



IMPROVING HSE STANDARDS IN THE ASM SECTOR: LESSONS FROM THE COVID-19 PANDEMIC

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The COVID-19 Pandemic and Extractives Industry

The covid-19 pandemic has impacted the global economy severely although this varies from one sector to another. The pandemic has equally impacted the extractives industry (oil, gas and mining) especially through measures imposed by governments in a bid to reduce or stop the spread of the virus. Some of these measures by governments include restriction of movement, public gatherings and learning among others. These measures while key in reducing the spread of the virus have severely impacted people's livelihoods with many businesses either closing, reducing their workforce, furloughing employees or imposing pay cuts so as to remain afloat. To address these economic challenges, governments have introduced economic stimulus packages to cushion the most affected. Kenya for instance allocated Kshs.56.6 billion in its 2020/2021 budget to cushion Kenyans from the effects of the pandemic including making cash transfers to needy Kenyans, providing support to the manufacturing sector, SMEs among other sectors (Diaz, 2020).

While most extractives industry operations globally have continued as planned, the impact on the industry varies by country and region in light of how heavily they depend on the industry as an economic pillar. The mining, oil and gas sectors have been affected differently especially with demand and production levels as governments have put in place measures that have largely restricted movements and other lockdown measures apart from what has been considered essential services. Furthermore, these sectors have been forced to take measures to protect their employees from the pandemic including closure of some operations, reduction of employee numbers in site operations, adherence to strict health and safety guidelines among others. These measures have been largely implemented by large scale operators as opposed to small scale operators especially artisanal and small scale mining (ASM).

ASM, just like its counterpart large-scale mining, is prone to serious health and safety (HS) challenges, therefore placing it at a unique position during this COVID-19 pandemic. This has been exacerbated by the existing poor HS standards in the ASM sector whose activities have largely been viewed as operating outside the legal and regulatory framework put in place by the government. It is therefore imperative to consider the implications of the COVID-19 pandemic on ASMs reactivity towards establishing and strengthening (Health, Environment and Safety) HES standards in its operations.

Health and Safety Standards in Artisanal Small Scale Mining

Most ASM activities are located in rural areas with majority of the workers being men, youth and women who are involved in extraction of the ores from the shafts, crushing and processing of the ore to get the different minerals especially gold. While the mining value chain has been affected as a whole by the pandemic, miners engaged in artisanal mining are generally the most

vulnerable group in this chain and COVID-19 poses additional challenges to their already complex situation. Whereas much attention has been towards large scale mining because of perceived economic contributions, there has been minimal attention to the economic benefits of ASM activities. It is however good to note that the ASM sector is an important contributor to the livelihoods of rural populations where most ASM activities are situated. It is estimated that ASM activities are spread in over 80 countries globally employing about 100 million miners (World Bank, 2013). In Kenya for instance, ASM gold mining is estimated to contribute USD 255 million at the national level while at the same time injecting almost 15% of this amount at the county level e.g. USD 37 million in Migori County (Hinton *et al.*, 2018).

In spite of these economic contributions, ASM has largely been seen as having complex HS impacts both on the environment and the miners. HS in large scale mining is bound and guided by government regulation as well as company policies and procedures. This is however different in the ASM sector which tends to operate extralegally (outside state legal framework) (Smith *et al.*, 2016). While there have been tremendous efforts and improvements in HS in the mining sector, the ASM has largely lagged behind and still has much to do to match up to the large-scale operations. This situation has to a large extent exposed mine workers to life threatening health situations largely through overcrowded shafts, lack or poor use of personal protective equipment's (PPEs) (like masks, overalls, safety boots and helmets), lack or poor screening or examination of health fitness of mine workers among others.

The health challenges in the ASM sector have prevalently been associated with the use, handling, exposure and inhaling of chemical substances used in mining. For instance uses of mercury in processing gold as well as cyanide have been linked to intoxication resulting in a number of health complications. Other health issues relate to exposure to certain compounds found in dust like silica which have been seen to cause tuberculosis and other respiratory illnesses among miners. Miners have also been at risk of exposure to toxic gasses from blasting, use of diesel operated machinery and naturally occurring gases like methane in underground mining. These gases are more fatal due to poor ventilation in the shafts. Another persistent challenge is inadequate access to water and other sanitary amenities like toilets thereby exposing miners to waterborne diseases (WHO, 2016).

In light of the forgoing, the COVID-19 pandemic poses a threat to the majority of the people involved in ASM of contracting the coronavirus, a situation that is made complex with the lack of or poor HS protocols as well as poor knowledge of HS risks among ASM operators (Ajith *et al.* .2020). In Kenya, the government instituted a phased reopening of the country on 6th July, 2020 with strict guidelines to resumption of businesses. These guidelines require adherence to strict sanitization and washing of hands, proper wearing of face masks, avoiding crowded areas, social distancing, checking temperatures, and self-isolation among others. These measures have

in essence become the 'new normal' and may provide a positive direction in improving HS standards in ASM operations.

Lessons from COVID-19 Measures: Towards Improving HES in ASM Operations

While the COVID-19 pandemic has largely been viewed as negatively impacting the sector, the pandemic has potential to contribute to better HS standards in ASM operations. The laid down measures of strict sanitization and washing of hands, proper wearing of face masks, avoiding crowded areas, social distancing, checking temperatures and self-isolation among others have proved an effective way to reduce the spread of coronavirus among populations. Application of these measures in ASM operations has the potential to achieve better results. A number of lessons can be applied to ASM operations which include but not limited to:

1. **Systematic Hygiene:** COVID-19 has brought to fore the importance of hand washing and continuous sanitation in reducing the spread of the virus. As has been observed, most ASM operations lack or have inadequate access to water and other sanitation amenities critical for mitigating the spread of water borne diseases like cholera and typhoid among others. Considering the effectiveness of hygiene practices in controlling the COVID-19 pandemic, application of these measures in the ASM operations promises better results in reducing certain health challenges especially those resulting in waterborne diseases. This calls for increased efforts towards continuous awareness raising among miners and owners of ASM operations as well as training.
2. **Proper and consistent use of PPEs:** Use of PPEs especially face masks has now become an essential practice during the COVID-19 pandemic. The goal has been to protect exposure to coronavirus from infected persons through close interaction. The ASM sector on the other hand exposes majority of the miners to harmful dust which has hazardous compounds like silica with potential to cause tuberculosis. Sensitization and enforcement of the use of dust masks among other PPEs is therefore key in reducing the risk of miners contracting health conditions which can be avoided with proper and consistent use of masks in their operations.
3. **Social distancing and improved ventilation:** Deaths and infections in the ASM sector can be attributed to overcrowding in mining pits. To reduce these incidents, there have been efforts towards controlling the number of miners who can enter a pit as well as documenting the length of time they have spent in the mining pit. Covid-19 presents valuable lessons when it comes to social distancing and avoiding overcrowding which is a high risk in the spread of coronavirus among populations. ASM is bound to benefit by managing the numbers of miners who access a shaft as well as those engaged in the

other aspects of the operations to avoid the spread of coronavirus and other disease like tuberculosis which thrive in overcrowded and poorly ventilated areas.

4. **Consistent health screening:** COVID-19 has led to a general acceptance that screening and testing is critical in controlling the spread of the coronavirus. Those who have shown symptoms of the disease have been isolated and quarantined either in their homes or in government isolation and quarantine facilities. These efforts have helped in reducing the spread of the virus and offering the required medical support to those in critical condition. These measures can successfully be applied in ASM operations to establish the health fitness of miners engaging in mining activities and offering them the requisite support to access health care services where necessary. Furthermore, consistent screening will ensure that only those fit will engage in mining and avoid exposing miners with certain health conditions from further health risks until they are medically fit to continue engaging in mining activities.

Conclusion

The COVID-19 pandemic while having disrupted the normal way of life, presents lessons important to addressing some of the complex HS issues that have continued to plague the ASM sector in developing countries. There is therefore need for stakeholders in the sector to implement some of these measures effectively in their operations and to measure the outcome of such efforts in the long-term. As it seems, COVID-19 might take longer than expected to be completely brought under control, stakeholders have to learn how to live with it. These measures are therefore key in managing the spread of the virus but also addressing HES issues in ASM operations.

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