



# **Extractives and the Environment: Kenya's Industry Role in Protecting the Environment**

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## **KENYA'S ENVIRONMENTAL NEEDS AND INDUSTRY ROLE IN PROTECTING IT**

Our [previous chapter](#) laid out the legal framework that governs Kenya's extractives industry which is quite robust. This discussion will concentrate on governance for environmental sustainability in extractives while borrowing from international examples. The extractives industry, together with Civil Society and the government each have obligations to fulfill towards protection of the environment. However, human activities increase pollution, to the extent that this is now recognized as the biggest single risk to human health worldwide (Landrigan *et al.* 2018).

The environment is closely related, in both positive and negative ways, to key economic issues such as poverty, prosperity, jobs, production patterns, innovation, and resource availability (GEO-6 p.8). These activities, left uncontrolled bring about greenhouse gas emissions, pollution, biodiversity loss, conflicts and threaten human rights (UN Environment 2019). At the forefront of protecting the environment internationally is the UN Environment which set up the 2030 Agenda for Sustainable Development (Agenda 2030). A document named "The Future We Want", was one of the outcomes adopted by world leaders at the Rio+20 Sustainable Development Conference in 2012 (UN Environment).

Agenda 2030 is a plan of action for people, planet and prosperity seeking to strengthen universal peace and balance the economic, social and environmental dimensions of sustainable development. Among the target areas for the Agenda include "The Planet" with a pledge to protect it from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations (Declaration 3-Preamble 2030 Agenda).

Fortunately, Kenya is already a signatory state to the four [Multilateral Environmental Agreements](#) (MEAs) including the United Nations Convention on Biological Diversity (UNCBD), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention on Combating Desertification (UNCCD) and the Stockholm Convention on Persistent Organic Pollutants (POPs) with NEMA as the designated National Authority (NEMA). The agreements were formulated by the international community as part of the international effort to promote the concept of sustainable development.

Under the Vision of the Agenda 2030 (Section 9), a world of sustainability where consumption, production patterns and use of all natural resources are sustainable and in which development and the application of technology are climate-sensitive, respect biodiversity and are resilient is envisaged. The goals and targets of the Agenda also recognize that each country has unique needs and opportunities and as such, may decide how the global targets should be incorporated into the national planning process, policies and strategies. Kenya in this case must put into consideration the social, cultural and economic needs of the country while trying to incorporate Agenda 2030.

## **ENVIRONMENTAL CONCERNS IN KENYA'S EXTRACTIVES INDUSTRY**

### **1. Poor Waste Disposal**

The extractives industry is no stranger to waste and the need to dispose of this waste. Unfortunately, at times, companies have no proper procedures on waste disposal or lack qualified personnel to do the job and offer training. If companies and communities do not have strict rules for waste disposal, there will be high cases of marine life loss and food shortage as a result of infertile soils (GEO-6 p.76). The Global

Waste Management Outlook (UNEP 2015) estimates total urban waste like solid, commercial, industrial and construction waste, at around 7-10 billion tons per year.

Even though waste generation rates are stabilizing in developed regions, for developing countries like Kenya, waste management is an ongoing challenge. Mining waste is also one of the world's largest waste streams with the potential to cause significant environmental impacts, including abrupt and extensive land use change (Sonter *et al.* 2017).

## 2. Air, Land and Water Pollution

Extraction requires a lot of water resources, which feed from existing fresh water lakes and rivers, affecting communities and causing contamination (UNDP, 2018). Industrial agriculture, mining, geothermal energy and ground-source heat pumps, disposal and storage of hazardous wastes, fluid injection (e.g. oil and gas extraction through hydraulic fracturing or 'fracking' and wastewater reinjection) as well as underground construction activities contribute to pollution and depletion of underground water sources (GEO-6 p.240). An example is coastal sand mining which kills organisms in the mined area, releasing mud into the seabed and affecting sea life (Larson 2018) as well as related noise pollution to aquatic life.

Pollution also occurs from seismic acquisition, drilling, development, production and transportation if left poorly managed. Transportation for example trucks that are used to transport resources from one point to another, which use diesel or petrol to run releasing air pollutants and other dangerous fumes from worn tires and brakes into the atmosphere significantly affecting health (GEO-6 P.115). Even more recently, Kenya suffered an [oil spill](#) that hit Kiboko natural springs in 2019 as a result of a burst on the Nairobi-Mombasa Pipeline making the water unsafe for human and animal consumption. To show its commitment to protecting the environment, the African Development Bank (AfDB) decided not to fund a coal-fired power plant project in Kenya and altogether stop further plans to finance new coal plants in future (Reuters 2019).

## 3. Change in Land Use

Land must be given up in order to extract the resources beneath it but the environmental and social costs are worse at this point of the cycle (GEO-6 p.93). Extractives activities ultimately leave behind a trail of reactive agents that increase land and water pollution if left unchecked. Land-use change leads to destruction of marine life and terrestrial environments which increases exposure to pollutants and emerging infectious diseases harmful to humans, livestock and wildlife (WHO and SCBD 2015, p.1-19).

Furthermore, oil and gas contract blocks cover 20 per cent of identified areas of biodiversity importance in Africa, resulting in potential tension between the need to extract minerals and society's desire to protect biodiversity and the vital ecosystem services flowing from it (UN Environment 2019), and as a result of expanding cities and towns, wetlands, rivers, lakes and ponds are vanishing in water scarce regions resulting in surface hardening (Ellison *et al.* 2012). Kenya is already considered a [water scarce region](#).

## 4. Increased Urbanization

In 2016, about 54.5% of the global population lived in urban areas and by 2030, the United Nations predicts that 60% of the global population will be urban (UN 2016a). Urbanization is associated with lower fertility rates, longer life expectancy, and better access to basic physical infrastructure and social

amenities such as education and health care (GEO-6 p.84). Cities are centers of innovation and wealth generation which, enabled by proximity and activity-intensity, attracts migrants to cities (IOM 2015), and will lead to expansion of the urban population by 2050 with an estimated 6.7 billion people living in cities (UN 2018).

According to a 2018 report, 27.03 percent of Kenya's total population lived in urban areas and cities, up from 2017's 26.56% (Statista 2018). The extractives industry promotes urbanization as infrastructure is developed thus encouraging migration into the growing city from workers as well as those seeking opportunities. However, despite the growing opportunities, there is increased inequality leading to crime, corruption and increased demand for water, food, energy, transport and waste management which does not aid the fight for a better and safer environment (GEO-6 p. 84).

## **5. Increased Health Problems**

Extractive activities like mining pose health hazards to those directly involved in the operations for example artisanal and small scale miners. Even with the positive outcomes associated with mining both to private members and governments, residues such as lead affect air quality that can easily be ingested without the proper gear for workers and the surrounding communities resulting in disease (Taylor *et al.* 2013b). In addition, heavy metals associated with water-intensive mining can potentially cause significant water degradation (mercury and arsenic used in gold mining can pollute surface and groundwater) (GEO-6 p. 248).

# **KENYA'S ROLE IN PROMOTING ENVIRONMENTAL SUSTAINABILITY IN ITS EXTRACTIVES**

## **1. Improved Governance**

Many efforts have been made to develop ways to improve environmental governance, ranging from stronger regulation and enabling policies to support voluntary actions, to stakeholder self-governance. The state has an important role in strengthening environmental governance, including by ratifying and implementing environmental conventions, supporting environmental research and supporting vulnerable populations including women and children who are the most affected (GEO-6 P.11).

Environmental rule of law as stipulated under the Constitution of Kenya must be upheld. This covers existing legislation on extractives including the Environmental Management and Coordination Act (1999) and supporting Regulations as well as extractives (petroleum and mining) laws and regulations. Environmental rule of law provides the basis for improving environmental governance without which environmental governance may be discretionary, subjective, and unpredictable (UN Environment 2019). The noose on perpetrators of environmental degradation must also be tightened to openly bring to book those who fail to comply to set regulations as well as those who omit to act against possible perpetrators.

Improved governance can also be through the government's efforts to encourage lifestyle change towards reducing pollution of air, water and land. This can be through providing further and better information that directly deals with community needs and goes in line with an improved understanding of the hazards and risks of exposure to pollution (Kelly and Fussel 2015). It is therefore important to provide real-time air quality data with observations and forecasts on TV, radio and social media (GEO-6 p.311). An example is the "*Know and Respond*" system in Scotland where registered subscribers receive alert messages on levels

of pollution in their areas (Air Quality in Scotland 2018). Such a system however requires an audience that is aware of what its use is hence the further need for government to educate communities and provide the information in languages that they understand.

## **2. Use of Sustainable Development License to Operate**

This license advocates for fairer deals, equal share of benefits among stakeholders and a holistic consideration of existing regulations in the extractives sector. It looks at the extractives industry holistically to minimize negative environmental, social and economic impacts while creating solutions for sustainable development replacing the social license to operate (UN Environment 2019).

To achieve this, aspects of transparency, business and human rights must be incorporated into the license to operate. Natural resources that are managed sustainably, transparently, and on the basis of the rule of law, can be the engine for sustainable development as well as a platform for peace and justice (UN Environment 2019).

## **3. Adopting a Resource Use Circular Economy**

This means that for non-renewable resources like metals and petroleum, there is need to create a system where any remnants are recycled to produce another by-product rather than abandon or dispose of. In a circular economy, efficient use of resources across their entire life cycle is critical: from extraction to manufacturing, through consumption and use, to recycling and reuse (EC 2015). The focus of a circular economy is on sound product or infrastructure design, as well as on the systems in place to monitor resource use, waste and environmental repercussions (Ghisellini et al). On the other hand, some societies use the linear economy structure which assumes that there will always be an abundant supply of raw materials and unlimited capacity to dispose of waste in the natural environment (GEO-6 p.440). However, with this structure, the resources are mostly depleted and non-renewable.

## **4. Environmental Policy Integration and Coherence**

Environmental policies should be enforced alongside other non-environmental policies. However, environmental ambitions often clash with other sectoral goals—for example, when the utilization of natural resources by the energy sector, agriculture industries or the infrastructure sector clashes with efforts to conserve those natural resources. A concept that promotes the environment in other policy sectors, and recognized in previous GEO assessments, is ‘environmental policy integration’ (EPI) (Lay et al. 2017). On the other hand, environmental coherence involves fusing environmental policy with social, economic and institutional policy to achieve an all rounded solution. Kenya fortunately has in place the Green Bonds which are normal bonds (debt instruments) raised at the capital market to fund sustainable projects that have a positive impact on the environment (Business Daily, 2020).

## **5. Regional and International Integration, Governance and Collaboration**

International collaboration may involve formal, informal, bilateral or multilateral diplomacy. Governments need to align their actions to MEAs dealing with national interests, international aid, capacity building, monitoring pollution and sharing information with the public (GEO-6 p.313). This means that a group of experts must be available to carry out the required monitoring and evaluation. Kenya would thus need to collaborate with the other East African States on a viable environmental solution that promotes and protects the environment as a region.

Luckily for Kenya, the East African Community is a platform from which such collaboration can happen. There exists the Eastern Africa Regional Framework Agreement on Air Pollution (Nairobi) (2008) bringing together Burundi, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda to develop actionable targets to address air pollution in the transport, mining and energy industries and to deal with waste, vegetation fires, air pollution, urban planning and management and regional and national environmental governance. If environmental liability is weak in the region, EIA and SEA tools available are futile.

## 6. Promoting Gender Equality

This requires equal opportunities for both men and women and equal pay and treatment for similar work. More on this topic can be found in our [blog](#) on gender.

## 7. Emergency Preparedness

Need for the government to have policies in place to prepare for emergencies and curb secondary impacts of environmental disasters. Such policies also help provide quick and effective response to damage or potential damage. Information on such a policy is readily available at the [Environmental Emergencies Centre \(EEC\)](#) which provides information and guidance to a prepared and effective response to environmental emergencies. Kenya already has the National Contingency Plan for Marine Spills from Shipping and Offshore Installations (2014) which provides a framework to the Kenya Maritime Authority (KMA), relevant Kenya Government agencies and the oil industry to respond with oil spill emergencies likely to occur within Kenya's internal waters, territorial sea, the Exclusive Economic Zone (EEZ) and the high seas where a marine spill has a potential to impact on Kenya's interests in the maritime domain. Unfortunately, despite the need for the plan to be updated every two years or after a clean-up, it is still in its draft stages and has been since 2014.

## CONCLUSION

Over the last few decades, human activities have transformed the Earth's natural systems, exceeding their capacity and disrupting their self-regulatory mechanisms, with irreversible consequences for global humanity (IPCC 2014). Also, environmental degradation is oftentimes a result of need for economic gains yet not all stakeholders benefit from such gains (Castella *et al.* 2013). A healthy planet is a necessary foundation for the overall well-being and further advancement of humanity (OECD] 2017a).

To address environmental challenges effectively, their wider impacts on people, economies, societies, markets, institutions, justice, security and culture must be well understood (GEO-6 p.12). Structures must be put in place to promote checks and balances and ensure that existing environmental laws and policies fulfill their intended purpose. The gains from the extractives industry can easily be watered down if the activities that affect the environment are not checked and fully dealt with. Government, civil society and stakeholders need to adopt the 6Rs of manufacturing (Jawhir and Bradley 2016) which focus on **reduce, reuse, recycle, recover, redesign** and **remanufacture**. It is cheaper to deal with the problem at hand than wait for it to manifest then start to find solutions.

Be on the lookout for our next blog on HSE standards in Kenya's ASM sector in light of COVID-19

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