

## **Kenya's Sand Harvesting laws and the Sustainable Development Licence to Operate: in Quicksand?**

By: *Caroline Katisya-Njoroge*<sup>1</sup>

### **Abstract**

*The Sustainable Development Licence to Operate is the new framework for governing mineral resources. The International Resource Panel has developed a Report that declares that the environmental and social impacts of sand extraction are an issue of global significance. Sand mining is prevalent and creates acute environmental degradation and conflicts. This article juxtaposes Kenya's sand harvesting laws against evolving global mining norms and assesses whether the country is in quicksand with regard to the governance of the sector and reviews available solutions.*

### **1. Introduction**

Sand is ubiquitous. Sand, crushed rocks, gravel and pebbles are referred to as aggregates which are important construction materials.<sup>2</sup> Apart from concrete in the construction industry, sand is used in land reclamation, as asphalt in infrastructure construction, water filtration, glass production, hydraulic fracking, building materials, the manufacture of electronic equipment amongst other uses. Sand is not homogenous and is characterized according to its size, density and composition. The best sand for construction is found on river beds and river banks. Ranking a close second is sand from coastal and marine areas although due to its saline nature it requires to be washed before utilization. The final source of sand is terrestrial from pits and quarries, but surprisingly desert sand which is plentiful is not good for construction as it is too smooth to be a good adherent.<sup>3</sup>

---

<sup>1</sup> *Ph.D candidate (UoN), LL.M (Dundee), CPS (K), LL.B (UoN), Advocate, Certified Mediator and Energy Law Consultant practising at Njoroge & Katisya Advocates.*

<sup>2</sup> Sand for purposes of this article refers to aggregates. It does not include mineral sands which may have rutile, ilmenite, zircon and other minerals.

<sup>3</sup> *Infra*, n.7, p. 29

In spite of the Covid-19 pandemic in 2020, Kenya experienced a construction boom due to housing and infrastructure development. The statistics from the cement industry, which are a strong indicator of the consumption of aggregates, showed an increase in consumption by 20% to 6.5 million tonnes<sup>4</sup>. This is driven in large part by the government's Vision 2030 third mid-term plan 2018-2022 which emphasizes the importance of the construction sector to its Big Four Agenda and in particular housing. Sand harvesting plays a critical role in the economic development of the country including creating jobs, multiplier effects to the economy and growth of government revenues. Globally it is estimated that the equivalent of 50 billion tonnes per year or 18 kg of sand per person per day<sup>5</sup> is extracted. The sand industry is experiencing growing demand. International trade in sand is a growing trend indicating its ever expanding demand globally.

In 2019, the International Resource Panel<sup>6</sup> developed the *Sand and Sustainability Report*<sup>7</sup> which highlights some key facts:

- Sand is the largest extracted and traded solid resource by volume globally.
- It is the least regulated resource in many jurisdictions.
- The extraction rate is exceeding the replenishment rate and therefore it is no longer viewed as a renewable resource.
- Sand harvesting causes major impacts to riverine, marine and terrestrial areas through biodiversity and environmental degradation, sedimentation of coral reefs, lowering the water table, pollution, drying up of tributaries, turbidity of water, erosion of river banks and shorelines leading to flooding, and diverting waterways. It also leads to injuries and death for the

---

<sup>4</sup> 'Cement Consumption rises 20%', Business Daily, 19<sup>th</sup> February, 2021

<sup>5</sup> *Infra*, n.7, p. xi

<sup>6</sup> This is a panel of scientists and experts established in 2007 to address under the auspices of United Nations Environment Programme.

<sup>7</sup> *Sand and Sustainability: Finding New Solutions for Environmental Governance of Global Sand Resources*, United Nations Environment Programme/GRID-Geneva (2019).

sand harvesters and results in negative impacts on tourism, fisheries and agriculture.

- The local and international media often refer to 'sand wars'<sup>8</sup> when reporting on the sector in order to highlight the prevalent conflicts between sand harvesters with local communities, violence and cartel (sand mafia) networks that are associated with the sand industry.
- The environmental and social impacts of sand extraction is an issue of global significance.

The Report identifies Kenya as one of the critical hotspot countries globally.<sup>9</sup> The proposition of this article is that the 'sand wars' are a manifestation of a weak governance structure for sand<sup>10</sup> in Kenya. We introduce the concept of Sustainable Development Licence to Operate, examine Kenya's governance structure and make a preliminary assessment on whether the sand sector is eligible for a Sustainable Development Licence to Operate and propose a way forward.

---

8

*'Kenya's illegal sand miners destroy farms to plunder scarce resource'*, Thomson Reuters Foundation, Shadrack Kavilu, 6 October 2016, accessed at <https://www.reuters.com/article/us-kenya-landrights-sand-mining/kenyas-illegal-sand-miners-destroy-farms-to-plunder-scarce-resource-idUSKCN126116>, on 26<sup>th</sup> April, 2021.

*'Kenya's Sand Wars. Communities are pitted against sand harvesters, powerful cartels and one another as demand for sand in Kenya grows'*, Aljazeera, Harriet Constable, 2017, accessed at <https://interactive.aljazeera.com/aje/2017/kenya-sand-wars/index.html>, on 26<sup>th</sup> April, 2021.

*'He who controls the sand: the mining 'mafias' killing each other to build cities'*, The Guardian, Vince Beiser, 28<sup>th</sup> February, 2017, accessed at <https://www.theguardian.com/cities/2017/feb/28/sand-mafias-killing-each-other-build-cities>, on 26<sup>th</sup> April, 2021.

*'Three killed after sand mine collapses in Makueni'*, The Star, Dec. 19, 2017, By Mutua Kameti, accessed at <https://www.the-star.co.ke/news/2017-12-19-three-killed-after-sand-mine-collapses-in-makueni/>, on 26<sup>th</sup> April, 2021.

<sup>9</sup> Supra n.7, p. 5

<sup>10</sup> Ibid, p. 29

## 2. Sustainable Development Licence to Operate

One of the significant events in the mining sector in 2019 was the passage of the Mineral Resource Governance UNEP Assembly Resolution<sup>11</sup>. The Resolution recognized various expert reports including the *Sand and Sustainability Report* and the *Mineral Resource Governance in the 21st Century: Gearing extractive industries towards sustainable development*<sup>12</sup>. The Resolution recognizes the importance of minerals in the fight for climate change and in achieving the Sustainable Development Goals. The Resolution by the premier United Nations environmental agency embraces the mining sector as an important partner in combating environmental challenges. It moves from the past perception of the mining sector as being the cause of the problem of environmental degradation to the sector being part of the solution. The Resolution emphasizes the concept of decoupling economic growth from resource use and environmental degradation and well-being.

The *Mineral Resource Governance in the 21st Century* establishes the concept of Sustainable Development Licence to Operate<sup>13</sup>(SDLO). The SDLO ties the mining sector to the achievement of the SDGs. It replaces the Social Licence to Operate which narrowly focused on community engagement, consultation and buy in through a non-binding private sector led process, with SDLO, under which polycentric interests, actors and networks at global, national and local level, home and host countries, private sector, local communities and artisanal miners are merged. The SDLO framework calls for the integration of all stakeholders involved in the entire global mineral supply chain to develop a holistic integrated

---

<sup>11</sup> United Nations Environment Assembly of the United Nations Environment Programme, Fourth session Nairobi, 11–15 March 2019, Resolution 4/19

<sup>12</sup> IRP (2020). *Mineral Resource Governance in the 21st Century: Gearing extractive industries towards sustainable development*. Ayuk, E. T., Pedro, A. M., Ekins, P., Gatune, J., Milligan, B., Oberle B., Christmann, P., Ali, S., Kumar, S. V, Bringezu, S., Acquatella, J., Bernaudat, L., Bodourogrou, C., Brooks, S., Buergi Bonanomi, E., Clement, J., Collins, N., Davis, K., Davy, A., Dawkins, K., Dom, A., Eslamishoar, F., Franks, D., Hamor, T., Jensen, D., Lahiri-Dutt, K., Mancini, L., Nuss, P., Petersen, I., Sanders, A. R. D. A Report by the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya

<sup>13</sup>ibid. p. 11

governance framework. It establishes a framework of joint responsibility and mutual accountability.

The SDLO is anchored on principles of coherent and standardized laws instead of opaque contracts, systems thinking approach throughout the supply chain and inclusive decision making to achieve fairer deals and equitable sharing of benefits. The pillars of the SDLO are planetary boundaries, stakeholders, resource efficiency, circular economy and life cycle analysis. The SDLO redefines the scope of sustainable development from the triple bottom line to the quadruple bottom line of economic, social, environmental; and governance and transparency goals.

The pathways to operationalize the SDLO include building on existing initiatives, organic growth with decisive action where required, a global agenda platform, collective investments and the establishment of an International Mineral Agency which will be the first international body overseeing the mining sector globally.

The SDLO concept fits into the new environmental governance (NEG) approach trend. This adopts a collective, integrated, participative, adaptive, transparent and knowledge based form of governance.<sup>14</sup> This approach does not discard prescriptive and market based incentives, but integrates them to NEG. One of the benefits of NEG is that it is based on knowledge, learning from failures and incorporating diverse views through discourse.

### **3. The Governance of Sand in Kenya**

#### **3.1. What is Sand?**

Article 260 of the Constitution defines 'natural resources' as including the physical non- human factors and components whether renewable or non-renewable, including minerals and rocks. Although sand is not expressly mentioned in the non- exhaustive list, it is by definition a natural resource. Sand is not only an economic commodity but it is also an important natural

---

<sup>14</sup> Cameron Holley, *Environmental regulation and governance, Regulatory theory: foundations and applications* / Peter Drahos (editor), ANU Press, 2017

resource. It is the base resource that supports all life. In the marine and coastal environment<sup>15</sup> for example sand supplies critical ecosystem goods and services. Sand dunes and beaches are an important habitat for marine biodiversity, sand dunes filter freshwater in coastal areas, it supports sea grasses which are important feeding grounds for marine life and provides protection against the impact of cyclones, tsunamis, waves and sea level rising. In equal measure sand plays an important role in terrestrial and riverine ecosystems.

Under the *Environmental Management and Coordination Act No. 8 of 1999*<sup>16</sup>, (EMCA) sand falls in the rubric of 'soil' which also includes rock, dust, earth and shale. The *Kwale Quarrying Act No. 11 of 2016*<sup>17</sup> uses the term 'common minerals' which are defined to include: clay, sand, rock, gravel, lime, slate, ornamental stone. The terminology of common mineral is borrowed from the repealed Mining Act of 1940. The *Machakos County Management of Quarrying Activities Act No. 4 of 2016*<sup>18</sup> defines 'quarrying materials' to mean a substance used in its natural state in civil construction or agricultural purposes and includes sand, marble, brine, dimension stone, gravel, rock, granite, aggregate, peat, murrum, surface stones, soil, clay and others. The *Makueni County Sand Conservation and Utilization Act 2015*<sup>19</sup> defines sand in terms of its properties.

There is lack of clarity on whether sand is a mineral under the *Mining Act No. 12 of 2016*. This was the subject of the case of *Bustra Saving and Credit Co-operative Society Limited & another v County Government of*

---

<sup>15</sup> Integrated Coastal Zone Management (ICZM) Policy, Republic of Kenya, Ministry of Environment, Water and Natural Resources, December 2013

<sup>16</sup> S. 2

<sup>17</sup> S. 2

<sup>18</sup> S. 2

<sup>19</sup> S.2 "Sand" means sedimentary material finer than gravel and coarser than silt with grains between 0.06mm and 2mm in diameter and includes stones, coral, earth and turf but does not include silica sand, this does not include sand that has been made through the crushing of rocks;'

*Tharaka Nithi County [2019] eKLR*<sup>20</sup>, where the Court stated that the quarry raw materials are not minerals as per the said statute. The Court based its decision on the First Schedule<sup>21</sup> of the said Act which did not include sand *per se* at the time of enactment. However the said Act<sup>22</sup> defines 'construction minerals' which includes sand and other aggregates. In Legal Notice 67 of 2017, the Cabinet Secretary in accordance with powers conferred by section 2 (2) of the said Act, to amend the First schedule<sup>23</sup>, gazetted the Declaration of Construction Minerals which includes sand, granite, gravel, sandstone, slate, gneisses, amongst other aggregates. Further Legal Notice No. 187 of 2013 imposes a 2% royalty on gross values of construction minerals. The definition of a mine<sup>24</sup> includes a quarry. The quandary on whether sand is a mineral may be attributed to society's misconceptions and disregard for sand due to its low price, abundance and widespread availability which makes it incomparable to rare or highly valued minerals.

---

<sup>20</sup> 'Quarry stones, murram, quarry chips and other quarry products are not in my view minerals governed under the Mining Act No.12 of 2016. ... It would be extrapolating the objects and purpose of the Mining Act too far in my view, if one was to conclude that quarry stones, hardcore and other quarry products like quarry chips fall within the meaning of "**minerals**" in the Mining Act 2016. It is clear that under the Mineral Act, one has to acquire prospectors license, mining, permit among other requirements under the Mining Act to prospect or mine minerals in Kenya. Those requirements do not apply to mining or production of quarry stones, murram or quarry chips. Parliament when enacting the Mining Act certainly never intended to include quarry stones, murram or quarry chips as part of "**minerals**" within the meaning of that Act and more so as can be seen in the First Schedule of the Act the same are missing in the list provided.'

<sup>21</sup> S. 2 Mining Act No. 12 of 2016 The scope of application of the Act is limited only to minerals in the First Schedule

<sup>22</sup> Ibid, S.4 'stones, gravel, sands, soils, clay, volcanic ash, volcanic cinder and any other minerals used for the construction of buildings, roads, dams, aerodromes and landscaping or similar works, and such other minerals as the Cabinet Secretary may from time to time declare to be construction minerals, by notice published in the Gazette.'

<sup>23</sup> It is arguable whether a Cabinet Secretary can amend a legislation passed by Parliament under the tenet of *delegatus non potest delegare*.

<sup>24</sup> Supra n. 21, S. 2

### 3.2. Who Owns Sand?

By virtue of Legal Notice No. 67 of 2017 and s. 6 (1) of the Mining Act, sand is vested in the government like other natural resources such as fisheries<sup>25</sup>, minerals<sup>26</sup>, geothermal resources<sup>27</sup>, renewable energy sources<sup>28</sup>, water<sup>29</sup> and public forests<sup>30</sup>. Under the Mining Act sand is vested in the government despite the ownership of the land where it is found<sup>31</sup>. This is consistent with the Constitution and particularly Article 62(3) which vests minerals in the national government.<sup>32</sup>

Despite the state ownership of sand under the Mining Act, the exploitation of sand in Kenya has adopted an open access approach. This has led to the 'tragedy of the commons' in many areas as predicted by Hardin<sup>33</sup>. The free access especially to public lands (rivers and coastal shores) creates a situation of low risk and low cost for a product that is in high demand, thereby creating a competitive race to the bottom scenario. There is no incentive for sand harvesters or dealers to manage or conserve the resource. Any conservatory measures equally suffers from the free rider<sup>34</sup> phenomenon. There is currently no way of accurately tracing the provenance of sand resources, hence creating a loophole for illegal sand mining.

---

<sup>25</sup> S. 29 Fisheries Management and Development Act No. 35 of 2016

<sup>26</sup> S. 6 Mining Act No. 12 of 2016

<sup>27</sup> S. 77 Energy Act No. 1 of 2019

<sup>28</sup> *Ibid*, s. 73

<sup>29</sup> S.5 Water Act No. 43 of 2016

<sup>30</sup> S. 31 Forests Conservation and Management Act No. 34 of 2016 (public forests are vested in the Kenya Forests Service)

<sup>31</sup> S. 6 (3) Mining Act

<sup>32</sup> S. 7 Mining Act reserves the rights of communities to take soil, clay, salt, iron and soda ash from any land from the application of the Act. Customary usage rights do not apply to areas where a mineral right has been formally granted.

<sup>33</sup> Hardin, G 1968. 'The tragedy of the commons', *Science* 162: 1243–8.  
[doi.org/10.1126/science.162.3859.1243](https://doi.org/10.1126/science.162.3859.1243) .

<sup>34</sup> Emily Tastet, *Stealing Beaches: A Law and Economics Policy Analysis of Sand Mining*, 7 *LSU J. of Energy L. & Resources* (2019), p.38 Available at: <https://digitalcommons.law.lsu.edu/jelr/vol7/iss2/11>



### 3.3. Who Regulates Sand?

The starting point is Article 69 of the Constitution which requires the state to sustainably utilize, exploit, manage and conserve the environment and natural resources and share the accruing benefits in an equitable manner. There are three main governance structures for regulating sand at the national level i.e. mining, environmental and planning laws.

#### 3.3.1.1. National Government

##### 3.3.1.2. Mining

The Mining Act establishes a licensing regime which confers mineral rights to large scale, small scale and artisanal miners. The first two have different licences for different phases of mining operations<sup>35</sup> which are issued by the Cabinet Secretary<sup>36</sup> on the advise of the Mineral Rights Board<sup>37</sup>. The licences have conditions that incorporate technical, reporting, local content, safety, environmental and other terms that must be complied with. Artisanal mining is authorized by the County Director of Mines<sup>38</sup> on the recommendation of the Artisanal Mining Committee<sup>39</sup>. The difference between artisanal and small scale miners is that the former employs rudimentary tools and techniques and is reserved for Kenyans. The Mining Policy<sup>40</sup> envisages sand quarrying as being undertaken by artisanal miners. Prior to 2016, artisanal mining was illegal. The Mining Act has established a process of organizing and licensing artisanal mining which is in the nascent stages of implementation.

##### 3.3.1.3. Environment

In the case of *Celestine John Aoko & others v Shem Owino Muga & 7 others; Amicus Curiae Kenya National Commission on Human Rights [2019] eKLR*, the Applicants claimed that sand harvesting had caused flooding in their farms, broken dykes and created pits which posed a safety risk amongst other hazards. The Court held that the National Environment

---

<sup>35</sup> reconnaissance (survey), prospecting and exploration

<sup>36</sup> S. 32

<sup>37</sup> S. 31

<sup>38</sup> S. 95

<sup>39</sup> S. 94

<sup>40</sup> Mining and Minerals Policy Sessional Paper no. 7 of 2016

Management Authority (NEMA) retains regulatory powers over sand harvesting activities through the *National Sand Harvesting Guidelines, 2007*, issued pursuant to Section 42 (4) of EMCA.

The *National Sand Harvesting Guidelines, 2007* are secondary legislation that apply to all sand harvesting activities in Kenya and is aimed at ensuring sustainable utilization of sand resources and proper management of the environment. The key provisions are:

- a) The Guidelines establish the Technical Sand Harvesting Committee (TSHC) whose main mandate is to be responsible for the proper and sustainable management of sand harvesting within the County, designate sand harvesting sites, ensure that sand dams and gabions are constructed in designated areas, designate sand transportation roads, ensure EIA/EA are undertaken, undertake dispute resolution, fix minimum sand prices, monitor restoration of sites and allocate areas to the Riparian Resource Management Association (RRMA).
- b) The Guidelines further establish a Riparian Resource Management Association (RRMA) which comprises community leaders with the mandate to require EIA before sand harvesting operations start, annual environmental audits, sustainable management, provide access to sites, collection of revenues to be employed in rehabilitation of sites and revenue sharing with the community.
- c) It<sup>41</sup> places responsibilities on sand dealers and transporters to comply with the Guidelines and the law.
- d) It identifies the social impacts of sand harvesting and bans child labour, requires fair wages, the organization of loaders for self-regulation and establishes a revenue sharing mechanism<sup>42</sup>.
- e) It requires sand harvesting to occur in designated areas only and under an environmental management plan<sup>43</sup>.

---

<sup>41</sup> Clause 10

<sup>42</sup> Clause 4

<sup>43</sup> Clause 6

- f) The said guidelines<sup>44</sup> provide for Farm, Lakeshore/Seashore and Riverbed sand harvesting as follows: it shall not exceed six (6) feet in depth, on-farm sand harvesting must be carried out at designated sites with a buffer zone of at least 50 metres from the riverbanks or dykes for, restoration will be undertaken concurrently with harvesting and under guidance from the Technical Sand Harvesting Committee, open-cast harvesting is recommended and underground tunneling must employ appropriate extraction technology to safeguard human safety.
- g) Riverbed sand harvesting is banned on riverbanks, must be carried out in designated sites, must retain adequate reserves of sand to ensure water retention and maintain a buffer zone of 100 metres from any infrastructure.
- h) The Guidelines<sup>45</sup> require any person who wishes to remove and/or transport sand to obtain a written approval from the District Environment Officer, NEMA.
- i) The Guidelines<sup>46</sup> bar harvesting or transporting sand during the night.

In the case of *John Muthui & 19 others v County Government of Kitui & 7 others [2020] eKLR*, the petitioners claimed that River Tiva in Kitui had dried up because of sand harvesting. The Court recognized that sand harvesting is necessary for economic development but upheld the principle of sustainable development and its ancillary principles of inter-generational equity, precautionary principle, sustainable, prudent, equitable and wise use. It granted conservatory orders against permitting sand harvesting as the activity constituted a threat to the Petitioner's right to a clean and healthy environment. The Court held:

*'112. Rivers all over the world are under immense pressure due to various kinds of anthropogenic activities, among them indiscriminate extraction of sand and gravel which is disastrous as the activity threatens the river ecosystem.*

---

<sup>44</sup> Clause 7 and 8

<sup>45</sup> Clause 9

<sup>46</sup> Clause 10

*'113. Sand harvesting activities affects the environment by causing land degradation, loss of agricultural lands, low availability of water and poor quality of water in the affected rivers. Bed degradation of rivers due to sand harvesting undermines bridge support, and may change the morphology of a river, which constitutes aquatic habitat. The loss of this ecosystem affects the environment in many and far reaching ways. To address the issue of sustainable harvesting of sand, NEMA has come up with sand harvesting guidelines (National Sand Harvesting Guidelines, 2007).'*

There is no doubt that sand as a natural resource is subject to the environmental governance structure. NEMA has the legal responsibility<sup>47</sup> to take an inventory and valuation of natural resources and examine the impact of land use patterns. By virtue of the powers<sup>48</sup> to protect rivers, lakeshores, seashores and wetlands the Cabinet Secretary for the Environment may enact regulations, orders and guidelines in respect of these areas<sup>49</sup>. Further artisanal quarrying and mining of sand are categorized as medium and high risk projects respectively, which require a full EIA study and process to be undertaken.

---

<sup>47</sup> S. 9 EMCA (b) take stock of the natural resources in Kenya and their utilisation and conservation; (bb) audit and determine the net worth or value of the natural resources in Kenya and their utilization and conservation; (c) make recommendations to the relevant authorities with respect to land use planning; (d) examine land use patterns to determine their impact on the quality and quantity of natural resources;

<sup>48</sup> S. 42 EMCA

<sup>49</sup> The Integrated National Land Use Guidelines, 2011 prepared by NEMA places on the District Environment Committee the power to control all activities in wetlands (e.g. regulating brick making, sand and clay harvesting) requiring that the users form voluntary societies and where necessary be licensed in accordance with the EMCA (Wetland Regulations) of 2009.<sup>49</sup> The Guidelines propose several interventions with regard to protection of the coastal zone including<sup>49</sup>:

- a) *'Regulate and gazette as conservation areas sand dunes known to be water catchment areas and prohibit any form of development and mining of sand;*
- b) *'Protect near shore coral reef from damaging activities such as soil erosion, non-point source pollution, dredging and alterations to near shore water circulation.'*

The Water Act has extensive provisions on conservation and management of water on watercourses, basin areas, water catchment areas, sea water and ground water. The Water Act<sup>50</sup> makes it an offence to pollute or divert or interfere with water from a water course or water resource. Although most sand mining in Kenya occurs in or next to rivers and seasonal streams and especially in arid and semi-arid areas, the institutions established under the Water Act play a limited role at regulating sand mining despite the clear threat to water resources. The *Wildlife Conservation and Management Act No. 47 of 2013*<sup>51</sup> permits quarrying in national parks, nature reserves, wildlife conservancies and sanctuaries provided that the approval of the Kenya Wildlife Service is obtained and the activities comply with EMCA and are not undertaken in protected or critical habitats or impact catchment areas, endangered or threatened species.

In addition there is a plethora of multilateral environmental agreements that Kenya has ratified at the global and regional levels. For example, the *Convention on Biological Diversity* has established SEA and EIA guidelines for marine areas which are oriented towards biodiversity and guide marine dredging activities<sup>52</sup>.

#### 3.3.1.4. Planning Laws

Other than environmental laws, planning laws also govern sand extraction. Planning laws are the main regulatory instrument for the management of aggregates sourced from land in the UK. The *Physical and Land Use Planning Act No. 13 of 2019* places environmental concerns and sustainable use of natural resources as necessary considerations in spatial planning, development control and permission, zoning and land use planning at the national, county and sub-county levels. The Act provides several policy instruments to guide the regulation of the sector as an important land use.

---

<sup>50</sup> S. 143

<sup>51</sup> S. 45

<sup>52</sup> CBD Voluntary Guidelines for the consideration of Biodiversity in Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs) in Marine Areas, UNEP/CBD/COP/Decision VIII/28, 15 June 2006, accessed at <https://www.cbd.int/decision/cop/?id=11042> on 29<sup>th</sup> April, 2021.

### 3.3.1.5. County Government

The Constitution<sup>53</sup> has conferred the function of implementing national government policies on environmental conservation and natural resources including soil and water conservation on the County Governments. This has been interpreted in various ways by the County Governments. The first approach is the direct regulation of sand mining. For example the *Kwale Quarrying Act No. 11 of 2016* regulates all activities around quarrying for common minerals. The County Act includes some of the input control measures set out in the *National Sand Harvesting Guidelines 2007*. It establishes a permitting and licensing regime for all quarrying and transportation of all common minerals and cess payment for transportation of common minerals from or to other counties. Fees and charges shall be imposed on quarrying and dealing in common minerals.

Similarly, the *Machakos County Management of Quarrying Activities Act No. 4 of 2016* establishes a permitting system based upon public participation and which expires at the end of the calendar year. The application for a permit requires a site plan, restoration plan, EIA, NEMA clearance, insurance and the prescribed fees. The *Makueni County Sand Conservation and Utilization Act, 2015* establishes a comprehensive regulatory framework comprising of institutional mandate placed on the Sand Conservation and Utilization Authority which supervises the sector, licences sand operations, handles grievances and promotes sustainable use of sand; the Act also establishes Sub- County Sand Management Committees and at the community level Sand Resource Users Association, it identifies the main actors as sand dealers (transporters and traders) who must be licensed to operate and sand loaders (harvesters) who must be registered and licensed to operate, it also licences sand vehicles, it designates extraction sites, roads and conservation sites which are no take zones, it establishes a County Sand Conservation Fund for mitigation of environmental degradation, it includes input control measures set out in the *Sand Harvesting Guidelines 2007*, it bans extraction on riverbanks. The Authority has powers to set pricing guidelines and receive revenues (25%) which shall be shared with the County Government (20%),

---

<sup>53</sup> Fourth Schedule, Part 2 No. 10

Conservation Fund (50%) and local community (5%). Most counties do not have any legislation on quarrying.

The second approach widely adopted by counties is to impose a cess on the transportation of sand from the County through the annual Finance Act based on powers conferred by Article 209 (3) of the Constitution. This approach is based on the size of the vehicle and tonnage and enables the county government to address the major damage to road infrastructure caused by sand trucks. In the case of *Bustra Saving and Credit Co-operative Society Limited & another v County Government of Tharaka Nithi County [2019] eKLR*<sup>54</sup> the Court confirmed the jurisdiction of the county government with respect to its taxation powers over transportation on county roads. The third approach is cess on the product for each stone or tonne of sand<sup>55</sup>.

#### 4. Way Forward

The Sand and Sustainability Report<sup>56</sup> identifies gaps in the governance of sand globally which are caused by complex and opaque value chains, informality, lack of data, poor monitoring and enforcement where regulations exist due to capacity constraints and corruption. A brief outline of the governance structure for sand in Kenya above indicates similar gaps in terms of a multiplicity of regulators at both national and county levels of government, weak property regime, uncertainty regarding the application of the Mining Act, multifarious prescriptive laws, low participation of the private sector and 'third parties', inadequate data on the sector, weak conflict resolution mechanisms, low compliance, amorphous appeal system, and minimal and haphazard enforcement.

---

<sup>54</sup> '30. There is however no dispute that the Respondent is levying cess/fees on transportation of any product and not on the product itself. Therefore it matters not whether the transporter is ferrying "minerals" within the meaning of Mining Act, sand or even cabbages to various markets within or outside the County. The cess/fees imposed by County Government on transportation of goods within the areas of their jurisdiction in contemplated under Article 209 (4) of the Constitution and is legitimate so long as it is a service charge backed by the necessary County legislation. This issue has been subject of a number of decisions in this County.'

<sup>55</sup> The Mombasa County Finance Act

<sup>56</sup> Supra n.7, P. 6

The numerous sites of unsightly open cast quarries found across the country are clear evidence of environmental degradation caused by sand harvesting. The increasing number of cases referred to litigation in the High Court indicates some weakness in the governance structure. The murders, burning of sand trucks, threats of violence by cartels and similar incidents reported by local and international media as 'sand wars'. The rising cases of 'sand wars' bear some resemblance to the phenomenon referred to as 'conflict minerals' in artisanal mining that became of such significance that the US Congress passed the Dodd Frank Act<sup>57</sup> and the Kimberly Process was created to bring the situation under some control. This indicates that the country is already in quicksand and does not yet qualify for a Sustainable Development Licence to Operate<sup>58</sup>. They say that when you are in quicksand, the first step is to stop moving. We need to reexamine our governance structure for sand. Some areas to be prioritized may include:

*Harmonization:* The governance structure is fragmented and convoluted. The harmonization and standardization of the legal governance structure is vital to lay the right foundation for other interventions.

*Build knowledge:* To build up knowledge of the sector we need to take an inventory of our resources, production rates and demand for sand, number employed in the sector and harvesting sites as no formal statistics exist. The employment of technological approaches will achieve a level of accuracy and verifiability required.

*Stakeholder Dialogue:* An urgent national discourse bringing together views from regulators, county governments, private sector, civil society, local communities, sand harvesters/loaders, traders, transport owners, manufacturers, realtors, professionals in the construction industry is required so as to define a roadmap that takes into account the country's developmental needs.

---

<sup>57</sup> S. 1502 Dodd Frank Wall Street Reform and Consumer Protection Act, accessed at <https://www.investopedia.com/terms/d/dodd-frank-financial-regulatory-reform-bill.asp> on 3rd March, 2021

<sup>58</sup> Ibid n. 35, p. 529, In India the sand mafia has compromised the regulatory system through corruption and violence in order to supply the black market for sand which is sustained by the insatiable demand for the resource.



*Circular Economy:* The encouragement of recycling, reuse and reduce is possible in the construction industry. Locally available best practices for rehabilitation of quarries such as Haller Park are globally acclaimed. Professional bodies, cement companies, realtors and other stakeholders in the construction industry have a role to play in promoting new building technologies including recycling construction materials. The proposed *Sustainable Waste Management Bill* will provide the necessary support for the production and use of recycled and secondary aggregates.

*Financial aspects:* The governance structure must identify the appropriate incentives and financing models to encourage and support alternatives, innovation and indigenous solutions. Green procurement practices are essential since government is the largest procuring entity in the country.

*Regulatory approaches:* The adoption of the integrated and community based governance approaches<sup>59</sup> already in existence in one form or another in other Natural Resource governance structures in the country<sup>60</sup> can be retooled to avoid the calamitous quicksand scenario the sand sector is rapidly falling into. An important focus must include grievance handling, monitoring and responsive enforcement<sup>61</sup> mechanisms.

*Capacity building:* At community level this requires undoing existing societal perceptions that sand is abundant and available. It requires to demonstrate the existing threats of exploitation and what the short term impacts of reduction or exhaustion of sand will entail both economically

---

<sup>59</sup> Ibid n.35, p. 539 'The community-based governance system shifts most of the control of the natural resource to community control rather than political control. The community has a personal interest in mining the sand sustainably so it is not depleted. Sand mining provides jobs to community members, which benefits the community as a whole. This provides the community the opportunity to build better infrastructure around the community with the sand. The effects of unsustainable sand mining on the community's water and food supply, as well as the heightened threat of flooding, also provide the community with an incentive to protect their environment by protecting their resources.'

<sup>60</sup> Dr. Kariuki Muigua, 'Integrated Natural Resources and Environmental Management for Sustainable Development in Kenya' accessed at <https://kmco.co.ke/on> 29<sup>th</sup> April, 2021

<sup>61</sup> Regulatory theory: foundations and applications, Peter Drahoš (editor), ANU Press, 2017, p. 5

and environmentally. Capacity building programs<sup>62</sup> should be broad based and continuous in view of the dynamic nature of the sector.

The SDLO framework is relatively new<sup>63</sup>. However it is apparent that in the sand sector there are gaps that require to be systematically identified and contextualized benchmarks developed. The SDLO provides a 'North Star' to guide efforts to achieve the sustainable development of the sand sector.

---

<sup>62</sup> The ACP-EU Development Minerals Programme offers training on development minerals available at <http://developmentminerals.org/index.php/en/>

<sup>63</sup> *Supra* n.12, P. 75 It is contended that development minerals may require a distinct governance framework from other minerals and metals.

## References

Cameron Holley, *Environmental regulation and governance, Regulatory theory: foundations and applications*, Peter Drahos (editor), ANU Press, 2017

Dr. Kariuki Muigua, 'Integrated Natural Resources and Environmental Management for Sustainable Development in Kenya' accessed at <https://kmco.co.ke/> on 29<sup>th</sup> April, 2021;

Emily Tastet, *Stealing Beaches: A Law and Economics Policy Analysis of Sand Mining*, 7 *LSU J. of Energy L. & Resources* (2019) Available at: <https://digitalcommons.law.lsu.edu/jelr/vol7/iss2/11>

IRP (2020). *Mineral Resource Governance in the 21st Century: Gearing extractive industries towards sustainable development*. Ayuk, E. T., Pedro, A. M., Ekins, P., Gatune, J., Milligan, B., Oberle B., Christmann, P., Ali, S., Kumar, S. V., Bringezu, S., Acquatella, J., Bernaudat, L., Bodouroglou, C., Brooks, S., Buergi Bonanomi, E., Clement, J., Collins, N., Davis, K., Davy, A., Dawkins, K., Dom, A., Eslamishoar, F., Franks, D., Hamor, T., Jensen, D., Lahiri-Dutt, K., Mancini, L., Nuss, P., Petersen, I., Sanders, A. R. D. A Report by the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya. p. 11

*Sand and Sustainability: Finding New Solutions for Environmental Governance of Global Sand Resources*, United Nations Environment Programme/GRID-Geneva (2019).

## Statutes

Energy Act No. 1 of 2019 Fisheries Management and Development Act No. 35 of 2016

Environmental Management and Coordination Act No. 8 of 1999

Forests Conservation and Management Act No. 34 of 2016 (public forests are vested in the Kenya Forests Service)

Kwale Quarrying Act No. 11 of 2016

Machakos County Management of Quarrying Activities Act No. 4 of 2016

Makueni County Sand Conservation and Utilization Act, 2015

Mining Act No. 12 of 2016

Physical and Land Use Planning Act No. 13 of 2019

Water Act No. 43 of 2016

Wildlife Conservation and Management Act No. 47 of 2013

### **Case Law**

Bustra Saving and Credit Co-operative Society Limited & another v County Government of Tharaka Nithi County [2019] eKLR

Celestine John Aoko & others v Shem Owino Muga & 7 others; Amicus Curiae Kenya National Commission on Human Rights [2019] eKLR

John Muthui & 19 others v County Government of Kitui & 7 others [2020] eKLR

### **Policies**

Integrated Coastal Zone Management (ICZM) Policy, Republic of Kenya, Ministry of Environment, Water and Natural Resources, December 2013

Integrated National Land Use Guidelines, National Environment Management Authority, 2007

Mining and Minerals Policy Sessional Paper no. 7 of 2016, Republic of Kenya, Ministry of Mining, 2016

National Sand Harvesting Guidelines, National Environment Management Authority, 2007