Case Study in Kenya: The Titanium Issue

At around the turn of the Century, a little-known Canadian mineral exploration company known as Tiomin Resources Inc. reportedly discovered the world's largest *unexploited* reserves of titanium mineral sands, spread along the coast of Kenya, with rich deposits in Kwale on the south coast, all the way to Kilifi County on the north coast.[1] Some of the deposits found in Kwale are estimated to hold 10 per cent of the world's supply of ilmenite and 14 per cent of the world's supply of rutile, both ores of titanium metal.[2] These deposits also contain significant quantities of zircon.

Kenya is reportedly the world's eleventh largest producer of titanium ores, "with the entire annual production of 160,000 metric tonnes mined in Kwale County on just 4,000 acres extracted by Australian company Base Titanium. The County should be the mining El Dorado, but a visit shows very little evidence that riches from titanium mining have impacted meaningfully on the Kwale economy."[3]

"Metal of the gods"

Titanium metal

Titanium metal is named after the *Titans* – a race of gods in Greek mythology. This "metal of the gods" – as it was sometimes called – has one of the best strength-to-weight ratios of any metal, making it incredibly light. It is twice as strong as aluminum, but only 60% heavier, and it is 40% stronger than steel, but only weighs about half as much. It also has relatively low melting and high boiling points, and is almost completely resistant to erosion and corrosion.

In addition to this exceptional combination of physical and chemical properties, titanium can be combined with aluminum, nickel, iron, vanadium, molybdenum and other metals to produce high-performance alloys. These alloys are crucial in the manufacture of high-

---

[1] Ojiambo, E.V. (2002). *"Battling for Corporate Accountability: Experiences from Titanium Mining Campaign in Kwale, Kenya."* A paper presented at the Institute of Development Studies, University of Sussex. Seminar on Linking Rights and Participation: Sharing Experiences and Opportunity, 29th May 2002.

[2] Akwiri, J. (2013). *Australia's Base Resources begins titanium mining in Kenya*. Reuters, 11th October 2013 – https://www.reuters.com/article/kenya-titanium-idUKL6N0I11AP20131011 (Accessed on 30th May 2023)

[3] Muyanga, P., & Gaitho, M. (2022). *Residents of Kwale dirt poor in spite of the mineral billions underground*. Daily Nation, July 19, 2022 – https://nation.africa/kenya/counties/kwale/residents-of-kwale-dirt-poor-in-spite-of-the-mineral-billions-underground-3884262 (Accessed on 24th December 2023)

performance products, such as jet engines, aerospace/spacecraft parts, energy production equipment, military equipment, medical equipment, sports equipment, body armor, bearings, and other high-tech products such as mobile phones. According to Apple Inc., for instance, the iPhone 15 Pro "features an aerospace-grade titanium design, using the same alloy that spacecraft use for missions to Mars."[4]

Titanium dioxide

Titanium dioxide (TiO_2) is the naturally occurring oxide of titanium and the most widely used white pigment in the world.[5] It is considered the whitest and brightest of the known pigments – also known as 'the whitest white' or 'the perfect white' – and is prized for its ability to confer whiteness and opacity, as well as its ability to absorb ultraviolet (UV) rays.[6] It has been estimated that titanium dioxide is used in the manufacture of two-thirds of all paint pigments worldwide, an industry worth billions of dollars.[7]

Titanium dioxide has unique characteristics that make it suitable for use in hundreds of products that people use every day. It has a higher refractive index (ability to scatter light) than even diamond, which makes it an incredibly bright substance and an ideal material for use in aesthetic design. Titanium dioxide also plays a key role in the development of energy efficient and environmentally friendly products.[8]

According to the Titanium Dioxide Manufacturers Association (TDMA), "our skin, cities, cars, homes, food and environment are made brighter, safer, more resilient and cleaner by TiO2. With a legacy of 100 years of safe commercial use, TiO2 is only going to become more vital as our environment faces greater challenges from a growing population."[9]

---

[4] Apple Inc. (2023). https://www.apple.com/ke/iphone-15-pro/ (Accessed on 28th December 2023)
[5] Skocaj, M., et al. (2011).Titanium dioxide in our everyday life; is it safe? *Radiol Oncol* 45(4), 227–247.
[6] Titanium Dioxide Manufacturers Association (TDMA) – *What is titanium dioxide?* – https://www.tdma.info/about-tio2/what-is-titanium-dioxide/#:~:text=What%20is%20titanium%20dioxide%20used,as%20the%20food%20colourant%20E171
[7] Schonbrun, Z. (2018). *"The Quest for the Next Billion-Dollar Color"*. Bloomerg.com – https://www.bloomberg.com/features/2018-quest-for-billion-dollar-red/ (Accessed on 31st May 2021)
[8] Titanium Dioxide Manufacturers Association (TDMA)
[9] *Ibid*

Zircon

The largest market for zircon is the ceramics industry.[10] A ceramic is a material that is neither metallic nor organic, but is usually hard and chemically non-reactive. It may be glassy, crystalline, or both glassy and crystalline. Ceramics are much more than just pottery and dishes: other well-known examples include clay, bricks, glass, cement, and tiles. Ceramics are used in various applications, including batteries, fuel cells, fiber optics, space shuttle tiles, chemical sensors, spark plugs, race car brakes, self-lubricating bearings, cooktops, artificial joints, skis, micropositioners, body armor, roads and even in buildings.[11]

According to Geosciences Australia, an Australian Government website, zircon contains the metals zirconium and hafnium. Zirconium is exceptionally hard and resistant to corrosion and is therefore used to make pipes that are used with harsh chemicals, heat exchangers and specialty alloys. Zircon products are also used in engines, spacecraft, computers and the electronics industry.[12]

More than 90% of zirconium is used in nuclear power stations, because it does not absorb neutrons. Zirconium alloys are used in almost 95% of nuclear reactors worldwide,[13] with more than 100,000 metres of zirconium alloy tubing being used in a single reactor.[14] When alloyed with niobium, zirconium becomes superconductive at low temperatures and is suitable for making superconducting magnets.[15]

Hafnium is also a good absorber of neutrons and is therefore used in nuclear control rods, especially in nuclear submarines. In addition, hafnium has a very high melting point and is

---

[10] Zircon Industry Association (ZIA) – https://www.zircon-association.org/applications.html#:~:text=From%20heavy%20industrial%20uses%2C%20such,to%20become%20even%20more%20significant

[11] Department of Materials Science and Engineering, University of Maryland – https://mse.umd.edu/about/what-is-mse/ceramics#:~:text=Ceramics%20are%20also%20used%20to,%2C%20body%20armor%2C%20and%20skis.

[12] Geosciences Australia – https://www.ga.gov.au/education/minerals-energy/australian-mineral-facts/zircon (Accessed on 28th December 2023)

[13] ScienceDirect – https://www.sciencedirect.com/topics/physics-and-astronomy/zirconium-alloys

[14] Royal Society of Chemistry (Zircon) – https://www.rsc.org/periodic-table/element/40/zirconium#:~:text=Today%20this%20element%20is%20widely,and%20to%20make%20foundry%20moulds (Accessed on 28th December 2023)

[15] *Ibid*

most suitable for plasma welding torches and super alloys, while hafnium oxide is used as an electrical insulator in microchips.[16]

Emerging research and development show that zircon will continue to play an increasingly greater role in the technological advances of the modern era.[17]

Other Ores in the Reserves

According to Base Titanium's predecessor, Tiomin, the deposits also contain garnet, tourmaline, leoxocene, kyanite and monazite, as well as significant traces of thorium and uranium.[18] However, Base Titanium has not confirmed this during its operations.

Brief Summary

On Monday, 16th December 2002, Tiomin Kenya Ltd, a subsidiary of Tiomin Resources Inc., announced that its application for a "Special Mining Lease" on its Kwale titanium mining project had been approved. Under the terms of the 16 year-long lease – renewable for a further 10 years – Tiomin would be given "full, irrevocable, sole and exclusive right to mine and process the heavy mineral sands at Kwale."[19]

During the heated campaigns leading up to the General Elections on 27th December 2002, the National Rainbow Coalition (NARC) argued that the licensing process should not have been hurried by the incumbent Moi government before crucial issues had been discussed in public. The late former President Mwai Kibaki stated that the titanium mining project should have been a partnership between local residents and the mining company, encouraging the Kwale residents "not to sell their land...until they are given shares in the project."[20] The leader of the Opposition at the time also claimed that the company "...preferred to deal with government officials behind the scenes, ignoring stakeholders in the areas where deposits

---

[16] Royal Society of Chemistry (Hafnium) – Royal Society of Chemistry (Hafnium) – https://www.rsc.org/periodic-table/element/72/hafnium

[17] Zircon Industry Association (ZIA)

[18] Tiomin Resources Inc. (2003). *Annual Information Form, 30th April 2003.* Toronto, Canada. (No longer available)

[19] Ong'olo, D. (2001). *'International Investment and Environmental Issues: The Case of Kenya's Kwale Mineral Sands Project'*. IFD Project Launch Meeting, Jaipur, 13-14 December, 2001, 2.

[20] Wanjiru, J. (2002). *Fate of Titanium Mining Awaits Kenya Polls*. Environment News Service – http://www.ens-newswire.com/ens/dec2002/2002-12-19-03.asp (No longer available)

were found."[21] Finally, the late Professor Wangari Maathai – a former Environment Minister and Nobel Peace Prize Laureate – challenged the Government of Kenya to invest in the production and processing of the titanium ores, insisting that Kenya was getting a raw deal.[22]

In early 2003, while speaking in reference to a titanium-mining fact-finding trip to South Africa during the first months of the NARC regime, the late Professor Maathai stated that "according to the plan, the delegation was to compile and present...findings to the government, and these were to inform the basis for a decision on whether to licence the company or not. The findings were to be discussed before a national consultative forum. But...just days after the trip, the government announced...that it had issued Tiomin with a mining permit. Curiously, the announcement came the same day a national forum had been organized to discuss the delegation's findings. Everyone was taken aback, with most questioning the logic behind sending a high powered delegation to South Africa in the first place."[23]

Dispossessing the Landowners

There are three clans that jointly claim ownership of the land that Base Titanium has been mining in Kwale: the *Achinauchi*, the *Achinangala*, and the *Avirizi*. Representative elders of these clans claim that the clans were not compensated, and that the people who were compensated *instead*, were "non-natives" whom the Kwale natives had previously accommodated, when the former ventured beyond the boundaries of their settlement scheme, in order to seek land for farming. According to the Kwale natives, this is the reason why non-natives agreed to the meagre compensation offered by Tiomin. Most of those compensated had never been the landowners in the first place, and the *Achinauchi*, *Achinangala*, and *Avirizi* clans can prove that they are in fact the *bona fide* landowners who have never been compensated for the loss of their land.[24]

---

[21] *Ibid*

[22] Osanjo, T. (2001). *Troubles Mount for Canadian Titanium Mine in Kenya*. Environment News Service – https://ens-newswire.com/wp-content/uploads/2010/05/2001-05-31-022.html (Accessed on 24th December 2023)

[23] Mbathi, J. (2004). *East Africa Hails Wangari Maathai's Peace Prize*. 11th October, 2004 – www.allafrica.com (Accessed on 24th December 2023)

[24] Primary Source (i.e. interviews with displaced communities). See also Annex 1: Kwale Villagers' Statement in the High Court of Kenya

Tiomin initially offered these landowners a paltry compensation of $114 (or about Ksh 18,000) per acre, then later increased that to $505 (or about Ksh 80,000) per acre.[25] However, both villagers and critics argued that the compensation rate was greatly disproportionate and did not take into account the mineral rich deposits beneath the surface.[26] On the rainy night of 25th April 2007 – soon after they had lost their case in the High Court in Mombasa (Re: Civil Case No.31 of 2004) – the villagers of Maumba and Nguluku were forcefully evicted from their land without any compensation, on the grounds that they lacked title deeds.[27] (See also: Annex 1 - Kwale Villagers' Statement in the High Court of Kenya)

Furthermore, as has been extensively discussed above, like most communities at the Coast, a large majority of the landowners did not have title deeds. Tiomin considered these people as being squatters and did not go into any contractual agreements with them. Thus, the displaced villagers had no legal recourse.[28]

According to reports, after communities in Kwale lost their land and crops (including valuable coconut trees), many have been living languishing in poverty owing to their inability to adapt to the reallocated lands.[29] Displacement should be the very last option, if at all necessary, and must be done with the prior and informed consent of communities.[30]

---

[25] Otani, R. (2005). *Tiomin Resources: A Controversial Mining in Kenya (06/01)*. http://www.towardfreedom.com/30-archives/africa/101-tiomin-resources-a-controversial-mining-in-kenya-0601 (Accessed on 24th December 2023)

[26] *Ibid*

[27] Mines and Communities. (2007). Cited: in Abuya, W.O. (2013). What is in a Coconut? An Ethnoecological Analysis of Mining, Social Displacement, Vulnerability, and Development in Rural Kenya. *African Studies Quarterly* (14)1-2 – http://www.miningresettlement.org/elibrary/what-is-in-a-coconut-an-ethnoecological-analysis-of-mining-social-development-vulnerability-and-development-in-rural-kenya (Accessed on 24th December 2023).

[28] Kibugi, R. (2008). *'Mineral resources and the mining industry in Kenya'*. In Okidi, C., Kamberi-Mbote, P., & Akech, M (eds) *Environmental Governance in Kenya: Implementing the Framework Law*, East African Educational Publishers. p.362. Cited in: Kariuki, F. (2018). *LAND RIGHTS ISSUES IN THE EXTRACTIVES SECTOR IN KENYA*. In Ambani, J.O (ed) *Drilling Past the Resource Curse? Essays on the governance of extractives in Kenya*. Nairobi, Kenya: Strathmore University Press. p.164

[29] Abuya, W.O. (2013). What is in a Coconut? An Ethnoecological Analysis of Mining, Social Displacement, Vulnerability, and Development in Rural Kenya. *African Studies Quarterly* (14)1-2 – http://www.miningresettlement.org/elibrary/what-is-in-a-coconut-an-ethnoecological-analysis-of-mining-social-development-vulnerability-and-development-in-rural-kenya (Accessed on 24th December 2023). p. 14.

[30] Kariuki, F. (2018). *LAND RIGHTS ISSUES IN THE EXTRACTIVES SECTOR IN KENYA*. In Ambani, J.O (ed) *Drilling Past the Resource Curse? Essays on the governance of extractives in Kenya*. Nairobi, Kenya: Strathmore University Press. p.147

In stark contrast to the spirit of *The Constitution (2010)*, it is important to note that the evictions (and erroneous compensation process) took place within a framework largely established by the following legislation:[31]

Mining Act (Cap 306): Under Section 4 of the Act, the Government *was* the owner of all minerals, including those discovered during the process of prospecting [this was covered in Section 24(1)(a)]. This Act had been in existence since colonial times and was enacted to "bequeath all minerals to the Crown for ease of exploitation and repatriation to the parent country."[32] It was only in 2011 that the government contemplated redrafting the Mining Act, a process that culminated in the *Mining Act (2016)* that came into effect on 27th May 2016.

Land Acquisition Act (Cap 295): Sections 6(1)(a) and (b) of the Act gave the Minister of Lands the power to compulsorily acquire land for "public good" and the commercial mining of minerals was considered as one such act of "public good". Section 8 of the same Act provided for full and prompt (no mention of "fair") compensation to all persons who held interest in the land.

Agriculture Act (Cap 318): This Act determined compensation rates for crops. Section 7 of the Act gave the Minister for Agriculture the *power to fix prices* for what was termed "scheduled crops" (including coconuts), which are crops recognized to be of economic value. The case of Kwale reveals that coconut trees, among other local crops, were undervalued, which resulted in significant economic and cultural implications to affected communities.[33]

> "For people living in tropical Africa, the most valuable tree would unanimously be the coconut tree…justified by the fact that it fulfils five of the principal requirements of human existence – that is starch, sugar, oil, fibre, and building materials."[34] In fact, there was a time in Miji Kenda history when coconut trees were more valuable than the land upon which they grew.[35]

---

[31] Cited in: Abuya, W.O. (2013).
[32] Ojiambo, E.V. (2002).
[33] Kariuki, F. (2018). In Ambani, J.O (ed). p.163
[34] Cook, O.F. (1946). "Africa Needs Palms as Tree Crop." *The Scientific Monthly* 62(2), 131-139. Cited in: Abuya, W.O. (2013).
[35] Ng'weno, B. (1997). "Inheriting Disputes: The Digo Negotiation of Meaning and Power through Land." *African Economic History* 25, 59-77. Cited in: Abuya, W.O. (2013).

Forests Act (Cap 7): The Department of Forestry enforced this Act and was charged with the rational utilization of forest resources for the socio-economic development of the country, including determining the compensation rates for trees and tree products. In the case of Kwale, the Department determined the compensation rates of the various indigenous and exotic trees.

Given that community land rights manifest themselves as a 'web of interests'[36] with different people having different rights (usufructuary rights) over land, economic compensation does not suffice. Therefore, claimants who enjoy shared rights may not be comprehensively compensated.[37] Due to the lesser values assigned through market evaluations to some of these 'unclear land rights', the valuation of land "cannot be done without a discussion of indigenous peoples rights,[38] including the cultural beliefs, knowledge and values that they have in relation to land."[39]

In the case of the titanium mining project in Kwale, the communities legally contested the monetary compensation package offered for land, crops, and physical structures lost, plus compensatory land, through a series of court cases.[40] As previously stated, the communities disagreed with the compensation rates given for trees and tree products under the *Forests Act*,[41] "especially the true value of the coconut tree whose compensation was not based on its numerous uses."[42]

The Environmental Impact Assessment (EIA)

According to the *Constitution of Kenya (2010)*, "every person has the right to a clean and healthy environment which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures..."[43] The

[36] Meinzen-Dick, R., & Mwangi, E. (2007). 'Cutting the web of interests: Pitfalls of formalising property rights' 26 *Land Use Policy*, 1 (2007), 36-43. These rights include the: right to graze, right to fetch water, right to harvest forest resources, right to access sacred sites, right to public spaces, among others. Cited in: Kariuki, F. (2018). In Ambani, J.O (ed). p.145

[37] International Institute for Environment and Development and World Business Council for Sustainable Development, Breaking New Ground, 149. Kariuki, F. (2018). In Ambani, J.O (ed). p.145

[38] *Ibid*. 151. Cited in: Kariuki, F. (2018). In Ambani, J.O (ed). p.145

[39] Kariuki, F. (2018). In Ambani, J.O (ed). p.146

[40] Abuya, W.O. (2013). p.14

[41] *The Forests Act* (No. 7 of 2005) (Repealed).

[42] Abuya, W.O. (2013). p.10

[43] Article 42, *Constitution of Kenya (2010)*

Environmental Management and Coordination Act (EMCA) can also be used to address environmental/health concerns around mining/extractive projects, particularly because it establishes the right to a clean and healthy environment, gives citizens the responsibility of ensuring that their environment is safeguarded, and also makes provision for the carrying out of EIAs.[44]

Pursuant to the above, the *Mining Act (2016)* requires EIAs to be conducted prior to any mineral activities taking place. Thus, the EIA process must not be conducted for the sake of formality, but must include a strategic environmental assessment. In addition, the results of the assessment must be deliberated and mitigation measures put in place.[45]

The case of *Cortec Mining Kenya Limited v Cabinet Secretary Ministry of Mining and others*[46] demonstrates some of the tensions between mining laws and environmental obligations, whereby the High Court held that "the grant of an EIA licence is a condition precedent for the approval of mining activities since mining is one of the activities for which an EIA is required."[47] The High Court ruled that:

> "NEMA has a mandate both under the EMCA and the Constitution to protect and safeguard the environment for the benefit of all Kenyans…It would be abdication of duty if NEMA were to fail to fulfil the mandate in regard to which they were established. To the extent that the Commissioner for Mines was not furnished with a NEMA licence as required under the EMCA and the Regulations made thereunder my view is he could not issue a valid mining licence and the licence he issued to the applicant on 7th March 2013 was null and void and of no legal effect."[48]

Tiomin attempted to commence its operations without having submitted an Environmental Impact Assessment (EIA), prompting the villagers to apply for an injunction, in an attempt to

---

[44] Kameri-Mbote, P. (2000). *Public Involvement in Environmental Decision-making in Kenya*. Research Report for World Bank. November 2000.

[45] Odote, C. (2018). *ENVIRONMENTAL IMPLICATIONS OF THE EXTRACTIVES SECTOR IN KENYA: CHALLENGES AND WAY FORWARD*. In Ambani, J.O (ed) *Drilling Past the Resource Curse? Essays on the governance of extractives in Kenya*. Nairobi, Kenya: Strathmore University Press. p.189-190

[46] *Cortec Mining Kenya Limited v Cabinet Secretary Ministry of Mining and others [2014] eKLR*. Cited in: Odote, C. (2018). In Ambani, J.O (ed). p.184

[47] Odote, C. (2018). In Ambani, J.O (ed). p.184

[48] *Cortec Mining Kenya Limited v Cabinet Secretary Ministry of Mining and others [2014] eKLR*.

stop its operations.[49] According to Harun Ndubi, a former executive director of the legal-aid organization *Kituo cha Sheria*, Tiomin also disregarded Kenya's land laws, specifically the requirement that any lease would need to be presented to the local land control board six months before ratification. "When I sought evidence that the company had adhered to this piece of legislation," he explained, "its president Jean Potvin failed to produce consent documents, saying only that the company had deposited them with the Kenya government."[50] Strangely, Tiomin claimed that it had not retained copies of these crucial documents.[51] Furthermore, the company had no income at the time, had accumulated expenses of over $40 million, and was staying afloat on bank financing through interest generated by the Kwale project.[52]

Although titanium mining operations in Kwale eventually proceeded after the submission of an EIA, yet environmental challenges continued to exist.[53] This has been attributed to a number of reasons, "ranging from lack of capacity by NEMA to enforce EIA requirements, corruption, lack of adequate public participation in the EIA process, poor quality of EIA reports to failure to hold project proponents to their environmental commitments under EIA."[54]

Prospecting plans must "include certain information, including an approved EIA report,[55] and an environmental management plan where required."[56] Furthermore, there is a legal requirement for monitoring and auditing, so as to ensure regular compliance with environmental standards.[57] One is required to show evidence of compliance with the initial

[49] The court while granting injunctive orders opined that where a proponent has not fulfilled the requirements of carrying out an EIA, it is immaterial that one is licensed under another law, in this case the *Mining Act*, Cap. 306, as per Hayanga J, in *Rogers Muema Nzioka & 2 others v Tiomin Kenya Ltd*, [2001] eKLR.
[50] Otani, R. (2005).
[51] *Ibid*
[52] *Ibid*
[53] Cited in: Odote, C. (2018). In Ambani, J.O (ed). p.184
[54] For an incisive discussion of these issues, see Adam Smith International, *Recommendations for the Development of Kenya's Extractive Industry Based on Inclusive Multi-stakeholder Consultation*. See also discussions on the limits of EIA in the context of Titanium Mining in Kenya, Davies T and Osano O, Sustainable mineral development: Case study from Kenya, Vol. 250 (1) *Geological Society London*, Special Publications, London, 2005, 93; *Economic Commission for Africa, Assessment of Mineral Regimes in the East African Community: Aligning Frameworks with the East African Community*, 2017, 22. Cited in: Odote, C. (2018). In Ambani, J.O (ed). p.184
[55] Section 78 (d), *Mining Act (2016).*
[56] *Ibid*
[57] Section 82(1) (e), *Mining Act (2016).*

conditions of the EIA licence, as evidenced in the audit reports submitted to NEMA, before applying for the renewal of their prospecting licence.[58]

From Tiomin to Base Titanium

Eventually, Tiomin Resources Inc. changed its name to Vaaldiam Mining Inc. after investors withdrew financial support following a spate of bad publicity, which also led to the suspension of its Kwale project.[59] Vaaldium Mining was taken over in 2012 by BCKP Limited, a private corporation registered in the Cayman Islands, a well-known tax haven.[60] Base Resources bought the mines from Tiomin in 2011 and spent the first two years (2011 - 2013) on infrastructure development to operationalize the mine, reaching full-scale operational capacity in 2015.[61] Base Resources conducted its mining operations in Kenya through its subsidiary, Base Titanium Limited.

Although Vaaldium Mining is no longer actively traded on any major stock exchange,[62] it continued to receive royalty payments from Base Resources' operation in Kenya: it received Ksh 310 million ($3.1 million) in June 2017, slightly lower than the KSh400 million paid in royalties to the Government of Kenya during the same period. These royalty payments are part of the sale agreement that Base Resources signed with Vaaldiam, which were to be paid at a rate of 1.5 per cent of revenues.[63]

In mid-2016, Base Titanium attempted to explore for more reserves in Msambweni Sub-County (Kwale County), by offering landowners Ksh 10,000 per hole drilled. However, these offers were largely rejected as landowners realized the true cost of losing their land.[64] In

---

[58] *Ibid*

[59] Abuya, W.O. (2013).

[60] MTNewswires. (2012). *BCKP Limited Agrees to Acquire Vaaldiam Mining for $18.5 Million; Vaaldiam Above Existing Year Highs* – https://www.nasdaq.com/articles/bckp-limited-agrees-acquire-vaaldiam-mining-185-million-vaaldiam-above-existing-year-highs (Accessed on 24th December 2023)

[61] Ernst and Young. (2017). *Base titanium total economic and tax contribution in Kenya' March 2015*. 6th May 2017 – http://basetitanium.com/newsletters?download=327:report-base-titanium-s-economic-contribution-to-kenya. p.2. Cited in: Orago, N.W., & Musangi, P.V. (2018). In Ambani, J.O (ed). p.20

[62] https://info.creditriskmonitor.com/Report/ReportPreview.aspx?BusinessId=5316630 (Accessed on 24th December 2023)

[63] Macharia, K. (2017). *Royalties: Vaaldiam Mining earns millions in royalties from mines years after exiting*. The Standard, 5th September 2017 – https://www.standardmedia.co.ke/financial-standard/article/2001253634/canadian-company-earns-millions-in-royalties-from-mines-years-after-exiting (Accessed on 24th December 2023)

[64] Primary Source. (2016-2018). Refers to the author's extensive discussions with project-affected communities during this period. See also: Complaint letters to: the *Senate Committee on Lands, Environment and Natural*

response, Base Titanium's General Manager (External Affairs) announced that the company had stopped exploratory drilling, citing "political interference and incitement" and "inflamed passions from residents against the firm's activities."[65]

The announcement was made in Nairobi on 21st July 2017, at a meeting between the *Vision 2030* delivery board and Base Titanium Limited, whereby a memorandum of understanding was to be signed between the two parties and the Kwale project declared as Kenya's *flagship mining project*. With a capital investment of approximately Ksh 35 billion, the Kwale Mineral Sands Project is the largest mining project undertaken in Kenya since the country attained independence. According to the Kenya National Bureau of Statistics Economic Survey 2017, Base Titanium accounted for nearly 60 per cent of Kenya's total mineral output in 2016.[66]

After villagers stopped the company from conducting prospecting operations in Msambweni Sub-County, Base Titanium sought to do the same in Lunga Sub-County, in the southern part of Kwale County. However, the company faced stiff opposition from thousands of villagers living in the area, whom it regarded as "squatters" and therefore would not qualify for any compensation.[67]

As stated earlier, this is the same argument that Tiomin used, prior to villagers being evicted from Maumba and Nguluku villages in 2007. Tiomin took advantage of the fact that most of the indigenous Mijikenda communities living along the Kenyan Coast do not possess title deeds and therefore did not compensate most of the villagers of Maumba and Nguluku, as they were considered to be "squatters".

Resources; Members of Parliament; and the Cabinet Secretary, Ministry of Petroleum and Mining (https://madaraka.online/case-study-the-titanium-issue/)

[65] Kairu, P. (2017). *Miner pulls out of Kwale over interference*. 23rd July 2017 – https://www.google.com/amp/www.nation.co.ke/Base-Titanium-suspends-operations/1056-4028772-view-asAMP-hox1qn/index.html (Accessed on 25th December 2023)

[66] Business Today Correspondent. (2017). *Kwale Mineral Sands joins Vision 2030's pool of flagship projects*. Business Today, 21st July 2017. https://businesstoday.co.ke/kwale-mineral-sands-joins-vision-2030s-pool-flagship-projects/ (Accessed on 24th December 2023)

[67] Suche, C. (2019). *Squatters threaten protests over titanium mining*. The Star – https://www.the-star.co.ke/counties/coast/2019-03-20-squatters-threaten-protests-over-titanium-mining/ (Accessed on 25th December 2023)

In mid-2023, Base Titanium re-attempted to conduct exploration activities in Msambweni Sub-County, but was met with stiff opposition from several villagers.[68] Eventually, the company announced that it was winding up its operations after recent exploration activities had not yielded viable reserves.[69] It also announced that it has been wholly acquired by an American mineral resources firm, Energy Fuels, a major global supplier of titanium and zirconium minerals.[70]

Meanwhile, many villagers contend that the titanium mining project has brought much more harm than good to the area.[71] Furthermore, they oppose the project, because they do not want to lose their ancestral lands and the tremendous natural wealth therein, especially if this will only serve to enrich a few at the expense of the much larger majority, and the environment.[72]

The villagers have written complaint letters to: the Senate Committee on Lands, Environment and Natural Resources[73]; Members of Parliament[74]; the Cabinet Secretary, Ministry of Petroleum and Mining (at the time)[75]; and the Board and Management of Base Titanium.[76] The most recent complaint letter was addressed to the President of the Republic of Kenya on 22nd August 2023,[77] after some residents registered a Community Based Organization (CBO) named MAZIMA – an abbreviation for the villages of Magaoni, Masindeni, Zigira, Mwadzikuko

[68] Kenya News Agency. (2023). *Kwale Mineral Exploration Faces Potential Stalling* – 30th July 2023, https://www.kenyanews.go.ke/kwale-mineral-exploration-faces-potential-stalling/#:~:text=Kwale%2Dbased%20Australian%20mining%20firm,residents%20opposed%20to%20its%20activities

[69] Omondi, D. (2025). *Base Titanium makes final shipment after shutting Kenya operation*. Business Daily, 12th February 2025 – https://www.businessdailyafrica.com/bd/corporate/companies/base-titanium-makes-final-shipment-after-shutting-operation-4924102

[70] Mwaniki, C. (2024). *US firm buys Kwale miner's parent in Sh31bn deal*. Business Daily, 23rd April 2024 – https://www.businessdailyafrica.com/bd/corporate/companies/us-firm-buys-kwale-miner-s-parent-in-sh31bn-deal--4600084

[71] Muyanga, P., & Gaitho, M. (2022). *Residents of Kwale dirt poor in spite of the mineral billions underground*. Daily Nation, July 19, 2022 – https://nation.africa/kenya/counties/kwale/residents-of-kwale-dirt-poor-in-spite-of-the-mineral-billions-underground-3884262 (Accessed on 24th December 2023)

[72] See videos here: https://madaraka.online/case-study-the-titanium-issue/

[73] https://www.docdroid.net/CTNiMkW/complaint-letter-to-the-senate-committee-on-lands-environment-and-natural-resources-docx

[74] https://files.fm/u/6uba34ct4m

[75] https://files.fm/u/5wer3j55sp

[76] https://files.fm/u/nv3j83tpx

[77] https://www.docdroid.net/l888z6h/complaint-letter-to-the-president-of-the-republic-of-kenya-raising-villagers-concerns-about-base-titanium-docx

and Mwaloya, all within the vicinity of Base Titanium's mining operations in Msambweni constituency, Kwale County.

Citing the *Access to Information Act*, the villagers also requested Base Titanium to provide them with copies of the company's Environmental Impact Assessment (EIA) study report and Special Mining Lease (Annexes 9 and 11 respectively). However, Base Titanium has not acted in "good faith" and both requests were promptly and firmly denied (Annexes 10 and 12 respectively). This lack of transparency and accountability does not auger well, in addition to the irregular licencing and prospecting activities described in the next chapter.

Pursuant to the above, although Base Titanium-affiliated Community Development Agreement Committees (CDACs) were established in 2018 – to create a platform of convergence" for "sustainable and responsible mining in Kwale County"[78] – they have not assisted the aggrieved residents of the villages named above.[79]

Finally, there was no local value-addition being done on the titanium mineral ore sands in Kenya, making this simply another case of "accumulation by dispossession" by the global extractive industry. "Accumulation by dispossession" refers to the persistence and increase of accumulation practices that Karl Marx had regarded as 'primitive' during the birth of capitalism. These include "the commodification and privatization of land and the forceful eviction of peasant populations; conversion of various forms of property rights (common, collective, state, etc.) into exclusive private property rights; suppression of rights to the commons…colonial, neo-colonial and imperial processes of appropriation of assets (including natural resources)."[80]

As summarized by a Kwale County Government official:

> "Mining is a major economic activity in Kwale, but benefits of the mining operations are not really visible, be it at the local mining communities or in relation to resources

[78] Kwale Mining Alliance Working Groups Launch – https://tikenya.org/2020/03/20/kwale-mining-alliance-working-groups-launch/

[79] The aggrieved residents informed the author about this during several meetings.

[80] Harvey, D. (2006). *Spaces of Global Capitalism: Towards A Theory Of Uneven Geographical Development*. London, U.K: Verso. See also the author's Master's Thesis: *"Accumulation by dispossession" by the global extractive industry: The Case of Canada* – http://ruor.uottawa.ca/handle/10393/30170 OR http://www.collectionscanada.gc.ca/obj/thesescanada/vol2/OOU/TC-OOU-30170.pdf

> to the County Government for development purposes. The mining companies like Base Titanium are reaping billions of shillings from local natural resources while giving very little back to the communities and to the County Government. It also takes the raw minerals without undertaking value addition at source, which could develop local industries to provide direct and indirect services in the value-addition process, thus creating employment and business opportunities for local populations..."[81]

"The titanium issue" is therefore about more than just compensation or the environment. It is about the failure of economic/corporate globalization[82] – particularly in the context of the mining/extractive sector – and why an overwhelming majority of Africans continue to live in dire poverty, despite the immense mineral wealth that surrounds them. Rather than serve as a basis for industrialization, this immense mineral wealth is simply exported in raw unprocessed form.

This has been the pattern across Africa since colonialism, whereby mining/extractive companies only invest in the basics required to extract and export natural resources from the continent. There is little to no processing/value-addition done in Africa, besides what is directly related to the refining and preparation of primary resources, in order to supply foreign manufacturers.[83] This is about the continual plunder of Africa's natural resources by the corporate extractive industry. According to David Harvey, "new imperialism…appears as nothing more than the revisiting of the old, though in a different place and time."[84]

---

[81] Key informant interview N-2 conducted at the County Government Offices on 22 May 2017. Cited in: Orago, N.W., & Musangi, P.V. (2018). *TITANIUM MINING BENEFIT-SHARING IN KWALE COUNTY: A COMPREHENSIVE ANALYSIS OF THE LAW AND PRACTICE*. In Ambani, J.O. (ed) *Drilling Past the Resource Curse? Essays on the governance of extractives in Kenya*. Nairobi, Kenya: Strathmore University Press. p.22-23

[82] Neoliberal / economic globalization is here understood as "a system fuelled by the belief that a single global economy with universal rules set by corporations and financial markets is inevitable" [Barlow, M., & Clarke, T. (2002). *Blue Gold: The Fight to Stop the Corporate Theft of the World's Water*. New York, NY: The New Press. p.81].

[83] Butler, P., et al. (Date Unavailable). *Africa's Blessing, Africa's Curse: The Legacy of Resource Extraction in Africa*. Produced in collaboration with the Canadian International Development Agency (CIDA), KAIROS, Canada (orders@kairoscanada.org), and Third World Network Africa (twnafrica@twnafrica.org).

[84] Harvey, D. (2013). *A Companion to Marx's Capital*. London, UK: Verso. See also: Perkins, J. (2004). *Confessions of an Economic Hitman: The Shocking Inside Story of How America REALLY Took Over the World*. San Francisco, CA: Berrett-Koehler Publishers

Characteristics of the "Free Entry" System in Kenya's *Mining Act, 2016*

(i) Little ministerial oversight

According to the *Constitution of Kenya, 2010*:

Article 71(1) A transaction is subject to ratification by Parliament if it –

> (a) involves the grant of a right or concession by or on behalf of any person, including the national government, to another person for the exploitation of any natural resource of Kenya;

However, rather than seeking ratification from Parliament, in accordance with the Constitution of Kenya, the *Mining Act 2016* only requires the Mining Cabinet Secretary to consult with either the "Mineral Rights Board" or the "Cabinet" before making decisions.[85]

(ii) The curtailment of the State from productive activities and its subsequent confinement to the role of facilitating private investment

There are Sections of the Mining Act that prioritize mining interests, whereby mining is considered the "highest and best" use of land. In particular, although the requirement of landowner's consent has been stipulated in the Mining Act, it shall not be "unreasonably withheld" [Sections 37(1) and Section 40(1)(a)] and "the Cabinet Secretary shall not unreasonably withhold consent" [Section 51(2)] and "shall not refuse to grant approval, except for valid reasons" [Section 51(8)].

(iii) Land surface relinquishment requirements (and "involuntary resettlement")

The same Sections of the Mining Act highlighted in part (ii) above are applicable here.

---

[85] Kebaso, M. (2017). *New team to lead Kenya's mining sector reforms*. Daily Nation, 2nd August 2017 – www.theeastafrican.co.ke/business/Kenya-mining-sector-reforms/2560-4042244-view-asAMP-rf6i2xz/index.html (Accessed on 2nd January, 2024)