significantly altered or damaged by the project. In exceptional circumstances when impacts on critical cultural heritage are unavoidable, the project should use a process of Informed Consultation and Participation of the affected communities (as noted under PS7, FPIC is required in cases where indigenous peoples are affected).

The **IFC Environmental, Health and Safety (EHS) Guidelines** provide technical guidance, performance levels and measures considered to be achievable at reasonable cost using existing technology. Relevant guidance includes the EHS General Guidelines (IFC, 2007), the EHS Guidelines for Onshore Oil and Gas Development (IFC, 2007b), EHS Guidelines for Crude Oil and Petroleum Product Terminals (IFC, 2007c), EHS Guidelines for Natural Gas Processing (IFC, 2007d) and the EHS Guidelines for Water and Sanitation (IFC 2007e). Guidelines for air and ambient air quality require compliance with relevant WHO guidelines. In keeping with the critical habitat concepts later developed in PS6, under the Onshore Oil and Gas Development guidelines there is a requirement to site all facilities in locations that avoid critical aquatic habitat.

The EHS Guidelines contain the performance levels and measures that are normally acceptable to IFC. However, when host country regulations differ from the levels and measures presented in the EHS Guidelines, projects are required to achieve whichever is more stringent. If less stringent levels or measures than those provided in the EHS Guidelines are appropriate in view of specific project circumstances, a full and detailed justification for such must be provided along with proof that the alternative performance levels remain consistent with the objectives of PS3 (see above). The EHS Guidelines are typically consistent with World Health Organisation guidelines (e.g. for air quality, dust and fine particulates, surface and ground water quality, drinking water quality, noise and vibration).

The **IFC Good Practice Note, ‘Addressing the Social Dimensions of Private Sector Projects’** (IFC, 2003) includes guidance for undertaking social impact assessments. It also addresses sustainable development and opportunities for social “value added” that may arise during project development.

The IFC Good Practice Handbook, Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets (IFC, 2013) refers to internationally recognized good practices including those of the Canadian Environmental Assessment Agency and the U.S. Council on Environmental Quality.

The **Extractive Industries Sourcebook** offers detailed guidance on improving transparency and accountability, including dealing with challenges and special issues, such as entrenched interests. The Sourcebook is intended for use by senior government officials and decision makers and by supporting domestic and international technical specialists. It has been developed through a partnership of universities, industry and civil society organizations, and the World Bank.

The World Bank Group also has an extended series of operational policies (OPs) and bank procedures (BPs) relating to the conduct of the Bank's operations. These generally mirror the intent of the IFC PS. Environmental and social examples that are relevant to oil and gas developments include:

OP and BP 4.00 on Piloting the Use of Borrower Systems to Address Environmental and Social Safeguard Issues in Bank-Supported Projects (including environmental and social safeguard policies, policy objectives and operational principles).

OP and BP 4.01 on Environmental Assessment.

OP and BP 4.02 on Environmental Action Plans.

OP and BP 4.04 on Natural Habitats.

OP 4.07 on Water Resources Management.

OP and BP 4.10 on Indigenous Peoples.

OP and BP 4.12 on Involuntary Resettlement.

4.4.2 International Conventions

Both Uganda and Kenya have acceded to or ratified numerous agreements, international conventions and treaties, which are designed to protect various aspects of the environment and society, including biological diversity, migratory species, natural resources, wetlands, culture and natural heritage, economic, social and cultural rights, international trade management in wild flora and fauna, responsible fisheries management of the Albertine Basin and Lake Victoria Nile Basin. These include:

The Convention on Biological Diversity incorporates the Aichi targets which enshrine the general principles of "no net loss" at the global level. To contribute to these targets, development must not affect the objectives of National Biodiversity Strategies and Action Plans (NBSAPs), and an approach that safeguards ecosystems needs to be adopted.

Bonn Convention (1/8/2000) and the Africa Eurasia Waterbird Agreement (12/200) which require project planning to demonstrate that the proposed development and activities will not present a physical barrier to migratory species or present a risk to such species in their foraging, resting or nesting activities.

The **Nile Basin Initiative (8/2002)** under which there is a need for agreement between riparian countries of the Nile to develop and manage resources in a sustainable manner.

The **International Labor Organisation (ILO) Convention on Indigenous and Tribal people** recognises that such peoples have rights to the lands which they traditionally occupy, including their natural resources even if the country concerned has not yet identified the lands or the rights Indigenous Peoples. Such people have to participate in the benefits of projects on their land, must be fairly compensated for any damage that results from the development activity and be consulted and participate fully at all levels of decision-making processes that concern them. The **United Nations**

Declaration on the Rights of Indigenous Peoples while not legally binding, has become a primary point of reference for many indigenous groups and their advocates around the world. It has similar requirements to the ILO Convention.

The **African Convention on the Conservation of Nature and Natural Resources** (Algiers, 15 September 1968) requires Contracting States to establish policies for conservation, utilisation and development of underground and surface water, and to endeavour to guarantee for their populations a sufficient and continuous supply of suitable water. It also requires effective measures for conservation and improvement of the soils and in particular measures to combat erosion and misuse of the soil shall be implemented.

The Convention Concerning the Protection of Wetlands of International Importance especially as Waterbird Habitat (also known as the Ramsar Convention) (1998) project planning must demonstrate that the proposed development and activities will not adversely affect the conservation objectives and wise use of Ramsar sites which requires sustainable development and maintenance of the ecological character of such sites.

The **Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal** which obliges parties to reduce the amount of hazardous waste generated; reduce amount of transboundary movements of such waste and promote its environmentally sound management. Environmentally sound management is defined as *“taking all practicable steps to ensure they are managed in a manner which will protect human health and the environment against the adverse effects which may result from such waste”*.

The **African Charter on People and Human Rights** (the Banjul Charter) promotes and protects human rights and basic freedoms in the African continent including civil and political, economic, social and cultural rights. The charter has however been criticised in relation to privacy, forced or compulsory labour and provisions for fair trials and political participation.

The **Conventions on Rights of the Child** sets out the social, political, economic, social, health and cultural rights of children.

The **Convention on the Protection of World Cultural and Natural Heritage** requires parties to recognise their duties in the identification, conservation, protection and preservation for future generations of cultural and natural heritage and in so doing put in places the necessary measure within their respective territories to ensure this occurs.

4.4.3 Independent International Organisations

The **Natural Resource Charter (NRC)** sets out 12 precepts on how best to manage resource wealth:

1. A comprehensive national strategy, clear framework and competent institutions with defined roles and public debates and interactions from stakeholders ranging from government, directly affected citizens, civil society and business are necessary to create an inclusive and comprehensive strategy and legal framework.
2. Requires decision makers to be accountable to an informed public requiring transparency of information along the entire chain of decisions.
3. Establishment of property rights and an appropriate method for allocating rights.
4. Establishment of tax regime and fiscal systems and administration that provide strong returns and take account of legal traditions.
5. Strengthening capacity of local government in managing impacts, service provision and promoting engagement with local communities. Upholding local rights (in particular in relation to land and natural assets) and ensuring local benefits, through involvement of local communities in decision making Strengthening capacity of local government in promoting engagement with local communities.
6. Defined mandates and accountability for nationally owned resource companies.
7. Management and investment of revenues to achieve optimal equitable outcomes for current and future generations.
8. Smooth domestic spending to take account of revenue volatility.
9. Government should use revenues to increase efficiency of public spending at national and sub national levels.
10. Government should facilitate private sector investments for the purposes of diversification and for domestic value added
11. and 12. Enabling international governance through company commitments in relation to environmental, social and human rights standards, disclosure and corruption.

Global Witness' **A Citizen's Checklist in the Award of Oil, Gas and Mining Licenses** makes recommendations as to how to governments can be held to account and provides a blueprint for policies in resource rich countries using 36 principles. Such principles include:

- 1-5 Fiscal, contractual and regulatory strategies, laws and institutions for managing and regulating natural resources including laws that have a strong bias in promoting openness prepared through open debate.
- 6-12 & 16 Open and competitive bidding and equal and transparent terms for all bidders set out, for example, in model contracts. Check on bidding companies or those subsequently proposing to buy into oil rights as to their financial standing and records with respect to human rights, criminal activities and environmental safeguards.
- 15 Rights to exploit made conditional on completion of an ESIA/EIA.
- 19-25 Fullest information regarding tenders contracts and audits of transactions, payment to governments, relationships with Agents and other third parties publicly disclosed.
- 26-33 Continuous oversight of the award and implementation of contracts by an independent agency and involvement and building of capacity of civil society groups in such oversight.
- 28 Implementation of EITI.
- 30 Right of access to all information by legislature.
- 34 Application of relevant home country legislation to address transparency, bribery and money laundering and enable civil society to express their views.

4.4.4 Anti-corruption/Transparency Initiatives

Extractive Industries Transparency Initiative (EITI). Implementing countries of the EITI must produce comprehensive reports that include full government disclosure of extractive industry revenues, and disclosure of all material payments to government by oil, gas and mining companies. The reports must be timely, actively promoted and accessible. Countries are also required to adopt a credible assurance process including international standards. The EITI encourages capacity-building efforts, especially with civil society and through civil society organisations, to increase awareness of the process, improve understanding of the information and data from the EITI reports, and to encourage use of the information by citizens, the media, and others. Neither Uganda nor Kenya are EITI compliant or candidate countries.

The S Dodd-Frank Wall Street Reform Act. S Dodd-Frank Walls Street Reform Act requires that oil, mining and gas companies listed in the US Securities and Exchange Commission (SEC) publish how much they pay the governments of the countries where they operate; while the

European Union Transparency Directive proposes similar requirements to S Dodd Franks for European listed corporations. The larger companies operating in Kenya and Uganda eni, Total, CNOOC, BG Group, Anadarko and Apache are listed on the US and/or Europe stock exchanges and are obliged to comply with both laws while Tullow Oil is listed in the UK and is therefore required to comply with the EU Transparency Directive only.

Home-country Anti-corruption Laws

Two examples of relevant laws are:

The **UK Bribery Act (2010)** which enhances UK law on bribery including foreign bribery in order to address better the requirements of the 1997 OECD Anti-Bribery Convention. It is now among the strictest legislation internationally on bribery. It has extra-territorial reach for UK companies operating abroad. Notably companies registered in the UK can commit an offence of failure to prevent bribery if an employee, subsidiary, agent or service provider ('associated persons') bribes another person anywhere in the world to obtain or retain business or a business advantage.

The **US Foreign Corrupt Practices Act (1977)** prohibits the payment of bribes to foreign officials to assist in obtaining or retaining business. It can apply to prohibited conduct anywhere in the world and extends to publicly traded companies and their officers, directors, employees, stockholders, and agents. Agents can include third party agents, consultants, distributors, joint-venture partners, and others.

4.4.5 Human Rights Standards and Guidance

The **UN Guiding Principles on Business and Human Rights (UNGPs)** set out clear guidelines for member states (both home and host) to respect, protect and fulfil human rights of its citizens including ensuring these are not violated by third parties; these remain the authoritative global reference point on business and human rights. The UNGPs define the International Bill of Rights and the ILO Declaration on Fundamental Principles and Rights at Work as the minimum benchmark human rights standards that businesses should take account of. These cover a wide range of civil, political, economic, social, cultural and labour rights.

Work is also underway to improve the implementation of the UNGPs. For example, the European Commission's "*Oil and Gas Sector Guide on Implementing the UN Guiding Principles on Business*" translates the expectations of the UNGPs into the particular context of the oil and gas sector.

The **OECD Guidelines for Multinational Enterprises**, as revised in May 2011, include a new chapter on human rights, explicitly drafted to implement the UNGPs. Businesses domiciled in any of the OECD's 34 countries are open to investigation by the agencies (National Contact Points, NCPs). The OECD Guidelines are specific about what is expected from companies in respect of human rights. National contact points on the OECD are beginning to reference the UNGPs in their reports and recommending that companies take specific steps to implement them.

The **Voluntary Principles on Security and Human Rights**, established in 2000, are a set of guidelines to help extractive companies to maintain the safety and security of their operations within an operating framework that encourages respect for human rights.

The **International Code of Conduct for Private Security Service Providers (ICoC)** was established in 2010 and sets private security industry principles and standards based on international human rights and humanitarian law, as well as to improve accountability of the industry by establishing an external independent oversight mechanism.

IPIECA's 2012 guidance document **Human Rights Due Diligence Process** offers companies advice on the development and implementation of a human rights due diligence process in a fit-for-purpose way. Guidance offered is linked explicitly to the UNGPs (see above).

4.4.6 Oil and gas industry

Both the International Association of Oil & Gas Producers (OGP; formerly the Exploration and Production (E&P) Forum) and IPIECA (the oil and gas industry's environmental and social organisation) have produced best-practice guidelines, including:

- E&P/UNEP, 1997: Environmental management in oil and gas exploration and production;
- OGP, 2008: Guidelines for waste management with special focus on areas with limited infrastructure;
- IPIECA, 2004: An IPIECA guide to social impact assessment in the oil and gas industry;
- IPIECA, 2005: A guide to developing biodiversity action plans for the oil and gas sector;
- IPIECA, 2010: Managing biodiversity impacts: 10 tips for success in the oil and gas industry;
- IPIECA, 2011: Ecosystem services guidance: Biodiversity and ecosystem services checklists;
- IPIECA, 2011: Ecosystem services guidance: Biodiversity and ecosystem services guide;
- IPIECA, 2011: Global Water Tool for oil and gas;
- IPIECA, 2011: Local content strategy: a guidance document for the oil and gas industry;
- IPIECA, 2012: Voluntary Principles on Security and Human Rights: Implementation Guidance Tools;
- IPIECA, 2012: Ecosystems: integrating biodiversity and ecosystem services into business practices;
- IPIECA, 2012: Preventing corruption: promoting transparent business practices;
- IPIECA, 2012: Indigenous Peoples and the oil and gas industry: context, issues and emerging good practice;

- IPIECA, 2012: Human rights due diligence process: a practical guide to implementation for oil and gas companies;
- IPIECA, 2012: Human rights training tool - 3rd edition;
- IPIECA, 2013: Water management framework;
- IPIECA, 2013: Cross Sector Biodiversity Initiative timeline tool; and
- IPIECA, 2013: Integrating human rights into environmental, social and health impact assessments. A practical guide for the oil and gas industry.

4.5 Corporate requirements

Although all three of the current licensees in the Albertine Graben and Turkana Basin (Total, CNOOC and Tullow Oil) have internal corporate standards and policies, they have all committed to compliance with the IFC PS and that these standards will therefore comprise the benchmarks to be achieved for their activities in both countries.

5 Existing and Planned Monitoring Efforts

5.1 Introduction

Potential providers of historic, current and future data applicable to the measurement and monitoring of the impact of the oil sector on the environment and social livelihoods in Uganda and Kenya comprise a range of organizations. These include: government departments and agencies, intergovernmental agencies, the oil industry, NGOs, aid agencies and universities and research organisations. An overview is provided (Section 5.2 and 5.3) of the main initiatives being implemented or proposed for implementation by such organisations, together with a summary of types of data generated or proposed to be generated by them. A review of their ability to be used to populate indicators to monitor the performance of the oil sector in each country is provided in Section 6 of this report. A summary of key monitoring efforts for Uganda is provided in Table 2 and Table 3 and for Kenya in Table 4 and Table 5 below.

It is recognised that the situation with respect to monitoring and is evolving. The review documented below was carried out in late 2013 and early 2014 and may therefore have altered since that date, and continue to do so as oil development progresses in the Great Lakes Region.

5.2 Uganda

Table 2: Key environmental and social monitoring efforts in the Uganda Albertine Graben by subject matter

Subject	Organisation	Notes
Air, noise, water quality	National Environment Management Authority	Mandated, but very limited in Albertine Graben until arrival of oil
Hydrology	Department of Water Resource Management	Limited locations and time series within Albertine Graben,
Wetlands	Wetlands Management Department	Wetland mapping, may be based on old data
Biodiversity	Uganda Wildlife Authority	Large and medium mammal counts in protected areas every 3 years, more systematic monitoring limited by resource and capacity constraints. Details not readily available
	National Forestry Authority within Ministry of Lands and Environment	Biodiversity values documented for larger Central Forest Reserves, but information likely to be outdated
	NGOs (e.g. Nature Uganda Wildlife Conservation Society, Jane Goodall Institute etc.) and academic institutes, notably Makerere University	Taxon-and habitat specific surveys for limited number of sites. Nature Uganda focus is on birds and in the Murchison Falls Albert Delta Ramsar Site
	Fisheries resources Research Institute	Limited monitoring of aquatic ecology. Lake Albert has not been well studied
	Institute of Ecology	Collected more systematic data but no longer in existence and data therefore outdated.
	Global Biodiversity Information Facility	Collate species occurrence records but reliant on others for generating such data
	Integrated Biodiversity Assessment Tool	Collates data on protected areas, other areas important for biodiversity and IUCN Red Listed species but reliant on others for generating such data

Subject	Organisation	Notes
Social Economics	Ugandan Bureau of Statistics (UBOS)	Census covering a range of social economic factors including demographics, health education religion, ethnicity, economic activity, income, family size, land tenure etc. Frequency (ten years) and low disaggregation may present difficulties for monitoring the oil sector
	District and parish level surveys	As for the census above
	UNDP Human Development Index	Global level assessment of development may be limitations associated with high level of aggregation
	NGOs (e.g. International Alert) and academic institutes e.g. Makerere University	One off surveys each at limited spatial coverage with lack of parity in methodology adopted.
	Beach Management Units	Species of commercial value – catch, size etc.
Land cover and uses	National Forestry Authority and Wildlife Conservation Society	Many individual studies, including change analysis based on land cover.
Human Rights	Uganda Human Rights Commission , UBOS, Makerere School of Statistics and Applied Economics	Collate human rights data
Development	UNDP Human Development Index	Global level assessment with limitations over disaggregation
Corruption	Transparency International's Corruption Perception Index	Global level assessment with limitations over disaggregation
Cultural Heritage	National Museum	Information on known sites, but to date based on limited survey effort.

Table 3: Oil-specific environmental and social monitoring efforts in Uganda

Monitoring Effort	Organisation	Notes
Data Clearing House	National Environment Management Authority	Multi-sectoral technical team at national level, composed of government lead agencies for environmental management (NEMA, Petroleum Exploration and Production Department (PEPD), UWA, DWRM, NFA, Fisheries and the Department of Occupational Health and Safety
Environmental Monitoring Plan for the Albertine Graben (EMPAG)	National Environment Management Authority	Basin-wide monitoring programme at early stage of implementation
Albertine Region Sustainable Development Project	World Bank and Government of Uganda	Anticipated to include a monitoring component, yet to be developed
Biodiversity Surveys	Various NGOs (notably WCS)	Have undertaken various surveys related to impacts of oil sector but generally "one off" and restricted spatial coverage which limits their use.
Human Rights	UHRC	Recent monitoring of human right violations linked to the oil sector in Albertine Graben but uncertain if will be repeated
Social surveys	Various NGOs and Academia including International Alert and Makerere/Brookings Institute	Covered a range of social issues but uncertain if these will be repeated
Surveys as part of project specific ESIA's and ESMPs Block wide and in some cases basin or wider landscape level thematic studies	Total, Tullow Oil and CNOOC	While ESIA's should be publically available it is uncertain whether underlying data from them or other oil company surveys and monitoring activities will made available to third parties

5.2.1 Government, NGOs and research institutions

Standard monitoring

The key responsibility of environmental and social monitoring in Uganda rests with NEMA although, as outlined below, various other government agencies have a mandate for monitoring different environmental and social parameters. In addition NGOs undertake surveys typically of biological, water and social conditions. An overview of such initiatives identified through this study is provided below:

Air, noise, water quality – although NEMA are mandated to undertake regular monitoring throughout the country it is considered that, due to resourcing constraints, until the “arrival” of oil this was very limited in the Albertine Graben.

Hydrology – Historically the Department of Water Resource Management (DWRM) has undertaken some hydrological monitoring but this is very limited within the Albertine Graben and is generally confined to flow data which, when available are often over a short or interrupted time duration, limiting their usefulness. DWRM also hold data relating to permit applications for ground water wells which may provide some useful information on ground water levels, although coverage is likely to be patchy. Tullow Oil have recently agreed to support DWRM in the mapping and monitoring of surface and shallow ground water wells near their oil fields on a biannual basis.

Wetlands – The Wetlands Management Department (WMD) have the mandate for wetland mapping. As of late 2012, wetland mapping (1994 and 2008) appeared to be based on relatively old map data (rather than recent remote sensing) and while a useful indication of where wetlands may be present, is not likely to be sufficiently reliable to inform compliance with the relevant regulations. Similarly the WMD inventory of wetlands (WMD, 2001) appears to be based on rapid site assessments and so only provides a summary indication of the occurrence and general location and nature of wetlands.

Biodiversity - The Uganda Wildlife Authority (UWA) undertake aerial surveys for large and medium mammals every three years, but these are generally limited to savannah and landscapes in protected areas (i.e. National Parks and Wildlife Reserves). Surveys therefore primarily cover Murchison Falls, Kabwoya, Semliki and Queen Elizabeth Parks. Details of data coverage (spatial and temporal) and methods adopted are not readily available, so the ability to evaluate such data is limited. However, based on responses from interviewees it is considered likely that little systematic monitoring has occurred recently due to capacity constraints. UWA also undertake ranger-based monitoring; while useful, such data is based on sightings and not collected in a systematic manner. It is understood that prior to the establishment of UWA more detailed research activities were undertaken in the parks. While out of date, such data if collated could provide information on trends and habitat suitability.

The National Forest Plan (Ministry of Lands and Environment, 2002) provides information on biodiversity values and their status, threats and trends in the larger Central Forest Reserves (CFRs), i.e. Budongo and Bugoma but not for the numerous smaller CFRs that extend between them. Details of several of these smaller CFRs are however contained within the various (in some cases draft) Forest Management Plans (FMP). Although these include descriptions of the physical, socioeconomic, and environmental condition of each, including the status and vulnerability of ecologically important and

fragile areas, they are considered to be of varying quality and cannot be relied upon. Although the FMPs are intended to be updated every year and reviewed after five years, this is not understood to have taken place. NFA also undertake periodic land cover mapping as derived from remotely sensed imagery which (subject to the necessary analyses) has potential to provide a basis for monitoring habitat change over time.

Several NGOs and research organisations undertake studies in the Albertine Graben. Notable among these is the Wildlife Conservation Society (WCS) which has undertaken surveys and studies across the various EAs which include several forest blocks, aerial photography as well as land cover classification and change analyses. They have also undertaken studies of impacts of the oil sector and are also understood to be involved in work being undertaken as part of the EMPAG in EA₁ and studies for the oil companies (see below).

Other organizations for example the Jane Goodall Institute, the Chimpanzee Sanctuary and Wildlife Trust, Makerere, Chicago and Oxford Brookes Universities undertake intensive studies but these tend to be limited to specific sites (primarily protected areas) and species, with little on movement patterns in the wider landscape.

Nature Uganda undertakes regular water and land bird surveys in the Murchison Falls National Park (MFNP) and Queen Elizabeth National Park (QENP), which include Lakes George and Edward, and will continue to do so. They do not however undertake any monitoring outside of these areas, for example in locations where there might be congregatory or migratory species.

Makerere University also undertakes its own research which is inputted to a database (The Makerere Biodiversity Databank) although, due to a lack of resources and funding this is currently not up to date. Members of the University also undertake consultancy work including for the oil companies and NGOs (see below).

The National Fisheries Resources Research Institute (NaFiRRI) have no regular monitoring programme for Lake Albert which they have noted (pers com 2012) is among the least well studied lakes in Uganda. NaFiRRI do, however, undertake surveys as part of specific research exercises or on a consultancy basis. This inevitably means that the data are constrained in scope (technical spatial and temporal) and unless published, not in the public domain. Furthermore these studies are piecemeal and neither systematic nor stratified and hence have significant gaps in terms of meeting the needs of oil sector monitoring. It is particularly notable for example that although one of the qualifying criteria for the Murchison Falls Ramsar site is the fish species it supports there are no known fish surveys of the Victoria Nile at that location and only two rivers in EA₂ have been subject to surveys for fish but no other aquatic species. Historically the Institute of Ecology monitored water resources in a more systematic manner and while such data are out of date they may provide information on trends and habitat suitability.

Data held by the Global Biodiversity Facility (GBIF), which comprises species occurrence records made available by different institutions provides a useful source of information. It has been noted by some interviewees that quality of the data necessarily varies regarding location accuracy (some coordinates in GBIF are only stated within a half degree level) and the coverage is not consistent. For example

many records occur along roads indicating a sampling concentrated in readily accessible areas. Furthermore, GBIF does not cover the whole area nor do they cover all species (e.g. an institution monitoring birds may not record occurrences of mammals, reptiles etc.). The absence of records therefore cannot be interpreted as an absence of the species.

Data held within the Integrated Biodiversity Assessment Tool (IBAT) provide boundaries of Protected Areas (at the national-level classified by the assigned IUCN Management Category, as well as protected areas designated under regional or international conventions and agreements) Key Biodiversity Areas (including Important Bird Areas, Alliance for Zero Extinction Sites, and other Key Biodiversity Areas identified for non-avian taxa), Biodiversity Hotspots, High Biodiversity Wilderness Areas, Endemic Bird Areas and Threatened, Near Threatened and Data Deficient⁶ species contained within the IUCN Red List of Threatened Species where the Extent Of Occurrence has been mapped. Species lists are displayed aggregated to a hexagonal grid. While these are very useful as an indicator or potential presence the same considerations as for data from GBIF apply in their analysis for example with respect to coverage and the aggregation of data over relatively wide areas. Both data sets are however of reliable quality and useful at a country level.

Socioeconomics - The main source of socioeconomic data is the Census, which is undertaken by the Ugandan Bureau of Statistics (UBOS), although some data are also generated at District and Parish level. The frequency of the census and disaggregation may not be sufficient to enable effective monitoring of the oil sector. Inconsistencies leading to lack of comparability were also noted by some interviewees.

Land cover analyses being undertaken by agencies and organizations such as the NFA and WCS (see above) may have potential to be used to monitor land use changes such as areas used for agriculture (large scale and subsistence) areas of settlements and urban expansion and infrastructure, such as roads.

The Uganda Human Rights Commission (UNHRC) has within its mandate monitoring of human rights conditions while the Uganda Bureau of Statistics (UBOS) and the School of Statistics and Applied Economics (SSAE) at Makerere University gather relevant data and develop of governance and human rights indicators to enhance informed policy formulation. The UHRC recently undertook and reported on a monitoring exercise of human rights violations caused by oil exploration and production activities of five districts in the Albertine Graben (UHRC, 2014). While this provides a snapshot of the current situation it is not clear whether this exercise will be repeated in the future to generate data that can be used for monitoring purposes.

With a Human Development Index of 0.456 Uganda was ranked 161 of the 187 countries in the UNDP Human Development Report of 2013, while in 2013 it was placed 140 out of 177, with a score of 26/100 in **Transparency International's Corruption Perception Index (CPI)**, a metric which attempts to gauge the prevalence of public sector corruption. While such indices may provide an indicator of overall human rights performance they do not disaggregate the performance of the oil sector from wider national activities.

⁶ According to the Categories and Criteria of the IUCN Red List of Threatened Species

Cultural Heritage - The National Museum holds information on known sites – archaeological, palaeo archaeological and cultural - within Uganda. However it is recognized that many areas are as yet unsurveyed and that the Albertine Graben in particular has potential to contain as yet undiscovered finds particularly palaeo archaeological remains. While these are very unlikely to be of the global significance of those found in Turkana they may nonetheless be of regional and local importance.

Oil related monitoring – government agencies

Site specific monitoring

NEMA aims to establish a clearing house for data relating to environmental monitoring of the oil related activities. Proposals were initially made for a multi-sectoral technical team at the national level, composed of government lead agencies for environmental management (NEMA, Petroleum Exploration and Production Department (PEPD), UWA, DWRM, NFA, Fisheries and the Department of Occupational Health and Safety, to inspect specific oil exploration activities (wells, camps etc.) on a quarterly basis, (MEMD, 2010). However this is understood to have been limited to date due to challenges with coordination of budgets and programmes. Similarly anticipated inspections as proposed by district level monitoring teams responsible for undertaking inspections have thus fallen to NEMA, who monitor physical parameters such as noise and water quality but only in the direct vicinity of activities notably drilling and waste sites. Such constraints resulting from insufficient institutional support and integration has also been recognised in the latest State of the Environment Report (NEMA, 2010) and remains an ongoing challenge.

Basinwide Monitoring

Moves towards creating a more integrated basin wide monitoring programme were initiated with the support of the Norwegian government and other partners under the programme for strengthening the management of the oil and gas sector in Uganda through which NEMA prepared the Environmental Sensitivity Atlas for the Albertine Graben (NEMA, 2010). This was followed in 2012 by a scoping exercise to develop indicators that were subsequently incorporated into the Environmental Monitoring Plan for the Albertine Graben (EMPAG) 2012-17 (NEMA, 2012) which is intended as a guiding tool in tracking the impact which oil and gas-related developments will have on the environment of the Albertine Graben. As such, it lists a number of environmental indicators that will be used to monitor a defined list of “Valued Ecosystem Components” (VECs) classified under five themes: including: aquatic, terrestrial, physical/chemical, society, and management and business. *“Over time, it is intended that the monitoring indicators will demonstrate progress and changes in the ecosystem components, signalling when environmental management in the petroleum sector is on track, or giving early warnings for when developments are heading in the wrong direction”.*

A review of the EMPAG and discussion with various interviewees, undertaken as part of the current study identified that, while many of the proposed measures, if implemented, could potentially generate the data required to monitor the impact of the oil sector, in several areas the proposals appear to be highly ambitious and aspirational. For several VECs, for example, there is an extensive suite of generic monitoring parameters, rather than a context specific smaller set that has been customized to the conditions in the Albertine Graben.

A recent capacity needs assessment (CNA) for the Pillar Institutions of Uganda (COWI for NEMA, 2012) identified that while the government of Uganda had progressed policy, legal and institutional mechanisms in relation to managing the environmental and social impacts of the oil sector, there remained a significant lack of capacity to implement these. The areas highlighted include one relating to (CNA strategic objective 3) data and information sharing. It is also understood that funding constraints have to date limited the implementation of the EMPAG to high priority areas such as Murchison Falls National Park rather than the wider areas of influence of the oil sector.

It is recognized that many such potential constraints may now be in the process of being addressed, for example through the creation of monitoring protocols supporting the EMPAG, and the ongoing programme to build institutional capacity called for in the CNA including that now being implemented by USAID. An evaluation of the various elements of monitoring proposed in the EMPAG is included in the summary of data quality provided in Section 6 of this report. Key representative observations are provided below.

Technical Scope

- While the EMPAG covers the relevant themes of aquatic and terrestrial biodiversity, physical aspects and social issues, there is variable coverage of the components to be considered under each theme. For example in terms of fauna, the aquatic biodiversity theme only considers fish. It is, however, known that other aquatic taxa of biodiversity importance are present, for example a critically endangered species of mollusc, which is a potential trigger for critical habitat, has been recorded on the shores of Lake Albert. Similarly the societal theme does not address access to land which is likely to be key due to the need for resettlement and indirect land pressures that may arise from oil development, nor does it address conflicts at community and family levels, changes in economic opportunities, and impacts on human rights, which are also likely to occur.

Sampling locations and spatial scope:

- The EMPAG contains reasonably detailed proposals for water quality monitoring in each 'receiving water body' but does not define which ones these are. To comply with the National Environment (Wetlands, River Banks and Lake Shore Management) Regulations this would need as a minimum to include Lakes Albert, Edward and George although these are not specified, nor are other locations identified, or how these will be determined.
- It is unclear whether EMPAG will cover all 5 EAs or focus on EAs 1-3 where there are current licenses. If the latter there is danger of insufficient baseline against which to monitor future change.
- It is unclear whether the monitoring will focus on sites within the EAs or also cover the wider areas of influence which could be impacted directly, indirectly or through unplanned development or cumulative impacts. It is also unclear whether monitoring covers associated development such as refineries, pipelines and oil city development which may occur some distance from the Albertine Graben but as a result of oil development within it.

- While the EMPAG addresses water quality there is as yet no ‘official’ map of the water bodies and drainage channels that are considered to form “rivers” under the definitions contained within national legislation and would be required to inform where monitoring is undertaken. Similar constraints apply with respect to what constitutes a wetland under the existing legislation.

Temporal scope:

- The proposed frequency of data generation may be too infrequent to inform monitoring, for example the demographics data is proposed to be derived from the census which only occurs every ten years.

Parameters to be monitored:

- Although biophysical water quality monitoring can pick up clear trends and acute pollution issues, the general degradation of catchment health, particularly in terms of changing flow regimes and siltation, which is likely to be a significant risk from oil related development, is not addressed within the EMPAG. As perennial rivers are one of the main supports to wetland ecosystems, this appears to be a gap in the proposals.

Applicable standards and metrics uses for monitoring:

- For several of the parameters to be monitored there is no description of what will be measured and reported or e.g. “number of exceedances” of specific noise or air quality standards. While in some cases these metrics may be able to be derived from legislation (e.g. noise), in others (e.g. ambient water quality and waste) these do not as yet exist and so it is not clear what should be applied.

Legal and other compliance:

- There does not appear to be a clear link between the components and parameters to be monitored and standards to be achieved to comply with applicable national policies, legislation and international standards. Without this there is the potential that use of the proposed indicators may not adequately monitor compliance with such standards and thus provide the “early warning” anticipated as an objective of the EMPAG.

It is also understood that as part of the development of the Physical Development Plan for the Albertine Graben Region, the Ministry of Land Housing and Urban Development (MOLHUD) will be preparing an inventory and assessment of the environmental, socio-cultural, economic opportunities, existing problems/constraints and potential components of the spatial system of the Albertine Graben (NEMA, 2013) which could generate some relevant data for ongoing monitoring of the oil sector.

Oil related monitoring – other agencies

In addition to their general activities identified above, various NGOs and academic institutes have undertaken survey studies targeted on the evolving oil sector. For example, International Alert (2013) have recently undertaken social surveys using qualitative and quantitative approaches “to establish the baseline data needed to measure the degree of change” within the areas subject to oil development. The study however only covered EAs 1 and while the implication from the stated objectives is that this exercise may be repeated in the future, this is not explicitly specified. Makerere University in collaboration with the Brookings Institute is currently undertaking household surveys across the oil development area. Similarly WCS have undertaken limited studies of impacts of the oil sector on wildlife. There however does not appear to be integration or measures to ensure consistency and complementarity between such studies and with the government led initiatives, which may limit their use and efficiency with which data are generated. This is particularly relevant given the identified shortage of resources to undertake such work and the need to harness efficiencies.

The World Bank is currently funding the Albertine Region Sustainable Development Project (ARSDP) which according to a recent Scoping Report (GoU, December 2013) involves environmental assessment of three components: *Improvement of Kyenjojo-Kabwoya-Hoima-Kigumba Road. Detailed Planning and Priority Economic Infrastructure provision in selected local governments and implementing: Business, Technical, Vocational Education and Training.* It is anticipated that monitoring will be undertaken as part of that study.

5.2.2 Oil companies

The three partners (Total, Tullow Oil and CNOOC) for Block 1, 2 and 3a are undertaking their own project-specific ESIA's which involve surveys and post-implementation monitoring as part of the associated EMPs. They also track wider performance across their in-country operations, for example stakeholder engagement, local content and grievances.

Historically the ESIA's have been of variable quality but have improved significantly over the last few years as result of capacity development of local consultants encouraged and assisted by the operators, government and external agencies such as USAID. This has resulted in the operators moving to common standards for monitoring and reporting. The ESIA's and their underlying data sets have not been made publicly available. Under the conditions of PSAs all such oil related monitoring activities, must first be approved by PEDP and the results and data subsequently provided by the oil companies to PEDP. However, to date these have not generally been released to third parties. This includes to other government agencies in particular NEMA which could potentially benefit from such coordination notably for the EMPAG initiative, to create an integrated dataset. This has been identified by several interviewees as a particular constraint since, as identified above the NEMA monitoring initiative currently lack funds to undertake all the surveys proposed in their plans and strategies.

It is also noted that as all ESIA's, as well as other ongoing monitoring by the oil companies or their subcontractors are cost recoverable, their scope and budget therefore need to be approved by PEDP whose priority is likely to be compliance with national legislation and not international standards or those of oil companies, where these exceed the national standards. Thus in some cases even if available

the ESIA generated data may not be appropriate to enable evaluation of performance against corporate or international standards.

The three partners are also collaborating in undertaking their own surveys and studies across (and in some cases extending beyond) the three blocks. Such studies are understood to cover: ecosystems services, hydrology and water management, fisheries, biodiversity, social conditions, waste management and cumulative impacts. They could potentially generate data for monitoring impacts at landscape level, including those occurring from indirect and cumulative impacts. These are unlikely to be adequately addressed through project level ESIA but could nonetheless have significant consequences. It is thus possible but not yet certain that such studies would go a considerable way to generating the required data to monitor the performance of oil sector development across the Albertine Graben against relevant international and corporate standards. It is however unclear if these studies, which in some cases go beyond the requirements of national ESIA's, would be made publically available. There are reports of ongoing discussions between oil companies and the government agencies to explore the possibilities of integration of activities particularly between the oil company monitoring and EMPAG.

5.2.3 Summary

The most recent State of the Environment Report (NEMA, 2010) and the Capacity Needs Assessment (COWI 2012) recognises that, despite having previously been identified as a priority need for Uganda (NEMA 2008), addressing data availability and currency remains a constraint with key underlying causes comprising:

1. insufficient institutional input and cross-sector collaboration for effective management of natural resources information;
2. insufficient metadata to enhance/enable information to be effectively used by those who may need to do so
3. lack of a cohesive approach among institutions for data dissemination;
4. inadequate investment (both in terms of skills and financial resources) for environmental information management; and
5. Inadequate baseline and trend data due to incompatibility of datasets, in that a great number of datasets cannot be combined to give meaningful information.

A key problem is that while NEMA is mandated to undertake monitoring, it lacks funding and resources. It has recently been reported for example (oil_in_uganda_newsletter_december_2013) that when NEMA was established in 1995, it had about 50 staff, yet today this has only increased to 65, and that the District Environment Officers in oil-bearing regions equally lack the resources to fulfil their mandated functions.

Due to limited government resources, most data generated to date is piecemeal. There are some indications that there have been initiatives to address such problems in oil development areas, notably the NORAD funded development Programme on Strengthening the Management of the Oil and Gas Sector in Uganda (MEMD, 2010) under which the development of EMPAG is progressing, and a USAID project which includes an element aimed at strengthening capacity to monitor the oil and gas sector. In the interim however, the continuing lack of integration and collaboration between government agencies, and lack of resources (human and financial) still limit data quality and the efficiency with which they can be generated (time, cost, and availability of suitable trained staff). It is also noted (NEMA, 2010) that encouraging an integrated approach to data generation and reporting, will eventually also lead to an integrated approach to the actual management of the natural resources in turn leading to a better overall outcome. An area where this may be particularly fruitful may be in enabling integration between NEMA EMPAG and monitoring data being provided to PEPD by the various oil companies.

While several NGOs are active in generating high quality and relevant data, the limited and short term nature of funding cycles results in lack of continuity as well as limited integration, and hence compatibility, between such studies, particularly when funded and/or delivered by different agencies and NGOs. Again the absence of a more systematic approach limits the applicability of data generated to long terms basin wide monitoring needs. Integrating such activities, both with each other and with the government and oil company led activities identified above, could therefore bring significant opportunities in terms of addressing the current and future data needs for monitoring the oil sector performance.

It is also noted that monitoring that has been undertaken to date has tended to be focussed on local impacts that may occur at the project level and may therefore not adequately address impacts at a landscape level, including those occurring from unplanned but predictable development and through cumulative effects.

5.3 Kenya

Table 4: Key environmental and social monitoring efforts in Kenya by subject matter

Subject	Organisation	Notes
Air, noise,	National Environment Management Authority	Mandated, but unlikely to occur in systematic manner
Water	Water Resource Management Authority	Monitoring stations on the Turkwell, Kerio and Omo rivers but likely to have lapsed. , Satellite monitoring of Lake Turkana levels. Limited number of groundwater monitoring locations.
	NGOs intergovernmental and aid agencies	Has generated several datasets but currently disparate and would require significant collation effort
Wetlands	Ministry of Environment and Mineral Resources	National wetlands atlas exists, but resolution likely to be too low for oil sector and no system for monitoring identified
Biodiversity	Kenya Wildlife Service	Few studies, even within protected areas
	National Museum of Kenya	National repository for biological data but dependent on others for provision of such data which are limited
	NGOs (e.g. Africa Wildlife Foundation and Nature Kenya)	Taxon and habitat surveys for a limited number of sites
	Global Biodiversity Information Facility	Collate species occurrence records but reliant on others for generating such data
	Integrated Biodiversity Assessment Tool	Collates data on protected areas, other areas important for biodiversity and IUCN Red Listed species but reliant on others for generating such data
Socio economic	Kenya National Bureau of Statistics	Demographic and Health Surveys. Frequency (five years) and low disaggregation may present difficulties for monitoring the oil sector
	Kenya National Bureau of Statistics Census and County level surveys	Census covering a range of social economic factors including demographics, health education religion, ethnicity, economic activity, income, family size, land tenure etc. ,Frequency (ten years) and low disaggregation may present difficulties for monitoring the oil sector
	National Drought Management Authority	Early Warning System for drought as well as monitoring of certain land uses such as grazing, food availability, prices of agricultural products, land based conflicts etc.
	UNDP Human Development Index	Global level assessment of development may be limitations associated with high level of aggregation
	NGO (e.g. Friends of Lake Turkana) aid agencies (e.g. Red Cross, Oxfam) and research institutes (e.g. IIED) and intergovernmental agencies (e.g. DFID)	Numerous studies have been undertaken by NGOs aid agencies and research institutes in the Turkana area although to date the information as not been generated or brought together in a systematic way limiting its applicability to monitoring
	Beach Management Unit	Data on fish species of commercial value - catch size price etc.
Land cover and use	Department of Remote Sensing	Likely focus on cattle and rangelands
	Kenya Forest Service	Countrywide land cover and vegetation maps
Human Rights	Kenya National Commission on Human Rights	Responsible for monitoring government institutions and legislation
Development	UNDP Human Development Index	Global level assessment with limitations over disaggregation.
Corruption	Transparency International's Corruption Perception Index	Global level assessment with limitations over disaggregation
Cultural Heritage	National Museum of Kenya	National Repository for all archaeological data generated in Kenya
	Turkana Basin Institute	Private institute. Collects data on cultural heritage

Table 5: Oil-specific environmental and social monitoring efforts in Kenya

Monitoring Effort	Organisation	Notes
Petroleum Master Plan	Government of Kenya with World Bank	Still in early stages of development, monitoring initiatives unknown
Social Surveys	NGOs, aid agencies and academia	Although generally active in the areas there has to date been limited monitoring targeted at the oil sector although a few studies have recently commenced which include an element of monitoring governance issues
Surveys as part of project specific ESIA's and ESMPs Block wide and in some cases basin or wider landscape level thematic studies	Tullow Oil	While ESIA's should be publically available it is uncertain whether underlying data from them or other oil company surveys and monitoring activities will be made available to third parties

5.3.1 Government NGOs, and research institutions

Standard monitoring

As in Uganda, NEMA is the key government agency with responsibility for environmental monitoring (air, noise, water, wetlands, soils, waste management etc.) although several other agencies also have a role, notably the National Museum of Kenya for Cultural Heritage and Biodiversity⁷ and the Water Resources Management Authority (WRMA). The main agency responsible for generation of socioeconomic data is the Bureau of Statistics.

While NGOs and research institutions also undertake surveys and data collection, their main focus has been palaeo-archaeology, which has been studied in the Turkana Basin for some time. Some social studies have been undertaken and data generated by the numerous faith-based and aid organisations and NGOs active in the area but these tend to be localised, with limited coverage and a lack of consistency between methods used, limiting their use for long term monitoring.

Air and Noise – Although details could not be formally verified during this study, it is considered unlikely that any regular or systematic monitoring has been undertaken over much of the area.

Water– WRMA have monitoring stations on the Turkwell and Kerio rivers which operated historically although it is understood that such monitoring has lapsed or if undertaken the data is not readily available. Similarly monitoring of the Omo river is also understood to have lapsed. Since 1992, Lake Turkana levels have been monitored using satellite radar techniques.

There appear to be many other sets of historic secondary data available of the area for surface water but these are disparate and would be substantial work to pull together. The Dry Land Learning Capacity Institute, funded by the EU may be compiling a database which may go some way towards addressing this.

In relation to groundwater, the WRMA monitor a limited number of locations (WRMA, 2013) and operate a national licensing and database system for boreholes, drilling and groundwater abstraction,

⁷http://www.nema.go.ke/index.php?option=com_content&view=article&id=274:nema-board-uganda-visits-nema-kenya&catid=98

and can make the records available for a fee. It is understood however that the data are of variable and unreliable quality, and are generated by the drillers and operators.

Other organisations including multi and bi-lateral agencies, NGOs and aid agencies may have additional water related data but these are likely to be associated with specific projects, e.g. a recent Food and Agriculture Organisation funded study on the impacts of irrigation on downstream aquifers and riparian area and food security; and proposals by the African Development Bank to update a historic NORAIID study on soils. Data are therefore likely to be restricted to a few sites, limiting their applicability to systematic monitoring.

Wetlands –The government of Kenya through the **Ministry of Environment and Mineral Resources** has produced an atlas which maps wetlands in the country as derived from satellite imagery and include several in the Turkana area, but these are necessarily at a relatively low resolution, and may not include small scale but nonetheless locally important wetlands. Nor is there a system in place to monitor these on a regular basis.

Biodiversity - Although the Turkana Basin is known to support important biodiversity features, the area, particularly outside sites that are protected, has been inadequately studied. Even within the protected areas the **Kenya Wildlife Service (KWS)** is understood to rarely undertake surveys. The main focus of any monitoring that has occurred has been large mammal counts, rather than more general research. Such counts however provide an indication of key trends in specific species for example recent reductions in elephant numbers and cessation of migration activities. An Ecosystems Management plan covering the National Parks was due to be published in June 2014, which may reveal more systematic monitoring proposals. Proposals to develop further wildlife protected areas in Turkana may also enhance the monitoring in this area.

There is some uncertainty over future monitoring of Nature Reserves, as responsibility for their management has recently passed from KWS to the county level. Any scientific studies that have been undertaken have generally been by academics and NGOs notably the **Africa Wildlife Foundation** and have been somewhat piecemeal in nature. This has nonetheless over the years generated a significant body of data, which is held by the National Museum of Kenya (NMK) in its function as the national repository for biological data. More recently the data generated by the oil companies (See section o below) has also been passed to the NMK to be incorporated into their records.

It noted that the Turkana basin is an important migration route for land and water migratory birds between Africa and Europe and that the Bird Atlas of Kenya is currently being updated as are the IBAs; these initiatives may generate additional data in the near future. Similarly, should the KWS and the counties be intending to designate more sites in the area in order to attract tourists (as has been suggested by various interviewees), this may also result in additional monitoring and data availability. Even if these take place, other taxa of biodiversity importance for which there is evidence of (potential) presence, are likely to remain understudied, for example butterflies, rodents (a new species has recently been discovered), reptiles, amphibians, and invertebrates It is also noted that the area contains particularly rich and unique eco palaeo-archaeology particularly at Katanapoi; while this has been studied to some extent there may be potential for further finds in this location and elsewhere in the Turkana basin.

The **Department of Remote Sensing**, within the Ministry for Environment, are understood to undertake regular remotely sensed surveys which are of good quality. While these are focussed on cattle and rangelands these may contain some information on wildlife. It is uncertain whether land cover classification is undertaken, but if so this could potentially provide ongoing monitoring data in terms of habitat type. The **Kenya Forest Service** also generates countrywide land cover and vegetation maps which adopt internationally defined classes, and are understood to be of good quality and could hence also provide a source of data for monitoring purposes.

As with Uganda data held by the **GBIF** and **IBAT** also cover the Turkana Basin and thus provide a useful sources of data which can inform ongoing monitoring of performance subject to the same considerations of coverage (spatial, temporal and taxonomic) described above for Uganda (Section 4.2.3).

Fisheries - Fisheries data are understood to be gathered by each **Beach Management Unit (BMU)** but are likely to be restricted to species of commercial value. Kenya Marine and Fisheries Research Institute are also understood to collect data.

Socioeconomics - The **Kenya National Bureau of Statistics** is responsible for Demographic and Health Surveys, carried out every 5 years, and the census carried out every ten years. The latest census which was undertaken in 2009, is publically available and goes to household level in Turkana. The frequency and level of disaggregation of such surveys may however not be sufficient to enable effective monitoring of the oil sector. The County Development Plans also contain demographic data and projections although it is not clear how they are generated. It was noted by several interviewees that the available data are very limited and where they do exist there are large discrepancies between them as well as significant variations in predictions and forecasts based on such data. There are thus uncertainties over the robustness and hence validity of the available data for use in planning and monitoring purposes. The general perception is that the oil companies will need to generate their own data for such purposes.

The **National Drought Management Authority** has recently launched (NDRMA, 2013) a community based pilot project initiative funded by the EU to provide an Early Warning System for drought. It covers monitoring and reporting of indicators such as rainfall, quality and extent of grazing areas, food availability, prices of livestock and agricultural produce as well as incidents of conflicts etc. The recent nature of the initiative limits the ability to assess its quality but some limitation may be the sheer extent of the area being sampled, and variation in the issues of relevance across them, as well as the need to include mechanism for triangulation of data and disaggregation of oil related influences form underlying trends and other causes of change. It could, however, potentially be developed to prove a valuable tool for monitoring certain social economic conditions in the oil development area.

The Department of Remote Sensing undertakes surveys of rangeland and cattle as well as fisheries catches, while the **International Livestock Research Institute** in its capacity as lead for the fisheries and livestock programme for the Consultative Group on International Research (**CGIAR**) and holds GIS data relating to environmental and socioeconomic conditions throughout East Africa.

Various charities including the **Red Cross** are active in promoting food security in the area, including establishing irrigated agriculture for pastoralist communities and may hold socioeconomic data. As identified above where such data exists they are very localized, with lack of consistency between method used and the data collection occurring over a short time (typically the period that a project is funded). While useful in providing a “snap shot” of conditions at particular locations, and hence an indication of potential sensitivities, the considerable variations in conditions across the basin means that such data cannot be considered as representative of the wider situation.

Similar consideration apply to data generated by **local NGOs** such as Friends of Lake Turkana (**FoLT**), Pastoralist Development Network of Kenya and the Pastoralist Shade Initiative although there may be elements of the work (e.g. mapping of pastoral migration routes which may be more applicable to longer term monitoring). Numerous studies have been undertaken in the Turkana area by **International NGO and aid organisations**, for example Oxfam, the International Institute of Environment and Development (IIED) the UK Department for International Development and Oxford University amongst others. While this has generated an extensive literature on socio-economic issues and adds further “snap shots” of conditions and dynamics, without substantial analysis cannot be readily used as a basis for monitoring.

There are also constraints associated with the sheer size and diversity of conditions within the study area so that such data while informative must be used with some degree of caution, if extrapolating to the basin wide situation.

Human Rights - The **Kenya National Commission on Human Rights (KNCHR)**, an autonomous national human rights institution investigates and provides redress for human rights violations in Kenya. In this role, it monitors government institutions, carries out investigations on alleged human rights violations and gives advice to the Kenyan Government on how to enhance the promotion and protection of human rights. It also monitors the enactment of legislation in Kenya and recommends existing legislation for review to ensure it complies with human rights standards. The Commission may therefore hold some data on Human Rights in the widest sense for Kenya. It is noted that access to land and water, and resources which rely on this, are already a source of conflict in the areas. This has potential to be compounded by the presence and actions of security forces associated with oil development and both are likely to form the basis for human rights issues in the Turkana basin. It is not clear to what extent the Commission is currently or is proposing to monitor such activities, but it is considered unlikely that they are as yet focussing on this part of Kenya.

Internationally high-level data on human rights is generated by the UNDP. With a Human Development Index of 0.54, Kenya ranks 147th of the 182 countries ranked in the UNDP Human Development Report of 2009. In 2012 it was placed 139th out of 176, with a score of 27/100 in **Transparency International's Corruption Perception Index (CPI)**, a metric which attempts to gauge the prevalence of public sector corruption. While such indices may provide an indicator of overall human rights performance they do not disaggregate the performance of the oil sector from wider national activities.

Cultural Heritage - The **National Museum of Kenya (NMK)** undertakes research and surveys on palaeo-archaeology throughout the Turkana Basin and is the national repository for archaeological and palaeo data, for which Turkana is locally unique and “considered as the “cradle of mankind”. While all recently collected data are entered directly into a GIS database, most previously generated data are still in the form of notes and maps, although these, albeit slowly, are being incorporated into the database. As the authority responsible for designating sites NMK also hold records of all designated sites, including candidate ones under consideration, for example a rock site south east of Lockichar.

As a private research institute with no legal mandate, the **Turkana Basin Institute (TBI)** which undertakes a significant amount of research on cultural heritage (as well as biodiversity) is not required to share data with NMK although much of these are generally acquired by NMK as part of the permitting process for which they are the sole authority for issuing licenses. Other research institutes Universities of Aberystwyth, Oxford and Cambridge who undertake palaeo archaeological work in the area are understood to provide data to the NMK.

NMK are working with Tullow Oil, other oil exploration companies such as Africa Oil and other developers in the region including LAPSET undertaking surveys before any activities or development can proceed. Any relevant data generated are added to the database. Thus while the entire area is not yet mapped it is likely that areas that are directly affected by oil developed will be studied prior to their implementation and monitored thereafter. There is less certainty however over the evaluation that is proposed of areas which may be subject to indirect or induced development.

There is relatively little information on more recent traditional archaeological sites in the area (e.g. prehistoric sites), possibly due to the focus on earlier periods although identification of such sites is undertaken as part of the advance investigations for oil related development.

Oil related monitoring– government agencies

NEMA is understaffed and underfunded and is unlikely at present to have the full capacity needed for monitoring and evaluating the performance of the oil and gas sector, particularly in environmentally and socially sensitive areas. Indeed, it has recently been noted that monitoring of company activities to date has not been very systematic (Vasquez, 2013). Unlike Uganda, where an internationally funded programme to prepare the country for monitoring of oil activities, including through the EMPAG, has been in place for some time, plans for future government-led monitoring of the oil sector in Kenya do not yet appear to be developed. They may possibly emerge from Petroleum Masterplan, being developed with the assistance of the World Bank, although the timing of this initiative, and its broad scope may mean that it will be some time before any monitoring requirements may be formulated and subsequently implemented.

A further key challenge in developing a monitoring programme for oil related development will be in determining how and indeed if, the impacts of oil development can be disaggregated from those occurring as a result of other ongoing developments and those currently proposed for the Turkana area. It is recognised that settlement patterns and socio economic conditions are already changing due to interventions from aid agencies providing water, schools, health facilities and increased security, while further changes are anticipated from ambitious and far reaching proposal for economic

developments for the whole Turkana county. Such disaggregation of impacts is therefore desirable both to track the performance of the oil sector in achieving the necessary environmental and social safeguards and to determine the contribution of that sector to cumulative and synergistic impacts (both positive and negative) of the combined development activities in the region. Such a monitoring programme will thus need to take account of the changes already occurring and the impacts of LAPSETT and of the various power and tourism developments proposed for the area. It could therefore be advantageous to plan and develop a coordinated approach to monitoring, for example integration of survey activities and consistency of protocols and metrics used so that they can both be disaggregated and combined to inform both types of analysis.

An added complexity which will need to be addressed in such a plan is the international dimension of proposed nonoil-related development which will impact the Kenyan Turkana area and potentially be attributed to such development. Of particular relevance are the Gibe Dams and irrigated sugar plantations on the South Omo in Ethiopia which will have major implications for the water regime in Lake Turkana, on which the livelihoods of many communities in Kenya depend. Such impacts have potential to threaten livelihood security and lead to local conflict.

Oil related monitoring –other agencies

Although generally active in the Turkana basin, there has to date been limited monitoring targeted at the oil sector by NGOs, aid agencies and research agencies, however several small initiatives notably those recently funded by the MacArthur Foundation exist. These are generally focussed on governance issues and may generate some data potentially applicable to monitoring, for example relating to the status of policies, laws, regulations, and practices relevant to oil exploration and production, especially as they affect sustainable development (as being undertaken by ILEG and WRI).

5.3.2 Oil companies

As in Uganda, Tullow Oil are undertaking their own project specific ESIA's which involve surveys and post implementation monitoring as part of the associated Environmental and Social Monitoring Plans (ESMPs), as well as tracking of wider performance across their in country operations, for example stakeholder engagement, local content and grievances.

They are involving national institutions on a consultancy basis for the ESIA's notably NMK in undertaking biodiversity and cultural heritage surveys. They are also undertaking additional (non-statutory) studies with the aim of addressing gaps in baseline information to generate such information. This is being planned both to inform early decision making and to address current baseline and future monitoring needs through establishing long term monitoring programmes. Such studies to date have included a Strategic Environmental Assessment (SEA) that it is understood provide an early identification of potential of oil related impacts, including those that could occur at landscape level and cumulatively, both across all oil developments and in combination with other proposed developments in the region. The SEA identified and collated available data to monitor such impacts and highlighted key gaps.

It is highly probable that the studies being commissioned by the oil companies may address such identified data gaps, although specific details have not been provided. It is thus likely that such studies

could go some way to generating the required data to monitor the performance of oil sector development against relevant international and corporate standards. However given the spatial extent of the potential area of influence, the nature and quantity of the data that needs to be generated, and hence the level of advance planning, proposals may not be available for some time. It is also uncertain whether data generated by such studies, rather than the synthesised analyses, would be made available to third parties.

The need to disaggregate impacts arising from oil development from those associated with other development in the region (as discussed above) is likely to be particularly important to the oil companies, not least to enable them to demonstrate full mitigation for adverse impacts of their activities.

5.3.3 Summary

The Turkana area is experiencing a time of considerable change with devolution of governance from national to county level, and major development proposals in both Ethiopia (damning and water abstraction from the upper Omo) and Kenya (development corridors including for power, tourism and transport and of course, oil).

Many of the interviewees for this study commented that, despite supporting several important yet fragile ecosystems, resources and communities, which are particularly vulnerable to change, the Turkana area has been largely unsupported and neglected in terms of government attention, including monitoring. This has occurred despite the region's high vulnerability to both natural (e.g. drought) and human induced (e.g. transformation from pastoralist to sedentary livelihood practices) changes. Consequently there is an acute shortage of reliable data with which to monitor such change. It is only very recently, with the arrival of oil and other development initiatives that interest in the region is beginning to emerge. While it is anticipated that studies including regular monitoring will follow, these are as yet at an embryonic stage. The implications of oil and other development needs to be considered against a backdrop of ongoing significant environmental and socioeconomic transformation in areas that experience conflicts over access to land, water and the resources they support. There are several key implications in terms of monitoring efforts that could be used to inform decision making relating to the oil sector, including:

- Data on environmental and socioeconomic conditions in the Turkana area have been very limited in coverage and quality to date. Where they do exist, they are either generated relatively infrequently (e.g. census data) or apply to limited areas, parameters or time periods and cannot be considered representative of the large areas, and diverse conditions within them, that may be affected by oil related development.
- To date there has been little demonstrable progress in developing government led monitoring initiatives to track the performance of the oil sector.
- The underlying trends as well as changes that can be anticipated from a range of proposed development activities in the region poses significant challenges in designing a monitoring regime that will enable disaggregation of oil related impacts from those that arise from other causes.

6 Summary of applicability of available data for tracking achievement of environmental, socioeconomic and governance objectives

6.1 Introduction

Based on the identification of standards relevant to the oil sector in Uganda and Kenya (documented in Section 4), and an analysis of their relevance to the specific conditions in the development areas in each country, the environmental, socioeconomic and governance objectives to be achieved when implementing oil development in each have been derived and are summarised in Table 7 and Table 8 inserted below. An indication of the likely applicability of available data (as derived through a review the monitoring efforts identified in Section 5) to track performance in meeting these objectives is also presented in Table 7 and Table 8.

The data considered to be “**available**” are those currently, or likely in the future, to be in the public domain and hence accessible by those wishing to engage in monitoring efforts. Sources therefore largely comprise NGOs government, intergovernmental, and research agencies. While it is recognised that the oil companies are also generating data which are shared to some extent with government agencies, such data have not generally been made available to third parties. It has not been possible to assess their quality nor to establish if they will in the future be made more widely available and, if so, in what form (for example raw, aggregated, synthesised within ESIA’s etc). Such oil company data have not therefore been included in Table 7 and Table 8, although if the situation with respect to making such data more widely available were to change, they could provide a valuable resource for third party monitoring of the sector. This applies in particular to any monitoring being undertaken at the landscape scale (to include indirect and cumulative impacts), which may be more relevant in tracking the performance of the sector, than site specific monitoring of direct impacts where until recently company efforts have been largely focussed.

The “**applicability**” of available data have been considered and ranked in terms of four broad features:

- Parameters measured and their spatial coverage;
- Ease of use of the data for populating performance indicators;
- Temporal coverage;
- Robustness of data generation- collection methods, quality controls, consistency

In order for data to be suitable for monitoring performance they must perform well **across all four criteria**. An overall ranking of the applicability of data for tracking performance against an objective should therefore **not aggregate** the ranking made against each criteria, but rather consider the consequence of each low ranking criterion in terms of the objective being monitored. For example, a monitored parameter that performs well in terms of technical and spatial coverage, ease of use and

robustness but has only been monitored once (i.e. ranks low in terms of temporal coverage) will have limited applicability to monitoring changes and trends.

The objectives listed in Table 7 and Table 8 may not in all cases reflect the balance between those that relate to input, output and outcomes required to accurately reflect priorities for monitoring and evaluation. It is intended rather that they form a long list from which the priority objectives, and the indicators to monitor progress in achieving them, can be developed.

The analysis of available data and their applicability to track performance has been based to a large extent on key informant interviews and reviews of material that could be readily sourced and reviewed during the study period. It may therefore not fully represent the current situation, which is rapidly evolving and would require further primary research to establish. It should nonetheless provide an indication of the key sources of data and an initial assessment of their likely ability to be used for monitoring. More specifically it assists in identifying where gaps in such data exist, and the nature of such gaps, which can be used to inform the nature of indicators that can be developed, and populated, for monitoring efforts. It can also potentially be used for identifying priority areas for targeting interventions aimed at filling monitoring gaps.

Table 6: Data Ranking Criteria

Ranking	Technical and spatial coverage	Ease of use	Updated over time	Robust
	Are the correct types of data collected and do they cover the required spatial scope?	Are data in a form that can be readily used for the monitoring?	Is the monitoring frequency sufficient and is there consistency in what is monitored each time?	Are the data capture methods systematic and reliable with appropriate quality controls?
	Datasets have significant gaps in terms of parameters covered and/or spatial coverage	Likely to require substantial collation analysis and interpretation to be in a useable form	Monitoring is <i>ad hoc</i> e.g. as part of a one off programme and not undertaken on a regular basis	Data is not collected in a systematic manner and/or not subject to quality controls
	Parameters are covered but at a high level of aggregation and/or over a limited spatial or technical scope	Would require significant further analysis to be in a useable form	Monitoring is undertaken through a range of unrelated initiatives with lack of consistency in methods adopted and/or at insufficient frequency and/or limiting use of data for tracking progress	There is significant uncertainty over the quality and systematic approach to the data capture methods
	Most but not all parameters are covered at the appropriate level of disaggregation and spatial scope	May require some analysis to be in a readily usable form	Monitoring is undertaken through a range of initiatives which are broadly consistent in approach but at uncertain frequency	Data is likely to be collected in a broadly systematic manner with some quality control but there may be a degree of uncertainty or variation in such aspects
	Full datasets exist over the entire study area	In public domain in a form that can readily be incorporated in reporting of performance	Regularly monitored through integrated and standard methods	Data are generated in a consistent and systematic manner that reliably represents the situation prevailing at time of capture
	<i>Insufficient information on which to make a judgement of ranking</i>			

Notes for Table 7 and Table 8

1. "Measures" are management actions required to safeguard features of importance under each theme.
2. "Objectives" to be achieved in oil development have been derived from analysis of legislation and standards (documented in Section 4 of this report) and their relevance to the project related development in the Albertine Graben and Turkana Basin respectively.
3. "Data" are those that could be used in monitoring the level of compliance of oil sector activities with the derived objective. These data and their ranking will therefore inform the nature of the specific indicator that may be developed for monitoring.
4. The "ranking" applies to data that are currently being generated or are proposed and committed to, for example through the EMPAG and can reasonably be expected to be made available to third parties. They do not include monitoring that may be implemented by the oil companies including through ESIA and ESMPs, where it is currently uncertain whether and if so in what form such information may be made available to external parties.

6.2 Summary of Data Availability

Table 7: Summary of data availability - Uganda

THEME	MEASURE ¹	OBJECTIVE ²	DATA LIKELY TO BE AVAILABLE ³				NOTES
			Ranking				
			Technical/spatial cover	Ease of use	Updated over time	Robust	
Governance	Overarching Institutional Framework & Legislation for the oil sector	Existence of national petroleum legislation which addresses amongst others: model contract terms, bidding process including independent oversight, fiscal powers, bribery, disclosure, transparency participation and human rights					Some data on adequacy of legislation and institutions has been generated by a number of players, primarily civil society organizations (notably ACODE and Greenwatch) who have been monitoring recent developments as new legislation continues to evolve. The continuance of these activities is, however, dependent on external funding as well as the level of freedom with which such organisations can operate.
		Existence of institutions with defined roles and capacity in implementing and overseeing the implementation of the oil related legislation					
		Updated National Environmental and Social Legislation that addresses management and regulation of oil related impacts and capacity to implement it					There does not appear to be any agency or NGO monitoring and reporting on the adequacy of environmental and social legislation, particularly of the biophysical aspects – although there is some monitoring and review of land legislation.
		Participation of civil society and grass roots in developing the above					Although several NGOs and CSOs undertake some monitoring and reporting of the participation of wider society in the development of oil sector legislation and decision making, these reviews rarely extend to evaluation of participation at grassroots (e.g. parish and village level). Further, such reviews tend to be qualitative in nature, aimed at highlighting broad issues and trends. While useful (possibly in informing high level indicators) these reviews may not be sufficiently frequent or robust to enable monitoring and evaluation of trends across all sectors of civil society over all the legislation relevant to oil related activities, in a consistent manner in order to generate data with the required confidence levels to populate indicators for monitoring purposes
		Companies operating in the region have corporate standards relating to environmental and social performance which comply with international good practice					To date there has been no publicly available reviews of corporate standards, although such a study is being undertaken as part of the current round of MacArthur grant making. It is not, however, known if this will be updated over time.
		National and corporate commitment to international standards					Some monitoring of this aspect is undertaken by NGOs and CSOs, including for example, of progress towards joining the EITI. Information is also publicly available on adoption of various international conventions e.g. those relating to human rights, biodiversity safeguards etc.
	Transparency accountability and access to information	Full public disclosure and access to information in accordance with international good practice in relation to oil sector development, as well as mechanisms for redress if this does not occur					Although there is some monitoring and review, largely by CSOs (for example Greenwatch), of transparency, accountability, access to information and participation which is made available through media (for example Oil Watch) this is <i>ad hoc</i> and is not coordinated or undertaken in a consistent manner. As with other monitoring, e.g. of legislation identified above, while such reviews highlight broad issues, they may not be sufficiently frequent or robust to enable monitoring and evaluation of trends across all sectors of civil society and over all aspects relevant to oil related activities, to generate data with the required confidence levels in order to populate indicators for monitoring purposes.
		Information provided to all sectors of society - government NGO civil society grassroots and as part of FPIC, indigenous peoples					
	Participation in decision making and monitoring relating to the oil sector	Citizen participation including, where Indigenous people are involved, FPIC					
	Revenue allocation and investment	Equitable sharing of revenue and long term investment and management					Too early to determine quality of data relating to this aspect as revenue is not yet being generated in Uganda.
Biodiversity	Wildlife Protected Areas	Any development in such areas should result in improved wildlife management					Data regarding status of wildlife in PAs is available to some extent through GBIF, IBAT and studies undertaken by NGOs e.g. WCS. Data proposed to be generated by EMPAG may also be relevant although they are likely to be patchy as not all species are (proposed to be) monitored and the programme is likely to be focused on NPs with less monitoring in WRs.
		Avoid, or if this is not possible minimize, development, the zone of influence of which extends into wildlife protected areas					The World Database on Protected Areas (WDPA) is sufficient for determining protected area boundaries. Zone of influence may be open to interpretation.
	Other Areas designated for biodiversity	Avoid or if this is not possible minimize, development, the zone of influence of which extends into other areas designated for biodiversity (CFR, IBA, Ramsar etc.)					The World Database on Protected Areas (WDPA) and data held by conservation organisations (for example by BirdLife International on Key Biodiversity Areas) is sufficient for determining boundaries of such areas. Zone of influence may be open to interpretation.
	Areas qualifying as critical or natural habitat	No net loss of natural habitat (NH)					Areas of NH are not currently mapped but potentially may be derived (in part) from remotely sensed data which is regularly generated. This would, however, require a degree of analysis and interpretation that is not currently undertaken plus the acquisition of the satellite imagery, and would not cover all habitat types.
		Net gain of critical habitat (CH)					Data on some trigger species for CH is available to some extent through GBIF, IBAT, WCS as well as Nature Uganda but this is unlikely to provide sufficient coverage and scope to enable determination of actual qualification of CH both inside and particularly outside PAs. Such gaps are unlikely to be addressed by current government monitoring which focuses on NPs. Data proposed to be generated by EMPAG may also be relevant although they are likely to be patchy as not all species are (proposed to be) monitored and the programme is likely to be focused on NPs with less monitoring in other areas which may nonetheless qualify as CH. EMPAG is understood not specifically to address CH which is an IFC rather than national requirement. The quantification of net gain is onerous and unlikely to be feasible from the data generated by proposed monitoring The IUCN Red List of Ecosystems when developed may provide some data in this respect. The ability to map critical habitat is however likely to be limited without further specific targeted survey activity.
	Main ecosystem services	Safeguarding of features providing ecosystems services					At present no specific mapping or monitoring of features providing ecosystems services, (including level of supply, use and dependency), has been undertaken by government agencies. The EMPAG includes monitoring of fish catch which may inform the achievement of this objective. However it does not identify how effects of oil related development will be disaggregated from other drivers of change to enable the impacts of oil to be tracked and evaluated.

THEME	MEASURE ¹	OBJECTIVE ²	DATA LIKELY TO BE AVAILABLE ³				NOTES
			Ranking				
			Technical/spatial cover	Ease of use	Updated over time	Robust	
Water resources	Safeguarding of rivers and lakes and "protected" zones around them	Avoid where possible development around protected rivers and lakes and where this occurs ensure permits are in place					Although legislation calls for mapping of protected rivers and lakes, this has not been undertaken to date. It is therefore not possible to determine which such features are subject to protection. The EMPAG does not address this aspect so it is likely to remain unaddressed.
		Catchment integrity maintained					Vegetation cover and remote sensing of wetlands is proposed along with land use mapping as part of the EMPAG. The proposals do not however include evaluation of river catchment health as could potentially be derived from percentage coverage by land use/cover (forest, scrub, arable, grazing, bare land etc.). As perennial rivers are one of the main supports to wetland ecosystems, this appears to be a gap in the proposals
		Water quality complies with national and international standards					Historically DWRM water quality data for rivers are generally lacking, and where they do occur there are no standards relating to physio-chemical quality of receiving waters. Tullow Oil has recently agreed to support DWRM in mapping and monitoring of surface water and of shallow ground water near their oil fields on a biannual basis. Although it is not known whether the other current operators have made such a commitment, given the nature of the partnership this is considered to be highly likely. The parameters to be measured within EMPAG are reasonably detailed although they do not include sediment load (which may be particularly relevant in the Albertine Graben context). Monitoring locations are not identified and it is therefore not clear if those features that are protected by regulations will be included/prioritised. There are no suggestions as to the development of standards for metrics (which do not currently exist) within the EMPAG.
		Flows and levels are maintained					Flow monitoring is theoretically carried out in each of the major river basins and collated/held by DWRM. However, in practice this is limited to a few of the perennial water courses and would not meet monitoring needs if major river abstraction is proposed. EMPAG indicates that data generated from existing stations and discharge measurements will form the basis of ongoing monitoring. However, as indicated above, unless this is enhanced it is unlikely to be sufficient although, as with water quality described above, these shortfalls may however be addressed to some extent by the Tullow Oil supported, government-led monitoring.
	Safeguarding of groundwater resources	Water quality complies with national and international standards					Information on groundwater levels is collected locally and collated by DWRM, monitoring system, and the National Groundwater Monitoring Network. However, given the nature of the aquifers, any impacts are likely to be localised, so a network that is geared towards potential receptors would be necessary for effective monitoring. As described above it is understood that Tullow are supporting DWRM in mapping and monitoring ground water levels in the vicinity of their operations. As with surface waters groundwater quality standards are not developed and need to be developed based on baseline conditions for physio-chemical parameters. Although some mention of these aspects is made in EMPAG groundwater metrics are generally not well covered
		Flows and levels are maintained					
Safeguarding wetlands	Avoid, or where this is not possible minimise, development whose area of influence will extend into designated wetlands					As with rivers, wetlands that qualify for protection have not been adequately mapped. Although there is currently limited monitoring of water quality within some wetlands, the rationale for the selection of such sites for monitoring is not clear. There are extensive proposals within the EMPAG for wetland monitoring. However the specification of what constitutes a wetland (in the absence of mapping) is not discussed and the extent and number of sites (which is likely to make the proposed monitoring impractical), along with the inherent baseline variability, have not been acknowledged in the proposal so they may not generate the required data for monitoring.	
	Erosion control	Ensure adequate erosion protection in high risk areas including permits for "hilly slopes or mountainous areas"				High risk areas and levels of erosion experienced are not currently mapped, although they could potentially be derived from digital elevation models and soils data	
Waste and Soils	Maintenance of soil productivity	Minimise loss of areas of high agricultural productivity				Land quality maps exist but are old (e.g. 1987) and may not reflect the variability in the Rift Valley.	
General Socioeconomic	Demographics	Population levels are within carrying capacity				Proposed surveys under EMPAG will rely on census data. The ten year interval between surveys is likely to be insufficient to monitor trends and the limited disaggregation may also be insufficient identify conditions and trends on specific groups. Other surveys undertaken by CSOs and NGOs e.g. International Alert and proposed by Makerere University, including under MacArthur grant making may generate some useful data. However, the lack of coordination between such studies and uncertainty over consistency of methods used, spatial extent and frequency at which they will be undertaken is likely to limit their use for reliable oil sector monitoring other than at high level. Additional data may be required to determine carrying capacity.	
		Lowered dependency ratio					
		Retain local population and minimise influx					
		Protect interests of marginalised, vulnerable and minority groups					
Protect community health well being	Provide a clean and healthy environment for local communities and employees					Some relevant parameters may be generated by proposed surveys under EMPAG. However, as identified above, these will rely on census data which is only generated every 10 years which is likely to be insufficient to monitor trends. The limited disaggregation may also be insufficient identify conditions and trends on specific groups. Such data are also unlikely to cover issues such as gender based violence, monitoring of security forces and civil conflicts arising from oil development. While other ad hoc studies may generate some information in these areas, the lack of coordination between them and uncertainty over consistency of methods used, spatial extent and frequency at which they will be undertaken, is likely to limit their use for reliable oil sector monitoring other than at a high level.	
	Promote a safe and secure environment free from civil conflict						
	Reduce prevalence of disease and mortality						
	Enhance education levels						
Enhance social Infrastructure	Oil related infrastructure development should enhance accessibility to key services (hospitals, schools etc.)					Accessibility to key services may be addressed to some extent by the EMPAG which is based on the census and hence subject to the limitations identified above. At present no monitoring of other aspects of social infrastructure has been identified.	
	Oil related infrastructure development addresses capacity of key services to meet demand in particular that arising from oil related activities						
	Engage local capacity (including that of women) to manage community infrastructure						
Livelihoods	Retain property, assets and access to land and water based livelihood and other land and water based activities	Minimise both physical and economic involuntary resettlement				Land security is already an issue with a move from communal to family ownership but this is generally customary land. Leasehold is also commonly practiced. There are therefore limited registers of ownership and rights to land. EMPAG does not address monitoring of access to land and assets, or resettlement under the "Society" theme. While this may be addressed to some extent through the demographic monitoring discussed above this will not provide the data to evaluate the resettlement process and its outcomes.	
		Where involuntary resettlement occurs ensure a process in accordance with IFC PS is implemented					
		Wherever possible provide replacement in kind rather than cash					
		Ensure rights to communal and customary land are respected					
		Retain access to other land uses – including cultural sites					
Economic Opportunity	Maximise direct and indirect economic opportunities for local communities					All operators are required to produce national content plans to maximise direct and indirect employment opportunities and to report on performance including employees at community, district and national level, training provided etc. The current requirements are considered unlikely to include data disaggregated by gender, minority groups etc. The EMPAG does not address economic benefits other than tourism.	
	Supply chain opportunities created						
	Skills programme for oil service industries and supply chain at local and national levels						
	Ensure equitable distribution across gender, ethnic groups and minorities and minorities						

THEME	MEASURE ¹	OBJECTIVE ²	DATA LIKELY TO BE AVAILABLE ³				NOTES
			Ranking				
			Technical/spatial cover	Ease of use	Updated over time	Robust	
Human Rights	Human Rights	Rights to ownership of property and access to land and water and fair compensation and dispute resolution for losses. Protection of security of communities and individuals including from actions of security forces. Access to a clean and healthy environment. Rights of ethnic and marginalised groups. Freedom from GBV. Access to information					At present although an initial special report and briefing of oil related human rights issues have been produced, and some aspects of human rights are covered by other "themes" in this table it is as yet unclear how this aspect will be taken forward,
Cultural heritage	Safeguard traditional archaeology, paleo archaeology, and intangible cultural heritage	Avoid or, if this is not possible minimize, development, the zone of influence of which extends into areas designated or otherwise important for cultural heritage					All records of palaeo archaeology and archaeological finds are held by the Museum of Uganda. While this provides a record of known features, large areas remain unstudied and may have potential to contain further finds. Intangible cultural heritage is generally less well studied. The area of influence for effects on intangible cultural heritage in particular may be subject to interpretation.

Table 8: Summary of data availability – Kenya

THEME	MEASURE ¹	OBJECTIVE ²	DATA LIKELY TO BE AVAILABLE ³				NOTES
			Rating				
			Technical/spatial cover	Ease of use	Updated over time	Robust	
Governance	Overarching Institutional Framework & Legislation for the oil sector	Existence of national petroleum legislation which addresses amongst others: model contract terms, bidding process including independent oversight, fiscal powers, bribery, disclosure, transparency participation and human rights					Several agencies, primarily NGOs and CSOs (notably Oxfam, KPSCOG and ILEG) are active in reviewing and commenting on the draft and final legislation and institutions as applicable to oil development. The continuance of these activities is, however, dependent on external funding as well as the level of freedom with which such organisations can operate although concerns regarding the controls that may be placed on NGO activities through the Miscellaneous Amendment Bill may no longer apply since the proposed amendments targeting Public Benefit Organisations have been withdrawn.
		Existence of institutions with defined roles and capacity in implementing and overseeing the implementation of the oil related legislation					
		Updated National Environmental and Social Legislation that addresses management and regulation of oil related impacts and capacity to implement it					Several changes called for in the recent Constitution are relevant to environmental management and are being implemented through a raft of new legal instruments though at present they may not yet adequately cover all potential implications from oil development. For example while the EMCA has recently been amended but may need further revisions to address specific requirements of the oil sector (e.g. management of waste). There does not appear to be any agency or NGO monitoring and reporting on the adequacy of such legislation or its implementation to oil related activities There has however been some monitoring of the evolving land legislation which will be particularly relevant to oil development though it is not yet clear whether and how its implementation will be monitored. While KNCHR monitor Human Rights it is not clear how much they are or intend to do so in relation to the oil development
		Participation of civil society and grass roots in developing the above					Although several NGOs and CSOs undertake some monitoring and reporting of the participation of wider society in the development of oil sector and legislation and decision making, these reviews rarely extend to evaluation of participation at grassroots (e.g. parish and village level). Further, such reviews tend to be qualitative in nature, aimed at highlighting broad issues and trends. While useful (possibly in informing high level indicators) may not be sufficiently frequent or robust to enable monitoring and evaluation of trends across all sectors of civil society over all the legislation relevant to oil related activities, in a consistent manner to generate data with the required confidence levels to populate indicators for monitoring purposes
		Companies operating in the region have corporate standards relating to environmental and social performance which comply with international good practice					Although to date there has been no publicly available reviews of corporate standards, such a study is being undertaken as part of the current round of MacArthur grant making. It is not however known if this will be updated over time.
		National and corporate commitment to international standards					Some monitoring of this aspect is undertaken by NGOs and CSOs, including for example, of progress towards joining the EITI. Information is also publicly available on adoption of various international conventions e.g. those relating to human rights, biodiversity safeguards etc.
	Transparency accountability and access to information	Full public disclosure and access to information in accordance with international good practice in relation to oil sector development, as well as mechanisms for redress if this does not occur	Information provided to all sectors of society - government NGO civil society grassroots and as part of FPIC, indigenous peoples				
Citizen participation including, where Indigenous people are involved, FPIC							
Revenue allocation and investment	Equitable sharing of revenue and long term investment and management						Too early to determine quality of data relating to this aspect as revenue is not yet being generated in Kenya

THEME	MEASURE ¹	OBJECTIVE ²	DATA LIKELY TO BE AVAILABLE ³				NOTES
			Rating				
			Technical/spatial cover	Ease of use	Updated over time	Robust	
Biodiversity	Wildlife Protected Areas (PAs)	Avoid disturbance of flora or fauna in PAs					Data regarding status of wildlife in PAs is available to some extent through GBIF, IBAT and various research projects but are likely to be patchy with very limited coverage. Although there are currently no government led proposals to address such gaps in terms of wildlife and botanical data, some work may be undertaken as part of the proposal to designate new PAs in the Turkana basin
		Avoid or, if this is not possible minimize, development, the zone of influence of which extends into existing or proposed wildlife protected areas					The World Database on Protected Areas (WDPA) is sufficient for determining existing PA boundaries. It is assumed that KWS will be able to provide indicative boundaries of further PAs being proposed in the Turkana area. Zone of influence may be open to interpretation
	Other Areas designated for biodiversity	Avoid or, if this is not possible minimize, development, the zone of influence of which extends into other areas designated for biodiversity (FR, IBA, Ramsar etc.)					The World Database on Protected Areas (WDPA) and data held by conservation organisations (for example by BirdLife International on Key Biodiversity Areas) is sufficient for determining boundaries of such areas. Zone of influence may be open to interpretation.
	Areas qualifying as critical or natural habitat	No net loss of natural habitat (NH)					Areas of NH are not currently mapped but potentially be derived (in part) from Remotely Sensing data which is regularly generated, although there may be some limitation in using vegetation as an indicator given the arid nature of the area. It would, however, require a degree of analysis and interpretation that is not currently undertaken plus the acquisition of the satellite imagery and would not cover all habitat types.
		Net gain of critical habitat (CH)					Data on some trigger species for CH is available to some extent through GBIF, IBAT as well as from Nature Kenya and NMK, but this is unlikely to provide sufficient coverage and scope to enable determination of qualification of CH particularly outside PAs. The quantification of net gain is onerous and unlikely to be feasible from the data generated by proposed monitoring.
		Avoid conflict human wildlife conflict between					The IUCN Red List of Ecosystems (when developed) may provide some data in this respect. However even with the above, the ability to map critical habitat is likely to be limited without further specific targeted survey activity. Although human wildlife conflicts are known to occur there is no known monitoring of such events. This may emerge from the recent Wildlife Policy and Act (both late 2013) although unlikely to occur for some time. There are as yet no known proposal to monitor the effect of the addition of oil sector which could exacerbate such conflicts.
Main ecosystem services	Safeguarding of features providing ecosystem services					At present no specific mapping or monitoring of features providing ecosystem services, (including level of supply, use and dependency) has been undertaken by government agencies. There may be some data generated on fish catch and drought levels which may help inform the achievement of this objective; these are however unlikely to identify how effects of oil related development will be disaggregated from other drivers of change to enable the impacts of oil to be tracked and evaluated.	
Water resources	Safeguarding of rivers and lakes and riparian zones around them	Avoid where possible development around riparian areas and where this occurs ensure authorisations are in place					The definition of what constitutes a watercourse is not clear and it is therefore not possible to determine which such features are subject to protection.
		Catchment integrity maintained					Although not currently undertaken evaluation of river catchment health could potentially be derived from percentage coverage by land use/cover (forest, scrub, arable, grazing, bare land etc.) as estimated from remote sensing analysis.
		Water quality complies with national and international standards					While there are monitoring stations on the main rivers in the Turkana basin and these operated historically it is understood that such monitoring has lapsed and any data that is generated is disparate, incomplete and lacking consistency.
	Flows and levels are maintained					Lake Turkana levels are however monitored by international agencies using satellite imagery.	
	Safeguarding of groundwater resources	Water quality complies with national and international standards					Although the Directorate for Water resources maintain national licensing database it is understood that the data are unlikely to be reliable as they are generated by licensees with limited quality controls.
	Flows and levels are maintained						
Safeguarding wetlands	Avoid, or where this is not possible minimise, development whose area of influence will extend into designated wetlands					Although the Government of Kenya has produced an Atlas which maps wetlands as derived from satellite imagery which includes several in the Turkana area there is not yet a system in place to monitor these on a regular basis. Further the Atlas is at a relatively coarse scale and may not identify all wetlands that could be protected under the applicable legislation that and that could be affected by oil development.	
Waste and Soils	Erosion control	Ensure adequate erosion protection in high risk areas					High risk areas are not currently mapped, although they could potentially be derived from digital elevation models and soils data and remotely sensed data.
	Maintenance of soil productivity	Minimise loss of areas of high agricultural productivity					Land quality maps exist but are old (e.g. 1980) and may not reflect the current situation.
General Socioeconomic	Demographics	Population levels are within carrying capacity					Relevant data will be obtained in census data but frequency of generation and level of disaggregation may be insufficient to inform monitoring of oil development and separate from impacts of other significant development in the areas. Other surveys undertaken by CSOs and NGOs may generate some useful data. However the lack of coordination between such studies and uncertainty over consistency of methods used, spatial extent and frequency at which they will be undertaken is likely to limit their use for reliable oil sector monitoring other than at high level. Additional data may be required to determine carrying capacity.
		Lowered dependency ratio					
		Retain local population and minimise influx					
		Protect interests of marginalised, vulnerable and minority groups					
Protect community Health and well being		Provide a clean and healthy environment for local communities and employees					Some relevant parameters may be generated by census data. However as identified above these are only generated every 10 years which is likely to be insufficient to monitor trends, and the limited disaggregation may also be insufficient to identify conditions of specific groups. They are also unlikely to address issues such as gender based violence, monitoring of security forces and civil conflicts arising from oil development. The demographic and health data generated every 5 years by the KNBS may provide more frequent data for some health aspects but are aggregated over the whole rift valley area and thus unlikely to be easily applicable to monitoring the impacts of the oil sector. While other ad hoc studies may generate some information in these areas, the lack of coordination between them and uncertainty over consistency of methods used, spatial extent and frequency at which they will be undertaken is likely to limit their use for reliable oil sector monitoring other than at a high level.
		Promote a safe and secure environment free from civil conflict					
		Reduce prevalence of disease and mortality					
		Enhance education levels					
Enhance social Infrastructure		Ensure activities do not increase/ and where feasible reduce gender based violence					
		Oil related infrastructure development reduces distance/enhances accessibility to key services (hospitals, schools etc.)					
		Infrastructure development addresses capacity of key services to meet demand in particular that arising from oil related activities					
	Engage local capacity (including that of women) to manage community infrastructure					Accessibility to key services may be addressed to some extent by the census and hence subject to the limitations identified above. At present no monitoring of other aspects of social infrastructure has been identified.	

THEME	MEASURE ¹	OBJECTIVE ²	DATA LIKELY TO BE AVAILABLE ³				NOTES
			Rating				
			Technical/spatial cover	Ease of use	Updated over time	Robust	
Livelihoods	Access to property and land and water based livelihoods (land and water based ecosystem services addressed under biodiversity above)	<p>Minimise both physical and economic involuntary resettlement</p> <p>Where involuntary resettlement occurs ensure a process in accordance with IFC PS is implemented</p> <p>Wherever possible provide replacement in kind rather than cash</p> <p>Ensure rights to communal and customary land are respected</p>					<p>Access to land and water is already a source of conflict. The agro pastoral and pastoral economic activities and communal nature of land poses specific challenges in term of ensuring rights and access are retained. There are likely to be limited registers of ownership and rights to land and it is as yet very unclear how the resettlement process and its outcomes should and can be monitored.</p> <p>FOLT and others are currently mapping pastoral migration routes but these may be limited in spatial extent.</p> <p>Grazing and agricultural areas may be capable of monitoring through remote sensing techniques but would require some additional analysis.</p>
	Economic Opportunity	<p>Maximise opportunities for local communities</p> <p>Supply chain opportunities created</p> <p>Skills programme for oil service industries and supply chain at local and national levels</p> <p>Ensure equitable distribution across gender, ethnic groups and minorities and minorities</p>					<p>All operators are required to produce national content plans to maximise direct and indirect employment opportunities and to report on performance including employees at community, district and national level, training provided etc. The current requirements are considered unlikely to include data disaggregated by gender, minority groups etc.</p>
Human Rights	Human rights	<p>Rights to ownership of property and access to land and water and fair compensation and dispute resolution for losses</p> <p>Protection of security of communities and individuals including from actions of security forces</p> <p>Access to a clean and healthy environment</p> <p>Rights of ethnic and marginalised groups</p> <p>Freedom from GBV</p> <p>Access to information</p>					<p>KNCHR monitors human rights in the widest sense in Kenya. However it is not clear to what extent it is currently or proposes to monitor the human rights performance of the oil sector. However it is considered unlikely they are as yet focusing on the Turkana region.</p>
Cultural heritage	Safeguard traditional archaeology, paleo archaeology, and intangible cultural heritage	<p>Avoid or, if this is not possible minimize, development, the zone of influence of which extends into areas designated or otherwise important for cultural heritage</p>					<p>All records of paleoarchaeology and archaeological finds are provided to NMK who maintain a database. While this provides a good record of known features, large areas remains unstudied and may have potential to contain further finds. Intangible cultural heritage is generally less well studied.</p> <p>The area of influence for effects on intangible cultural heritage in particular may be subject to interpretation</p>

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Appendix A: Informants

The following table provides a list of key informants who participated in interviews as part of the study and contributed information that was considered in its preparation. Their inclusion in the table does not imply that the report reflects the views of any specific individual or organisation, nor their endorsement of the report. The below table provides an acknowledgement of their input, that was generously provided. Where an organisation but no contact name is provided, this reflects the interviewee's stated preference.

A further 13 organisations also provided inputs to the study but did not respond confirming whether or not their organisations should be named.

Organisation	Contact name
Cordah Consultants	Ron Bisset
Global Witness	George Boden
Greenwatch Uganda	Harriet Bibangambah
ILEG (Institute for Law and Environmental Governance)	Collins Odote
Independent Hydrogeologist working for Tullow Oil	Mike Price
IUCN	Elliot Taylor
Kenya Civil Society Platform	-
Makarere University	Robert Kityo
Oxfam	Ian Gary
Tullow Oil Kenya	Dana Cartwright
Tullow Oil Kenya	Alex Mutiso
Tullow Oil London	-
Tullow Oil Uganda	-
Wildlife Conservation Society Uganda	Andy Plumtre
WRI	Florence Landsberg
WRI	Denise Leung
WWF Uganda	-