Balancing Investments and Health and Safety in African Extractive Communities in the 21st Century: A Legal Analysis

Bernard Kengni*

Abstract

The African extractives sector, encompassing mining, oil and gas extraction, presents a unique set of health and safety legal concerns. These concerns affect various sectors of society, including communities near the extractives industry. Communities living near extractive operations in Africa face several specific health and safety legal concerns such as respiratory ailments resulting from air and water pollution, and land contamination. This is often a result of poor waste management practices, inadequate regulations and limited access to information, amongst others.

This paper highlights how and why managing those health and safety concerns presents legal challenges for investment in the extractives sector of Africa. Using the examples of South Africa, DRC and Nigeria, the paper highlights why and how such challenges can be resolved or mitigated.

Keywords: Health, Safety, Extractives, Investment, Communities, Legal Issues

1. Introduction

Several African countries have continuously relied on their extractive industry for economic development for decades. As a result, investment in the extractive sector in Africa has steadily climbed over the years. As an example, exploration budgets for Africa "continued to grow year over year in 2022, maintaining their 10 % share of the global budget".[1] S&P Global reveals that during the same period, the total budget of South African companies grew by an estimated $8 million.[2] This demonstrates a growing appetite for investing in extractive activities. Such growing appetite for investment is clearly spelt out in a World Bank report revealing that the production of certain minerals, including "graphite, lithium and

* LLB, LLM, Ph.D.
Research Affiliate, NRF/DST SARChI Research Chair: Mineral Law in Africa; Department of Private Law, University of Cape Town.
Lecturer, Department of Public Law, University of the Western Cape.
Bernard.Kengni@uct.ac.za.

1 *S&P Global Market Intelligence*, Africa – mining by the numbers, 2022 (2022) https://www.spglobal.com/marketintelligence/en/news-insights/research/africa-mining-by-the-numbers-2022 (accessed on 20 July 2024).

2 Ibid.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

cobalt, could increase by nearly 500 % by 2050".[3] One of the main drivers behind the anticipated increase in production is the growing demand for clean energy technologies to facilitate the energy transition.

Investment in the African extractives industry should be good news as it entails development. This is even more crucial considering the fact that no African country is qualified as "developed". Even worse, several countries on the continent lack basic infrastructure, including roads, healthcare and educational facilities necessary for economic and personal development.[4] There is also a growing lack of necessities such as food and energy security which are key for improved livelihoods.[5] Investments in the extractive industry on the continent are expected to contribute to alleviating the above concerns.

However, such investments also signal the beginning of challenges such as health and safety concerns which often become constant threats to the lives and wellbeing of communities living close to extractive sites. These concerns arise because of environmental pollution caused by mining and also often largely due to flaws in the regulatory framework meant to mitigate the environmental impacts of extractive activities.[6] The regulatory framework can render the surroundings of the extractive industry safer for nearby communities or contribute to making it worse for communities and investors.

This paper aims to explain why and how the law should serve as a tool to enable investments in the extractive industry in Africa in the 21st century in ways that are safer for nearby communities. The paper also analyses how managing health and safety concerns presents legal challenges for investment in the extractives sector of Africa. Hence, using the examples of South Africa, the Democratic Republic of Congo (DRC) and Nigeria, the paper highlights the impacts of extractive activities on communities' health and wellbeing. Further, the paper analyses health and safety legal issues associated with the African extractive industry and how such issues can be mitigated to enhance perceptions *vis-à-vis* future investments in the extractive industry.

2. Background

In many resource-rich countries in Africa, the discovery and extraction of mineral resources often signal the beginning of much-awaited development, which often comes with consequences that leave huge societal scars. The extractives industry's direct and indirect

3 *Kirsten Hund, Daniele La Porta, Thao P Fabregas, Tim Laing and John Drexhage*, Minerals for climate action: The mineral intensity of the clean energy transition (World Bank 2023) 12.

4 *Uche Osakede*, 'Infrastructure and health system performance in Africa' (2022) 20 Managing Global Transitions 376–377.

5 *Philbert Mperejekumana, Lei Shen, Shuai Zhong, Mohamed S Gaballah and Fabien Muhirwa*, 'Exploring the potential of decentralized renewable energy conversion systems on water, energy, and food security in africa' (2024) 315 Energy Conversion and Management 118757, 2–3.

6 *MA Hermanus*, 'Occupational health and safety in mining-status, new developments, and concerns' (2007) 107 Journal of the Southern African Institute of Mining and Metallurgy 531, 531 & 536.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

polluting effects on people's health caused by mine wastes, oil spillage and gas flaring are one such consequence.[7]

In South Africa, about 1.6 million people (mostly poor and/or historically marginalised) live on or directly next to mine dumps, where issues such as acid mine drainage and mine dust are permanent health hazards.[8] A study found a higher level of asthma symptoms like wheeze and rhinoconjunctivitis in children living near mine dumps (21.1 % and 32.9 %) compared to studies conducted in cities with less mining activities like Cape Town (20.3 % and 20.7 %) and Polokwane (18.0 % and 16.9 %).[9] A case-control study by Brusselen et al on the impacts of mining in Lubumbashi (DRC) revealed that babies with "birth defects were more likely to have been fathered by men with a mining-related job".[10] Communities around the extractives sector in Africa are thus constantly at risk of contracting diseases (at times transmissible) besides the fact that they face severe safety issues, including the collapse of waste tailing dams.[11]

Another study in Lubumbashi indicated that exposure to arsenic and cadmium is linked to cases of pre-eclampsia (hypertension) in women and the alterations of sperm in men living in mining areas.[12] In Nigeria, oil spillage and gas flaring are associated with health issues like insomnia, cancer, headaches, and respiratory ailments.[13] Despite being well documented, efforts to avoid or mitigate these health concerns remain inadequate and, in some instances, non-existent.

Healthcare facilities catering for workers in the African extractives sector and surrounding communities are either non-existent or at times poorly equipped and shut down upon

7 *Jonathan Gamu, Philippe Le Billon and Samuel Spiegel*, 'Extractive industries and poverty: A review of recent findings and linkage mechanisms' (2015) 2 The Extractive Industries and Society 162, 163 and 165.

8 *Bernard Kengni and Vusumuzi Nkosi*, 'Analysis of the current legal framework protecting the health of communities near gold mine tailings in South Africa' (2022) 37 Southern African Public Law 19 pages, 10.

9 *Vusumuzi Nkosi*, How mine dumps in South Africa affect the health of communities living nearby (2018) *The Conversation* https://theconversation.com/how-mine-dumps-in-south-africa-affect-the-health-of-communities-living-nearby-77113#:~:text=There%20was%20a%20higher%20prevalence,(18.0%25%20and%2016.9%25) (accessed 31 August 2024).

10 *Daan Van Brusselen, Tony Kayembe-Kitenge, Sébastien Mbuyi-Musanzayi, Toni Lubala Kasole, Leon Kabamba Ngombe, Paul Musa Obadia, Daniel Kyanika wa Mukoma, Koen Van Herck, Dirk Avonts and Koen Devriendt*, 'Metal mining and birth defects: a case-control study in Lubumbashi, Democratic Republic of the Congo' (2020) 4 The Lancet Planetary Health e158, e159.

11 *Lochner Marais, Deanna Kemp, Phia van der Watt, Sethulego Matebesi, Jan Cloete, Jill Harris, Michelle Ang Li Ern and John R Owen*, 'The catastrophic failure of the Jagersfontein tailings dam: an industrial disaster 150 years in the making' (2024) International Journal of Disaster Risk Reduction 104585, 4.

12 *Van Brusselen and others*, note 11, e165-e166.

13 *Nkemdilim Obi, Phillip Bwititi and Ezekiel Nwose*, 'Study proposal of the impact of gas flaring on health of communities in Delta state Nigeria' (2021) 7 International Journal of Scientific Reports 468, 471.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

decommissioning of projects.[14] This exacerbates the well-being of workers and community members who contract diseases related to the sector's activities and poor environmental rehabilitation. These issues are a consequence of several obstacles, including legal challenges discussed below.

3. Current legal challenges

Health and safety remain a major concern in communities living around the extractives industry in African countries such as South Africa, the DRC and Nigeria. "Top-down" decision-making processes on mining or production rights and too little regulatory consideration given to health issues suffered by workers and communities who live near the mines and oil infrastructure are part of the problem.[15] The health and well-being of the workers and communities that must absorb the negative externalities of mining and petroleum are thus often overlooked to meet consumer societies' demands for raw minerals. The lack of consideration is either a result of a commission or an omission, as explained below.

3.1. Limited law-making

One of the factors fuelling health and safety concerns is the fundamental flaws in the regulatory and policy frameworks across Africa. South Africa has the Mine Health and Safety Act (MHSA) which only applies to the South African mining industry. Hence, the MHSA is designed solely to govern occupational health and safety standards on mining sites.[16] Such standards range across various aspects, including risk assessments, protective equipment, emergency preparedness, and measures to mitigate the impact of hazardous substances.[17] The MHSA also provides for the monitoring, screening and mitigation of ailments induced by mining activities and their impacts on the environment.[18] Consequently, the effects of the MHSA are unlikely to be felt in mining communities. Hopefully, monitoring, screening and mitigation efforts can help, to an extent, to limit the rate of illnesses transmitted by mine workers to community members.

Similarly, in the DRC and Nigeria frameworks dedicated to health and safety in the extractive communities are simply lacking. In Nigeria, the Mineral Oils (Safety) Regulations

14 *Fabien Muhirwa, Lei Shen, Ayman Elshkaki, Hubert Hirwa, Gloriose Umuziranenge and Kgosietsile Velempini*, 'Linking large extractive industries to sustainable development of rural communities at mining sites in Africa: Challenges and pathways' (2023) 81 Resources Policy 103322, 2 and 10.

15 *George Atisa, Aziza Zemrani and Mathew Weiss*, 'Decentralized governments: local empowerment and sustainable development challenges in Africa' (2021) 23 Environment, Development and Sustainability 3349, 3354.

16 MHSA, s1.

17 Ibid.

18 Ibid, preamble.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

and the Petroleum (Drilling and Production) Regulations provide for improved health and safety standards in the oil and gas industry.[19] These regulations do not apply to health and safety concerns in nearby communities for obvious reasons, including the fact that the regulations are merely designed to enforce occupational health and safety standards in the Nigerian oil and gas industry. Similarly, in the DRC there is no instrument designed to address health and safety issues arising as a result of mining and its adverse effects on mining communities. Legal instruments such as the Congolese Mining Code simply mandate mine operators to pursue transparent health and safety standards by publishing their safety instructions concerning the specific conditions of their activities.[20]

Though communities are likely to face similar adverse health and safety effects associated with extractive activities,[21] such effects in the selected countries are mostly catered for under legal instruments different from those applicable to similar issues faced by workers in the sector. These include legislation relating to environmental protection[22] and public health[23]. The major concern with such legislation is their inability to prevent or properly mitigate health and safety issues resulting from extractive activities as they are not intentionally and specifically designed to address those issues. This is mainly because extractive communities face unique health and safety challenges compared to other communities.[24] For example, these challenges differ significantly from common public health concerns often observed in communities that are beyond the reach of the negative impacts of extractive activities.[25] Thus, the current "*one-size-fits-all*" approach contributes to the ineffectiveness of the existing legal framework in resolving health and safety issues in communities affected by extractive activities.

The ineffectiveness highlighted above is further exacerbated by limited implementation, as explained below.

19 Mineral Oils (Safety) Regulations, s7.

20 Article 210 of the Mining Code.

21 *Brianna M Eiter, Zoë J Dugdale, Tashina Robinson, Carol T Nixon, Heather Lawson, Cara N Halldin and Casey Stazick*, 'Occupational Safety and Health of Women in Mining' (2023) 32 Journal of Women's Health 388, 391.

22 National Environmental Management Act 107, 1998 (South Africa); National Policy on the Environment revised 2016 and Law No 11/009 on Environmental Protection in the Democratic Republic of Congo.

23 National Health Act, 2014 (Nigeria); National Health Act 61, 2003 (South Africa) and Law No. 18/035, 2018 establishing the fundamental principles relating to the organization of Public Health in the Democratic Republic of Congo.

24 *Freek Cronjé, Suzanne Reyneke and David Van Wyk*, 'Local communities and health disaster management in the mining sector' (2013) 5 Jàmbá: Journal of Disaster Risk Studies 1, 2.

25 *Andrea Leuenberger, Mirko S Winkler, Olga Cambaco, Herminio Cossa, Fadhila Kihwele, Isaac Lyatuu, Hyacinthe R Zabré, Andrea Farnham, Eusebio Macete and Khátia Munguambe*, 'Health impacts of industrial mining on surrounding communities: Local perspectives from three sub-Saharan African countries' (2021) 16 PLoS One e0252433, 15.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

3.2. Poor implementation

There are frameworks, as indicated above, that can to a limited extent contribute towards mitigating health and safety issues in extractive communities. However, those frameworks often fail woefully to mitigate the issues effectively. Limited implementation is identified as one of the major reasons behind the failure.

First, limited implementation is characterised by poor monitoring and inspection of health issues in extractive communities. Thus, to an extent, poor legal implementation for better health and safety standards in those communities can be attributed to poor monitoring and inspection.[26] Poor monitoring and inspection of health and safety hazards create a significant knowledge gap.[27] As a result, the regulator often lacks critical information on existing health and safety issues, as well as on their perpetrators, which would enable the identification of areas where implementation must be enhanced.[28] Monitoring and inspection are essential to enable the observation and identification of areas where existing legal frameworks have fallen short of their objectives. Failing this, implementation is likely to fail as seen in the Niger Delta where various sources point to the fact that limited implementation is also a result of poor or no monitoring,[29] as well as the use of outdated monitoring methods.[30]

Second, the issue of poor monitoring is exacerbated by a lack of adequate facilities. These include healthcare centres and facilities designed to gather critical data on health and safety issues affecting extractive communities. Thus, communities close to extractive activities in South Africa, Nigeria and the DRC often lack access to well-equipped health facilities capable of attending to health issues common to such areas.[31] This is attributed to poor implementation as laws and policies relating to health concerns in those countries have failed to make special provisions for the unique health and safety conditions that confront

26 *Dou Shiquan, Franklin Amuakwa-Mensah, Xu Deyi, Chen Yue and Cheng Yue*, 'The impact of mineral resource extraction on communities: how the vulnerable are harmed' (2022) 10 The Extractive Industries and Society 101090, 2.

27 Ibid 10; *Xavier Takam Tiamgne, Felix K Kalaba and Vincent R Nyirenda*, 'Mining and socio-ecological systems: A systematic review of Sub-Saharan Africa' (2022) 78 Resources Policy 102947, 13.

28 *Tiamgne and others*, 'Mining and socio-ecological systems: A systematic review of Sub-Saharan Africa' 13.

29 *Kelly Bryan Ovie Ejumudo*, 'Air Pollution and Health Challenges in the Niger Delta: Desirability of a Collaborative Policy and Action' (2011) Editorial Board 162, 185; *Daniel Raphael Ejike Ewim, Ochuko Felix Orikpete, Temiloluwa O Scott, Chisom N Onyebuchi, Amanda O Onukogu, Chinedum Gloria Uzougbo and Chiemela Onunka*, 'Survey of wastewater issues due to oil spills and pollution in the Niger Delta area of Nigeria: a secondary data analysis' (2023) 47 Bulletin of the National Research Centre 116, 9–10; *Eucharia Oluchi Nwaichi and Justice Obinna Osuoha*, 'Has the National policy on environmental pollution control in Nigeria been neglected in the Niger Delta region? An update' (2022) 24 Environment, Development and Sustainability 12494, 12496.

30 *Ewim and others* note 30, 7.

31 *Muhirwa and others* note 15, 2 and 10.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

those communities. Therefore, when it comes to implementing such laws and policies, decision-makers seldom take into account the fact that health and safety issues in extractive communities differ significantly from those often observed in other communities.[32] As such public health standards are generally applied in a blanket manner. This implies that healthcare facilities, which are sometimes very far away from those communities, are not as equipped as health facilities on extractive sites to handle health and safety issues associated with extractive activities.[33] It is crucial to have well-equipped facilities because such issues are rarely experienced in areas less or not affected by extractive activities.

Third, limited financial and human resources are another factor that slows down the required legal implementation to enhance health and safety in extractive communities. In terms of financial resources, there is often a chronic lack of funds to finance monitoring and evaluation in areas adversely affected by extractive communities. For example, most South African municipalities lack the necessary finances to fund the monitoring of the impacts of mining in communities, even with support from the national government.[34] As a result, the applicable legal framework cannot be implemented as intended.

Similarly, the legal framework is not implemented as intended due to limited human resources. In the DRC, for example, health centres are often staffed by community health workers. These workers are community members trained to provide basic care under the supervision of nurses.[35] The challenge with unskilled health workers is that they lack the required ability to properly attend to affected community members and diagnose the major health challenges that extractive community members battle with, such as respiratory ailments and congenital disorders. Another problem is the lack of proper oversight from the government departments responsible for public health. This is due to limited personnel or a lack of skills necessary to discharge their functions effectively.[36]

Legal implementation is doomed to fail without sufficient financial and human resources, even with the best-crafted and inclusive legal frameworks. Even with proper implementation, the legal framework may still fail to achieve its intended objectives due to a lack of compliance as explained below.

32 *Nkosi* note 10.

33 *T Nyirenda, D Mhura, S Mashange, M Mhura and V Sithole*, 'Determine the Capacity of Mine Health Facilities to Accommodate Surrounding Communities' (2022) 10 and 47.

34 *Angelien Meggersee and Sevias Guvuriro*, 'Economic Sustainability of Small Mining Towns: A Case Study in South Africa' (2023) 13 SAGE Open 21582440231218583, 10.

35 *Jean Mukulukulu Etshumba, Dosithée Ngo Bebe, Jacques Emina and Célestin Nsibu Ndosimao*, 'Profiles of Community Care Sites and provider Community Health Workers: A Case study at Gombe Matadi, Kenge and Kisantu Rural Health Zones in the Democratic Republic of Congo' (2024) 16 Global Journal of Health Science 63, 68–69.

36 *Rosine N Bigirinama, Samuel L Makali, Mamothena C Mothupi, Christian Z Chiribagula, Patricia St Louis, Pacifique L Mwene-Batu, Ghislain B Bisimwa, Albert T Mwembo and Denis G Porignon*, 'Ensuring leadership at the operational level of a health system in protracted crisis context: a cross-sectional qualitative study covering 8 health districts in Eastern Democratic Republic of Congo' (2023) 23 BMC health services research 1362, 8–10.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

3.3. Lack of compliance

While the poor management of health and safety issues in extractive communities in South Africa, Nigeria, and the DRC can be attributed to poor implementation, it is also a result of a lack of compliance with the rule of law. Some extractive companies, often driven by profit fail to give health and safety the attention it deserves, especially in vulnerable communities. Such failure is due to three main factors, as elaborated below.

First, the high costs of implementing and maintaining compliance measures are significant burdens that often result in further economic pressures. This is because extractive companies depend highly on highly skilled professionals and experts to facilitate proper compliance with health and safety guidelines.[37] Such professionals and experts include compliance officers, environmental health and safety managers, legal advisors, internal auditors and risk managers. These personnel are generally hired to handle compliance on extractive sites. Despite the high cost associated with acquiring their services, the eradication of health and safety concerns on sites remains farfetched as observed in the three countries selected for this paper.[38] Therefore, extending resources to cover health and safety in neighbouring communities is an unsurmountable task for many companies. Consequently, some companies may prioritise short-term financial gains over long-term sustainability in affected communities.

Second, besides economic pressures, regulatory complexity often impedes compliance, especially where legal frameworks lack clarity. The regulatory environment can be very confusing are times and keeping up with and understanding all the requirements becomes difficult, especially for smaller companies.[39] The lack of clear legal frameworks on health and safety in extractive communities, as explained above, means that companies operating in the extractives space must navigate through various pieces of legislation or government policies to figure out the right steps to follow. This can be very confusing and thus a barrier to effective compliance, especially when laws and policies on environmental protection and public health in the selected countries are not designed to specifically address most health and safety issues that are unique to communities adversely affected

37 *AC Atkins and M Ritchie*, Improving board assurance of technical and operational risks in mining (Australian Centre for Geomechanics 2019).

38 *Alex G Stewart*, 'Mining is bad for health: a voyage of discovery' (2020) 42 Environmental geochemistry and health 1153, 1157; *Christian Ahadi Irenge, Parfait Kaningu Bushenyula, Emmanuel Bayubasire Irenge and Yves Coppieters*, 'Participative epidemiology and prevention pathway of health risks associated with artisanal mines in Luhihi area, DR Congo' (2023) 23 BMC public health 121, 2; *Chizubem Benson, Christos Dimopoulos, Christos D Argyropoulos, Cleo Varianou Mikellidou and Georgios Boustras*, 'Assessing the common occupational health hazards and their health risks among oil and gas workers' (2021) 140 Safety science 105284, 2.

39 *R Alberts, JA Wessels, A Morrison-Saunders, MP McHenry, A Rita Sequeira, H Mtegha and David Doepel*, 'Complexities with extractive industries regulation on the African continent: What has 'best practice'legislation delivered in South Africa?' (2017) 4 The Extractive Industries and Society 267, 4.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

by extractive activities.[40] This is also often exacerbated by a chronic lack of enforcement due to poor implementation, as explained in the previous section. As a result of insufficient enforcement of environmental and safety regulations, some extractive companies in South Africa, Nigeria and the DRC tend to take shortcuts or ignore affected communities' plight altogether.[41]

Third, the nature of extractive activities presents significant operational challenges. This is because extractive operations are inherently hazardous and environmentally impactful. Thus, balancing productivity with health and safety arising from environmental concerns can be challenging.[42] This is exacerbated by technological limitations slowing down the uphill battle against extractives-related health and safety issues in communities in the selected countries. Research points to the fact that the technology required to meet regulatory standards in that regard is very costly.[43]

While such challenges are at times be beyond the control of extractive companies, some companies may use them as excuses while it may be their corporate culture not to prioritize environmental, health and safety compliance in affected communities. This is prevalent in companies lacking ethical leadership.[44]

This paper argues that lack of compliance will continue to affect investment in extractive activities negatively in the selected countries. More and more communities are resisting extractive activities in their areas as observed in all three countries where there have been several demonstrations against activities that they qualify as deadly.[45] This may be exacerbated by existing and potential environmental-friendly investors either avoiding investing in or withdrawing their investments from the sector as they become aware and develop sympathy for communities feeling the pervasive effects of extractive activities the

40 *Edward T Bristol-Alagbariya*, 'Costs and benefits of energy and major natural resources extractive industrial operations on communities: Spotlight on host communities development regime in Nigeria's Petroleum Industry Act, 2021' (2023) 11 International Journal of Development and Economic Sustainability 1, 10, 28–29.

41 *Muhirwa and others*, note 15, 2.

42 *Oscar Rikhotso, Thabiso John Morodi and Daniel Masilu Masekameni*, 'Health risk management cost items imposed by Occupational Health and Safety Regulations: A South African perspective' (2022) 150 Safety Science 105707, 2.

43 *Oluranti Agboola, Damilola E Babatunde, Ojo Sunday Isaac Fayomi, Emmanuel Rotimi Sadiku, Patricia Popoola, Lucey Moropeng, Abdulrazaq Yahaya and Onose Angela Mamudu*, 'A review on the impact of mining operation: Monitoring, assessment and management' (2020) 8 Results in Engineering 100181, 7–8.

44 *Livhuwani Muthelo, Tebogo Maria Mothiba, Nancy Rambelani Malema, Masenyani Oupa Mbombi and Peter Modupi Mphekgwana*, 'Exploring occupational health and safety standards compliance in the South African mining industry, Limpopo Province, using principal component analysis' (2022) 19 International journal of environmental research and public health 10241, 1–2 and 9.

45 Ruth O Ogunnowo, 'An evaluation of natural resources extraction and host communities' reaction in Nigeria and South Africa 2005-2015', North-West University (South Africa) 2022) 7 and 61–62.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

most.[46] Nonetheless, investment in extractives can become more acceptable to communities if the law serves as a tool to enable sustainable activities.

4. Community health and safety-friendly legal framework

South Africa, Nigeria and the DRC, as developing economies, are desperate to enhance economic development. Extractive activities contribute significantly to the gross domestic product of each country.[47] Therefore, promoting investment in the respective countries' extractive sector is crucial. However, as explained above, such investments are not always welcome due to their negative effects on community health and safety.

This paper argues that the rule of law can enable more sustainable and acceptable investments in the extractives sector in the 21st century. The first step requires state decision-makers to seek to understand the actual health impacts of extractives on communities. This requires commissioning more research, monitoring and observation to establish the actual impacts of extractive activities on communities and the reasons behind their dissatisfactions. The process must also engage with affected communities as they have first-hand experience with the highlighted health safety issues. The likely outcome of such an exercise is the shifts in thinking and approaches regarding health and safety issues associated with extractive activities and their impact on community wellbeing.[48]

Understating the health and safety issues in extractive communities will equally enable decision-makers to identify existing regulatory and policy gaps. It will also enable the identification of the causes and drivers of poor implementation and compliance which have so far been barriers to sustainable health and safety in extractive communities. This will most likely require the amendment of existing legislation or the enactment of new ones to address the existing gaps, considering the fact that legal frameworks in the three countries do not specifically address extractives-related health and safety issues in communities. It is also essential to strengthen state functionaries' capacity to close the law and policy gaps by promoting political will and hiring required staff with appropriate training or skills.[49] It is anticipated that a clear and inclusive legal framework can reduce health and safety vulnerabilities.

It must, however, be highlighted that the effectiveness of regulation in the extractives sector depends on the extent to which companies comply. While many companies evade

46 *Kwesi Amponsah-Tawiah and Justice Mensah*, 'Exploring the link between corporate social responsibility and health and safety in the mines' (2015) 6 Journal of Global Responsibility 65, 66.

47 *Makhura B Rapanyane*, 'China's involvement in the Democratic Republic of Congo's resource curse mineral driven conflict: an Afrocentric review' (2022) 17 Contemporary Social Science 117, 120–120 and 126.

48 *W Travis Selmier II and Aloysius Newenham-Kahindi*, 'Communities of place, mining multinationals and sustainable development in Africa' (2021) 292 Journal of cleaner production 125709, 2 and 7.

49 Ibid 7.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

compliance, research shows that compliance can attract better returns for companies and their investments. For example, if companies extend their health and safety policies to neighbouring communities they can expect reductions in illness rates.[50] This is because workers, especially in the mining industry, come from the same communities. As a result, illnesses that start or are contracted in neighbouring communities can end up on the extractive sites. Thus, investments in health and safety measures to enhance compliance on sites and in communities can result in long-term cost savings.[51] Another way to improve compliance could be upgrading infrastructure and acquiring technology to monitor and address health and safety concerns timely.[52] This has the potential to reduce issues such as childhood mortality, improve public infrastructure and increase the wealth index and thus render investment in extractives more acceptable.[53] This is possible since vulnerable communities and society will perceive investments in extractives as beneficial and not problematic.

5. Conclusion

As discussed in this paper, investment in the extractives sector in South Africa, Nigeria and the DRC is crucial for economic development. However, the paper finds that extractive activities are a major burden, especially to extractive communities that battle with various forms of health issues caused by environmental pollution and degradation resulting from extractive activities. Part of the problem is the flaw in the legal framework. Particularly, no framework caters to health and safety in extractive communities specifically. As a result, health and safety concerns in such communities can only be addressed through legislative frameworks meant generally for environmental protection and public health in general, despite the fact that those communities face unique challenges. This paper further finds that even those legislative frameworks fall short of mitigating health and safety problems in affected and vulnerable communities. The main reasons are poor implementation by respective governments and lack of compliance by the extractive companies that are the main culprits.

To address the problem and boost the tolerability of investment in extractive activities in the selected countries, this paper has argued that countries must take the necessary steps to understand the magnitude of the health and safety challenges affecting vulnerable communities. The paper also finds that closing legal and policy gaps through reforms, law-making and political will are crucial to resolve or at least mitigate the issues much

50 *Cronjé and others*, note 25, 9.

51 *Victoria Shahly, Ronald C Kessler and Ian Duncan*, 'Worksite primary care clinics: a systematic review' (2014) 17 Population health management 306, 309–310.

52 *Guillaume Peterson St-Laurent and Philippe Le Billon*, 'Staking claims and shaking hands: Impact and benefit agreements as a technology of government in the mining sector' (2015) 2 The extractive industries and society 590, 591 and 593.

53 *Van Brusselen and others*, note 11, e159.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

better. However, these steps are most likely to bear fruits only if extractive companies take the necessary measures to extend their health and safety standards to neighbouring. In so doing investment in extractive activities could attract favourable perceptions pending when South Africa, Nigeria and the DRC will be ready to transition completely from dependence on minerals and fossils.

Bibliography

Atkins A and Ritchie M, *Improving board assurance of technical and operational risks in mining* (Australian Centre for Geomechanics 2019).

Hund K and others, *Minerals for climate action: The mineral intensity of the clean energy transition* (World Bank 2023).

Agboola O and others, 'A review on the impact of mining operation: Monitoring, assessment and management' (2020) 8 Results in Engineering 100181.

Alberts R and others, 'Complexities with extractive industries regulation on the African continent: What has 'best practice'legislation delivered in South Africa?' (2017) 4 The Extractive Industries and Society 267.

Amponsah-Tawiah K and Mensah J, 'Exploring the link between corporate social responsibility and health and safety in the mines' (2015) 6 Journal of Global Responsibility 65.

Atisa G, Zemrani A and Weiss M, 'Decentralized governments: local empowerment and sustainable development challenges in Africa' (2021) 23 Environment, Development and Sustainability 3349.

Benson C and others, 'Assessing the common occupational health hazards and their health risks among oil and gas workers' (2021) 140 Safety science 105284.

Bigirinama RN and others, 'Ensuring leadership at the operational level of a health system in protracted crisis context: a cross-sectional qualitative study covering 8 health districts in Eastern Democratic Republic of Congo' (2023) 23 BMC health services research 1362.

Bristol-Alagbariya ET, 'Costs and benefits of energy and major natural resources extractive industrial operations on communities: Spotlight on host communities development regime in Nigeria's Petroleum Industry Act, 2021' (2023) 11 International Journal of Development and Economic Sustainability 1.

Cronjé F, Reyneke S and Van Wyk D, 'Local communities and health disaster management in the mining sector' (2013) 5 Jàmbá: Journal of Disaster Risk Studies 1.

Eiter BM and others, 'Occupational Safety and Health of Women in Mining' (2023) 32 Journal of Women's Health 388.

Ejumudo KBO, 'Air Pollution and Health Challenges in the Niger Delta: Desirability of a Collaborative Policy and Action' (2011) Editorial Board 162.

Etshumba JM and others, 'Profiles of Community Care Sites and provider Community Health Workers: A Case study at Gombe Matadi, Kenge and Kisantu Rural Health Zones in the Democratic Republic of Congo' (2024) 16 Global Journal of Health Science.

Ewim DRE and others, 'Survey of wastewater issues due to oil spills and pollution in the Niger Delta area of Nigeria: a secondary data analysis' (2023) 47 Bulletin of the National Research Centre 116.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

Gamu J, Le Billon P and Spiegel S, 'Extractive industries and poverty: A review of recent findings and linkage mechanisms' (2015) 2 The Extractive Industries and Society 162.

Hermanus M, 'Occupational health and safety in mining-status, new developments, and concerns' (2007) 107 Journal of the Southern African Institute of Mining and Metallurgy 531.

Irenge CA and others, 'Participative epidemiology and prevention pathway of health risks associated with artisanal mines in Luhihi area, DR Congo' (2023) 23 BMC public health 121.

Kengni B and Nkosi V, 'Analysis of the current legal framework protecting the health of communities near gold mine tailings in South Africa' (2022) 37 Southern African Public Law 19 pages.

Leuenberger A and others, 'Health impacts of industrial mining on surrounding communities: Local perspectives from three sub-Saharan African countries' (2021) 16 PLoS One e0252433.

Marais L and others, 'The catastrophic failure of the Jagersfontein tailings dam: an industrial disaster 150 years in the making' (2024) International Journal of Disaster Risk Reduction 104585.

Meggersee A and Guvuriro S, 'Economic Sustainability of Small Mining Towns: A Case Study in South Africa' (2023) 13 SAGE Open 21582440231218583.

Mperejekumana P and others, 'Exploring the potential of decentralized renewable energy conversion systems on water, energy, and food security in africa' (2024) 315 Energy Conversion and Management 118757.

Muhirwa F and others, 'Linking large extractive industries to sustainable development of rural communities at mining sites in Africa: Challenges and pathways' (2023) 81 Resources Policy 103322.

Muthelo L and others, 'Exploring occupational health and safety standards compliance in the South African mining industry, Limpopo Province, using principal component analysis' (2022) 19 International journal of environmental research and public health 10241.

Nwaichi EO and Osuoha JO, 'Has the National policy on environmental pollution control in Nigeria been neglected in the Niger Delta region? An update' (2022) 24 Environment, Development and Sustainability 12494.

Nyirenda T and others, 'Determine the Capacity of Mine Health Facilities to Accommodate Surrounding Communities' (2022).

Obi N, Bwititi P and Nwose E, 'Study proposal of the impact of gas flaring on health of communities in Delta state Nigeria' (2021) 7 International Journal of Scientific Reports 468.

Osakede U, 'Infrastructure and health system performance in Africa' (2022) 20 Managing Global Transitions.

Rapanyane MB, 'China's involvement in the Democratic Republic of Congo's resource curse mineral driven conflict: an Afrocentric review' (2022) 17 Contemporary Social Science 117.

Rikhotso O, Morodi TJ and Masekameni DM, 'Health risk management cost items imposed by Occupational Health and Safety Regulations: A South African perspective' (2022) 150 Safety Science 105707.

Selmier II WT and Newenham-Kahindi A, 'Communities of place, mining multinationals and sustainable development in Africa' (2021) 292 Journal of cleaner production 125709.

Shahly V, Kessler RC and Duncan I, 'Worksite primary care clinics: a systematic review' (2014) 17 Population health management 306.

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC

Shiquan D and others, 'The impact of mineral resource extraction on communities: how the vulnerable are harmed' (2022) 10 The Extractive Industries and Society 101090.

St-Laurent GP and Le Billon P, 'Staking claims and shaking hands: Impact and benefit agreements as a technology of government in the mining sector' (2015) 2 The extractive industries and society 590.

Stewart AG, 'Mining is bad for health: a voyage of discovery' (2020) 42 Environmental geochemistry and health 1153.

Tiamgne XT, Kalaba FK and Nyirenda VR, 'Mining and socio-ecological systems: A systematic review of Sub-Saharan Africa' (2022) 78 Resources Policy 102947.

Van Brusselen D and others, 'Metal mining and birth defects: a case-control study in Lubumbashi, Democratic Republic of the Congo' (2020) 4 The Lancet Planetary Health e158.

Nkosi V, *How mine dumps in South Africa affect the health of communities living nearby* (2018)

Ogunnowo RO, 'An evaluation of natural resources extraction and host communities' reaction in Nigeria and South Africa 2005–2015' (North-West University (South Africa) 2022).

Mine Health and Safety Act 29 of 1996.

Mineral Oils (Safety) Regulations of 1997.

Petroleum (Drilling and Production) Regulations, L.N. 69 of 1969.

Mining Code 2018 (Law No. 18/001).

National Environmental Management Act 107, 1998.

National Policy on the Environment revised 2016.

Law No 11/009 on Environmental Protection.

National Health Act, 2014.

National Health Act 61, 2003.

Law No. 18/035, 2018.

Vusumuzi Nkosi, How mine dumps in South Africa affect the health of communities living nearby (2018) The Conversation https://theconversation.com/how-mine-dumps-in-south-africa-affect-the-health-of-communities-living-nearby-77113 (accessed 31 August 2024).

S&P Global Market Intelligence, Africa – mining by the numbers, 2022 (2022) https://www.spglobal.com/marketintelligence/en/news-insights/research/africa-mining-by-the-numbers-2022 (accessed on 20 July 2024).

https://doi.org/10.5771/2363-6262-2024-4-491 https://www.inlibra.com/de/page/agb - Open Access - (cc) BY-NC