REPUBLIC OF KENYA

COUNTY GOVERNMENT OF KITUI

THE COUNTY ASSEMBLY

FIRST ASSEMBLY – (THIRD SESSION)

COMMITTEE ON ENVIRONMENT, ENERGY, MINING AND NATURAL RESOURCES

REPORT ON

STUDY VISIT TO MATHIMA LIMESTONE MINING AREA, TSAVO NATIONAL PARK, GEDI RUINS NATIONAL MONUMENT, BOMBOLULU WORKSHOPS AND CULTURAL CENTRE AND HALLER PARK LAFARGICAL SYSTEMS

JUNE 2015
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1. PREFACE

Mr. Speaker, most countries have recognized the potential of the mineral sector as a key driver of economic and social development and has taken appropriate action to tap this potential. Kenya vision 2030 has set out long term economic development goals for the country. In line with this, the minerals and mining sector is recognized as one of the drivers of economic development.

Mr. Speaker, according to the devolved system of governance Article 185(4)(a) of the Constitution further elaborates that a County Assembly may receive and approve plans and policies for the management and exploitation of County Resources.

Mr. Speaker, aware that there are pertinent issues surrounding the mining of natural resources in our County, the Committee on Environment, Energy, Mining, Tourism and Natural Resources constituted by this Honorable House was concerned with the nature of these issues.

Mr. Speaker, further concerned, this committee saw purpose to visit several places including mining areas and cultural places to learn and develop some general awareness on Mining of Natural Resources, land reclamation and rehabilitation, preservation of culture and tourism attraction.

i) Committee Membership

Mr. Speaker, the committee on Environment, Energy, Mining, Natural Resources and Tourism is comprised of the following members;

1. Hon. Stanislous Mulongo Chairperson
2. Hon. Ruth Kinyumu Vice Chairperson
3. Hon. Mwendwa Munyoki  Member
4. Hon. Antony Muthui  Member
5. Hon. Felix Kauvi  Member
6. Hon. Titus Kasinga  Member
7. Hon. Titus Mbiti  Member
8. Hon. Allan Kavindi  Member
9. Hon. Johnray Ngava  Member
10. Hon. Kalovo Musau  Member
11. Hon. James Munuve  Member
12. Hon. Boniface Katumbi  Member

ii)  **Committee’s Mandate**

Mr. Speaker, Standing Order 191(1) establishes for every County Assembly, Sectoral Committees with specific mandates. Under Standing Order 191 (5), the Sectoral Committees are charged with the distinct responsibilities which include;

To;

i) investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned departments;

ii) study the program and policy objectives of departments and the effectiveness of the implementation;

iii) study and review all county legislations referred to it;

iv) study, assess and analyze the relative success of the departments as measured by the results obtained as compared with their stated objectives;

v) investigate and inquire into all matters relating to the assigned departments as they may deem necessary, and as may be referred to them by the County Assembly;
vi) to vet and report on all appointments where the Constitution or any law requires the County Assembly to approve, except those under Standing Order 185 (Committee on Appointments); and

vii) Make reports and recommendations to the County Assembly as often as possible, including recommendation of proposed legislation.

**Mr. Speaker,**

The committee visited five areas to realize this exercise:

- Mathima Limestone mining area
- Tsavo East National Park
- Gedi ruins National Monument
- Bombolulu Workshops and Cultural Centre
- Haller Park Lafargical Systems

**Mr. Speaker,**

This is a report of the committee’s deliberations and findings on the same.

**2. ACKNOWLEDGEMENT**

**Mr. Speaker,** the Committee extends its appreciation to the Offices of the Speaker and the Clerk of the County Assembly for the support accorded to it in the execution of its mandate and the opportunity accorded to its Members to undertake the tour.

**Mr. Speaker,** the Committee also wishes to extend its gratitude to, Mr. Josphat Mwanga and Mathima Limestone mining area, Mr. Dominic Wambua and Tsavo East National Park, Ms. Florence, Mr. Joseph Mwaringa, Mr. Shadrack Kombe and the Gedi Ruins National Monument, Ms. Esther Wanyama and Bombolulu
cultural centre, Mr. Albert Musalo and the Haller Park lafargical Systems in the organization of visits and in ensuring that the objectives of the visit were met.

3. AUTHENTIFICATION

Mr. Speaker, on behalf of members of the Environment, Energy, Mining, Natural Resources and Tourism Committee, I wish to present to the House the report on the Educational Tour to the Tsavo, North and South Coast regions, for further consideration and subsequent adoption by the house.

Signed_____________________________________

Hon. Stansilous Mulongo, Chairperson
Environment, Energy, Mining and Natural Resources Committee

Date..............................................

4. EXECUTIVE SUMMARY
This report documents activities relating to Educational exercise by the Committee On Environment, Energy, Tourism and Natural Resources at the Coastal region from 8\textsuperscript{th} - 11\textsuperscript{th} June 2015.

The introduction of this report gives a legal background and the objectives that steered the committee during a sitting held on 4\textsuperscript{th} June, 2015 to undertake these activities. The acknowledgement thanks the county assembly of kitui for their support and extends gratitude to respondents at the ground.

The first part of the report documents activities undertaken by the committee after visiting several places including mining areas and cultural places to learn and develop some general awareness on mining of natural resources, land reclamation and rehabilitation, preservation of culture and tourism attraction. The committee being led by the able chairperson Hon. Stanislous Mulongo (Member for Mui ward) held a series of meetings with several respondents at the ground.

The second part of this report contains Committee observations and recommendations on matters concerning Mining and Environment, Tourism and Natural resources.

\textbf{5. COMMITTEE FINDINGS}
Mr. Speaker, Standing Order (190) (5) (g) provides for the laying on the Table of the County Assembly by the Chairperson of the sectoral committee its report. The following are the findings of the Committee;

A) REPORT ON THE STUDY VISIT TO KITUI-MATHIMA MINING AREA

The committee visited Mathima mining area on Monday, 8th June 2015 and encountered on the ground Mr. Joseph Kyundu, a representative of Mathima Natural Resources Cooperative society, (MNRCS).

According to Mr. Kyundu, there are five cement companies along the limestone belt which were Athi River Mining, Devki Cement, and East African Portland, Criss cross and Bamburi.

Mr. Kyundu added that, six primary schools and eight churches in the two limestone rich locations i.e. Mathima and Kanziku Locations are going to be affected when the actual excavation starts. The EAPCC had already identified 300 acres in Mutomo, which has ‘huge’ limestone deposits which will be mined for use in its Athi River plant to ensure uninterrupted supply of the raw material. Gypsum and limestone are the two minerals the companies are targeting in Mutomo District.

Sources privy to this, have argued that, the deposits the firms have discovered are sufficient to sustain mining for more than 200 years. The two minerals are also key inputs in the manufacture of cement, which constitutes up to 90 per cent of the volume of the finished product.

Initial reports indicates that the Kitui County Council had been directed to contract two cement manufacturers to mine limestone in the Districts.

Reports have it that, a Government permanent secretary had directed the clerk of the council to uphold the principal of competition when leasing out the two
blocks in Mutha division. The initial plan was for the council to lease the land to the cement firms with the issue of compensation to the landowners in Mathima and Kanziku locations being addressed adequately by the then Mutomo district commissioner Alfred Mwandale. It was cited that the council is empowered under the Trust Land Act to license mining within its jurisdiction since limestone is classified as a common mineral under the same Act.

He said that the decision to allow lease of each block to one company was reached after a meeting chaired by the then Local Government minister Musikari Kombo at that time. The meeting observed that the rights and interests of the community must be protected by the investors, the civic body and the Government.

The letter that was copied to commissioner of mines and geology and the Mutomo District Commissioner directed that the Local Government Act, Trust Land Act and other relevant statutes relating to land matters be observed during the transaction.

However, a court battle pitting Athi River Mining and Bamburi Cement companies over limestone has derailed the mining process from taking off. Both want exclusive right to the land.

Bamburi claim that they have an Exclusive Prospecting License (EPL) obtained from the commissioner of mines and geology while ARM point out that a full council meeting by Kitui County Council sanctioned operations in Mathima location. ARM ventured into Mathima in July 2011 and went ahead to pay Shs 60,000 per acre to the landowners in the area beginning with a deposit of Shs 25,000.

Locals have been following developments on exploitation of limestone deposits in the area keenly with the hope that they could reap great benefits. The matter has also been popular with local politicians who are promising to push for hefty
compensation. When ARM is reported to have paid the land owners Sh60,000 per acre, the owners started to demand an increase following a better offer given by the rivals of the company. This offered the stage for a protracted court battle between the two giant companies.

Therefore, according to Mr. Kyundu in May 2015 a court order to stop the activities taking place at Mathima was issued and then the process has stalled since then.

**The committee had the following concerns:**

i) Did the National Environmental Management Authority (NEMA) do an Environmental Impact Assessment on the proposed mining area?
ii) Was there a Mining Liaison Committee in Mathima?
iii) How was the surveying done by both the Private and the Government surveyors?

- Mr. Kyundu responded that NEMA did an Environmental Impact Assessment on the Limestone Prospecting area and gave a report over the issue stating that the ecosystem surrounding the area was save.
- Further, he added that there wasn’t a Mining Liaison Committee in Mathima but a committee formed by members of the Mathima Natural Resources Cooperative society was used as a Link by ARM to tackle issues of compensation.
- He concluded by stating that, a private surveyor was contracted by ARM and latter a Government surveyor came and therefore ARM was issued with a prospecting permit by the Department of Mines and Geology.
Committee members at the site where machines were left after the prospecting activities stalled in May, 2015

The Limestone Raw material
B) REPORT ON THE STUDY VISIT TO THE TSAVO EAST NATIONAL PARK

The Committee visited the Tsavo East National Park on the evening of Monday 8th June 2015. According to Mr. Dominic Wambua the Senior Warden, Tsavo East National Park is one of the oldest and largest parks in Kenya at 13,747 square kilometers. Situated in a semi-arid area previously known as the Taru Desert, it opened in April 1948, it is located near Voi town in the Taita-Taveta County of the former Coast Province. The park is divided into east and west sections by the A109 road and a railway. Named after the Tsavo River, which flows west to east through the national park, it borders the Chyulu Hills National Park, and the Mkomazi Game Reserve in Tanzania.

The park can be accessed by three main gates, from Voi through the Manyani gate, from Mombasa through the Bachuma gate or from Malindi through the Sala gate. There are also several airstrips in the park that allow chartered light planes. Inside the park, the Athi and Tsavo rivers converge to form the Galana River. Most of the park consists of semi-arid grasslands and savanna. It is considered one of the world's biodiversity strongholds, and its popularity is mostly due to the vast amounts of diverse wildlife that can be seen, including the famous 'big five' consisting of masai lion, black rhino, cape buffalo, elephant and leopard. The park is also home to a great variety of bird life such as the black kite, crowned crane, lovebird and the sacred ibis.

The slightly larger Tsavo East is generally flat, with dry plains across which the Galana River flows. Other features include the Yatta Plateau and Lugard Falls.

Mr. Wambua added that Tsavo West National Park is more mountainous and wetter than its counterpart, with swamps, Lake Jipe and the Mzima Springs. It is known for birdlife and for its large mammals. It is also home to a black rhino sanctuary.

Major attractions
i) **Mudanda Rock**

The Mudanda Rock is a 1.6 km inselberg of stratified rock that acts as a water catchment that supplies a natural dam below. It offers an excellent vantage point for the hundreds of elephants and other wildlife that come to drink during the dry season.

ii) **Yatta Plateau**

The Yatta Plateau, the world’s longest lava flow, runs along the western boundary of the park above the Athi River. Its 290 km length was formed by lava from Ol Doinyo Sabuk Mountain.

iii) **Lugard Falls**

Lugard Falls, named after Frederick Lugard, is actually a series of white water rapids on the Galana River.

iv) **Aruba Dam**

Aruba Dam was built in 1952 across the Voi River. The reservoir created by the dam attracts many animals and water birds.

v) **Birds**

According to Mr. Wambua, Over 500 bird species have been recorded in the area, including ostriches, kestrels, buzzards, starlings, weaver birds, kingfishers, hornbills, secretary birds and herons.

The committee had the following concerns:

i) The challenges faced by the Tsavo East National Park
ii) Steps to rehabilitate South Kitui Game Reserve
iii) The role of the Kenya Wildlife Service in developing the parks and Reserves.
- Mr. Wambua responded by saying that Tsavo East National Park is faced with Various Challenges such as; Water shortage, Poaching, Insecurity, Deforestation and Human Settlement among others.
- Further he added that, Kitui South Game Reserve is a resource that the County Government of Kitui needs to look at with a lot of seriousness in order to attract Tourists and curb insecurity. In his remarks, he pointed out that to rehabilitate the Park; the first thing was to identify the boundaries, followed by demarcating with Beacons and the resettling people inhabiting the Park.
- Mr. Wambua concluded by saying that the Kenya Wildlife Stakeholders met at Mutomo in May, 2015 and came up with Management Plan over the Kitui South Game Reserve and therefore the committee on Tourism and Natural Resources need to come up with a policy to protect and manage Natural Resources of the County.

Photo Gallery:

Committee members at Tsavo East National Reserve, Ithumba Gate,
Tamed elephants at the Tsavo East National Park, Voi Gate

Hon. Ngava on a tamed Elephants Park at Tsavo east National Park, Voi.
C) REPORT ON THE STUDY VISIT TO GEDI NATIONAL MONUMENT

The Committee visited Gedi National Monument, the Kipepeo Butterfly Farm and the Gedi Reptile Rescue (the snake park) on afternoon of Tuesday 9th June 2015. According to Ms. Florence, the tour guide, Gedi ruins are the remains of a Swahili town, typical of most towns along the East African Coast. It traces its origin in the twelfth century but was rebuilt with new town walls in the fifteenth and sixteenth centuries. This rebuilding is connected with the emigration of many citizens of Kilwa to Mombasa, Malindi and other places along the coast.

From the 13th or 14th to 17th centuries, Gedi was a thriving community along the jungle coast of East Africa. Although no written record exists of this town, excavations between 1948 and 1958 revealed that the Muslim inhabitants traded with people from all over the world. Some of the findings included beads from Venice, coins and a Ming vase from China, an iron lamp from India, and scissors from Spain. The population was estimated to exceed at least 2500 people. These items can be found in the museum in the complex which was opened in 2000.

Gedi had a mosque, a palace, and large stone houses. These houses were complex for their time, with bathrooms with drains and overhead basins to flush toilets. The city's streets were laid out at right angles and had drainage gutters. There are also wells which supplied water to the community. The material used to construct the buildings was made from coral reef from the nearby ocean.

Gedi's eventual abandonment to nature is believed to be as a result of a number of factors. Namely, the Wazimba raid along the East African coast in 1589. The removal of the Sheikh of Malindi and the Portuguese to Mombasa in 1593. The falling water table as shown by the deepening of the well outside the Great
Mosque and finally the overhanging menace of the Galla, a hostile nomadic ethnic group from Somalia. Gede remains the first intensively studied site on the coast. It was first visited by Sir John Kirk, a British resident of Zanzibar in 1884. Over forty years later in 1927, it was gazetted as a Historical Monument. Two years later in 1929, it was declared a "protected monument" and in the late thirties, the Public Works Department carried out work on preservation of its crumbling walls. Gede was soon after the repairs in 1948 declared a National park and an Archaeologist appointed as warden. Thus, the first archaeological work at Gede began under the direction of James Kirkman followed by the first publication of the site. In 1969, Gede's administration was taken over by the Museum Trustees. It is unclear whether the actual name of the town was Gedi, Gede, or Kilimani. The Oromo word "Gede" means "precious", but the town might have been named after the last Oromo leader to camp on the site.

The site is inhabited by guenon monkeys, which frequently interact with visitors. Gede indigenous forest is a sacred site for traditional rituals and sacrifices for the surrounding community.

**Photo Gallery**

![The Inner Wall of Gedi Ruins](image_url)
Members at the Pillar Tomb of the Inner Wall of Gedi Ruins

Within the Gedi Ruins National Monument there are other Departments; the Snake Park and the Butterfly (Kipepeo) Centre.
i) The Kipepeo Butterfly Farm

According to Joseph Mwaringa Saha, the Kipepeo Farm Manager, The Kipepeo Project is a community-based butterfly farming project on the margins of Arabuko-Sokoke Forest on the north coast of Kenya. This forest is a globally important forest for biodiversity conservation. In the early 1990s, 54% to 59% of the local community wanted the entire forest cleared for settlement and the forest was invaded by farmers on several occasions. The Kipepeo Project was set up to change community attitudes to the forest by giving them a stake in its conservation. Kipepeo trained farmers living next to the forest rear forest butterflies. Butterfly pupae were purchased from the farmers for export to the live butterfly exhibit industry in Europe and the U.S. cumulative community earnings from 1994 to 2001 exceeded $130,000 with significant positive effects on both livelihoods and attitudes. The project has been financially self-sustaining since 1999. Butterfly monitoring indicates that there have been no adverse effects on wild butterfly populations.

The Kipepeo Market Place is located at the Gede Ruins National Monument 20, kilometres south of the resort town of Malindi and near the world famous Watamu beach.

Photo Gallery
The Kipepeo Butterfly House, Gedi Ruins

Preservation of Pupae

ii) The Snake Park

According to Mr. Shadrack Kombe Kondo, the snake handler Gedi Reptile Rescue and Awareness snake Park is an integrated entity of the National Museums of Kenya targeting at providing awareness and education to the public and in particular the young generation with a phobia of snakes and amphibians. The snake park started as a reptile rescue centre in handling cases of reptiles that were on the verge of being killed, burnt or being trafficked to other countries. The snake park has been instrumental to the community particularly the neighboring schools whose students had previously been affected by the snake phobia. However with the collaboration of the Museums and the schools administration, students are given free lectures and visits to the snake park. This has really changed the once prone hysteria experienced in the area. The snake Park has maintained its objective of rescue and conservation of reptiles.
with a record of receiving new rescue cases of tortoise at least every two months with a recent being hitched-back tortoise species.

**The committee had the following concerns:**

i) How many registered farmer groups are there in the Kipepeo Farm?

ii) What is the importance of the co-operatives to farmers?

iii) Who are the stakeholders working in collaboration with the Kipepeo Butterfly Farm?

- Mr. Joseph Mwaringa Saha, the Kipepeo Farm Manager told the committee that there are 26 registered farmer groups who supply pupae to the farm. Each group sends a representative every Friday to bring the pupae.

- Mr. Joseph further explained that the Farmer Cooperatives have great importance both to the farmers, the farm and the government at large; for creating employment opportunities to farmers, the farm generates some income and the government earns some revenue.

- Finally, Mr. Saha concluded by saying that the Kipepeo Butterfly Farm works in collaboration with Nature Kenya, Kenya Wildlife Service and Kenya Forest Service

**Photo Gallery:**
The Black Mamba

The Green Mamba
D) REPORT ON THE STUDY VISIT TO BOMBOLULU WORKSHOPS AND CULTURAL CENTRE

The Committee visited The Bombolulu Workshops and Cultural Centre on the Morning of Wednesday 10th June 2015. According to Esther Wanyama the Programme Manager, Bombolulu Workshops and Cultural Centre is a programme of The Association for the Physically Disabled of Kenya (APDK), Coast Branch that operates several workshops and a cultural center through which it offers social and economic rehabilitation and empowerment of people with disabilities.

It is a self-sustaining, non-profit and Fair-Trade organization and also an APDK Programme, that seeks to forge strategic alliances and partnerships with others in order to advance its cause. Bombolulu Workshops and Cultural Centre is governed by a Management Committee nominated from the APDK, Coast Branch membership. The day-to-day running of the workshops and cultural Centre is done by the Programme Manager and the management staff. The Programme Manager reports directly to the APDK Coast Branch Executive Officer.

Bombolulu Workshops and Cultural Centre was established to empower people living with disability, socially and economically, and to enable them realize their full potential in their lives.

PRODUCTS

Bombolulu works with different materials and techniques. Their artisans work together in either the five workshops creating high quality handcrafts for national and international market.

i) Jewellery

Necklaces, bangles, earrings, finger rings, pendants and much more are handmade out of copper, brass, glass beads, coconut shells, semi-precious stones, bones; silver and gold plated, batiked soapstone and brass cast jewellery.
ii) **Leather**
Canvas and leather bags, belts, sisal bags, coasters, key rings, sandals.

iii) **Textile**
Table cloths, aprons, pot holders, kitchen gloves, sarongs, t-shirts, bags, stuffed dolls; men, women and children garments, kikoi wall hangings, cushion covers all made of 100% cotton.

iv) **Wood Carvings**
Decorative and functional wood items, flexible animals, nativity sets, spoons, forks and much more made from wood.

**Delivery Time**
According to Ms. Wanyama, the delivery time depends on the order volume. Due to documentation, the minimum delivery time after receipt of payment is eight weeks for orders exceeding US Dollars 5,000.00.

**Packaging**
All Jewellery and clothes are packed in polythene bags and labeled with their code numbers: Gold/silver plated Jewellery are mounted on decorative cardboard and sealed in polythene bags. Consignments are shipped in carton boxes dimensions 44x58x33cm.

**Other Services**
Bombolulu Workshops and Cultural Centre offers a series of other services:
- Venue for conferences, meetings, weddings and parties
- Lunch and dinner booking
- Buffet lunch for special events
- Day Conferencing
- Performances (African / International style)
- Fashion Shows
The committee had the following concerns:

i) What is the criteria used to select the handicapped that join the Bombolulu team?
ii) How is quality maintained in their products?
iii) Are there any retirement benefits to the workers?
iv) Does the centre work in conjunction with the Kenya National Museum?
v) Does the centre target both the Local and International Markets?
vi) What mechanisms are there in place to help handicapped escape in case of a tragedy such as fire?

- Ms. Wanyama responded by telling the Committee that the criteria number one for someone to join the Bombolulu team is **DISABILITY**. Secondly the centre looks at whether someone is trainable. She added by saying that the doors are open to anybody in Kenya. The centre uses the local administration such as Chiefs and Assistant Chiefs to help select the physically challenged. Most people in the centre come from the streets as beggars.

- To maintain quality in the end products, Ms. Wanyama said that, quality assessment is done at every production line and this involves thorough quality checks.

- Ms. Wanyama told the Committee that there are two categories of employees; employees who are in the union and these include artisans who have been trained by the centre on various grounds and employees who are in the management, and this is the Technical Personnel that has been employed by the centre such as the Manager, Accountants, Secretaries e.t.c and therefore the union and the management advocates for the employees’ rights respectively.

- Ms. Wanyama made it clear that Bombolulu Centre is a private entity. They work in conjunction with the Ministry of Culture but not the National Museum of Kenya.
- Bombolulu Centre tries much as possible to produce for the International Market since the Local Market is a bit slippery because they attach a negative notion over the centre.
- In conclusion Ms. Wanyama added that the Centre has health and safety trainings every year and identified key people who are not totally physically challenged get skills on how to help others during times of emergencies.

**Photo Gallery:**

*Members get welcomed at Bombolulu Centre by the Manager, Ms. Wanyama, traditional dancers and a tour guide.*
The Jewelry Department

Hon. Titus Kasinga and Hon. Mwendwa Munyoki in the Textile Department at Bombolulu Centre
E) REPORT ON THE STUDY VISIT TO HALLER PARK

The Committee visited Haller Park on the afternoon of Thursday 11th June 2015. According to Albert Musalo the Ecosystem and Tourism Manager, Haller Park (formerly Bamburi Nature Trail) is located south of the Bamburi cement plant along the Mombasa/Malindi highway. A product of the company's efforts, since 1971, to convert barren landscape of disused limestone quarries into vibrant and diverse ecosystem of forest, grasslands and ponds.

Haller Park holds a variety of plant and animal species which serve as a recreation hot spot to tourists and locals. Up to March, 2007 it held the famous attraction of Owen and Mzee – the friendship of a hippopotamus and a tortoise.

Currently, Haller Park plays host to a variety of wildlife including hippos, giraffes, buffalos, and antelopes as well as smaller mammals and birds.

The Park was the first recipient to be honoured with the United Nations Environmental Program **Global 500 Roll of Honour** award for the unique, ecologically sound and successful rehabilitation undertaken.

The Park consists of a **Game Sanctuary, Reptile Park, small demonstration Fish Farm area, Palm Garden, Crocodile pens and a giraffe viewing platform**, offering a variety of attractions at the various points to educate and entertain the over 160,000 visitors who visit the park every year.

The diversity of vegetation is considerable, from mangrove palms and majestic indigenous shade trees to coastal forests where several of these plants are rare and endangered; a haven for botanist. Yet each plant plays an important role in the overall harmony of the ecosystem.

The park also provides a home to various animal species from the cheeky Vervet monkeys to the graceful giraffe; Weaver birds, Kingfisher, Storks, Herons, Egrets,
Owls, Eagles, Kites, Cranes, Ibis, Sandpipers the list is endless, Haller Park is a must visit for all bird lovers.

**History of the rehabilitation project**

a. **Effect of cement production;** Albert Musalo added that in 1952, *Cementia Holding* searched for a site at the East African Coast to build a cement factory. Dr. Felix Mandl found an ideal location 12 km (7.5 mi) north of Mombasa. Over the years cement production grew to 1.2 million tons. The area soon became inhospitable arid wasteland with brackish water. The Bamburi Cement Company decided to rehabilitate the quarries which seemed to be an inconceivable task.

No plants had been able to establish themselves in the quarries. In 1959, Dr. Rene Haller was hired as manager of the garden department and given the task to beautify the area. In the 1970s Rene embarked on the reforestation project.

a. **Task;** the vital task was to find pioneer plants which could survive the limestone desert. The plants had to survive the fierce tropical sun. After planting 26 plants only 3 of them survived: The damas, coconut palm, and the casuarina.

b. **Introduction of Casuarina;** the casuarina was used initially to colonize the barren quarry floor. The casuarina is adapted to grow under severe conditions. Its branchlets look like pine needles and have a strong outer surface skin which protects the tree against loss of water. The casuarina could tolerate salty water which seemed perfect for the environment. However, due to the casuarina’s high tannin content its needles are too tough and bitter to be broken down by bacteria into humus for other plants to grow in.

c. **Introduction of the Millipedes;** According to Albert Musalo, Dr Rene Haller observed a red legged millipede (Mombasa trains) feeding on dry casuarina needles and introduced hundreds of millipedes into the quarry forest. The droppings of the millipede while feeding on the Casuarina needles made it easier for bacteria to break down resulting in a rich layer of humus allowing other plant species to grow. After 5 years the Casuarina began self-seeding.
and colonising the surrounding area. After 10 years the casuarina trees reached a height of 30 m. After 20 years some of the trees had a trunk circumference of 2.4 meters and the humus layer was 10 cm deep. Many of the trees began to collapse after 20 years. However they had accomplished their task and created a friendly environment conducive to new plants. The tree trunks were used for building timber and firewood.

d. **Effect on vegetation;** More plants distributed by wind and animal established themselves in the quarry. The next tree species were carefully selected. The quarry slowly developed into a sanctuary for endangered species of plants. Over the years, over 180 species of indigenous trees and bushes have been planted. Modes of propagation of plants however vary, all in the aim of ensuring succession. Vervet monkeys, insects and particular bird species have participated actively in succession within the ecosystem. They feed on fruits of the ficus sp. trees, whose seeds must travel through an alimentary canal to completely break dormancy. If this step does not take effect, the seeds have to be boiled to achieve the same. When the three above-mentioned animals excrete, seeds are dispersed in their feaces and those that hit fertile ground germinate after some time. This has helped achieve growth in parts of the forest that are not easily accessible by humans.

e. **Animals;** Dr. Rene Haller believed animals should play an equally important role in the forest ecosystem as plants. The introduction of the millipedes into the casuarina forest triggered a chain reaction of colonization by plants and animals. The creation of new habitats attracted a number of birds, insects and mammals. Some larger mammals were introduced while others moved in.

The mammals had a huge impact on the environment. For example, the bush pig which feed on roots, maggots, and insects helped to aerate the trees root system. The female giraffes feed on leaves and dispersed plants seeds while their feaces acted as fertilizer. The dung beetles also played an important role by helping bring the manure underground where it is broken down by micro-organisms creating further plant life.
i) **Elands:** The Elands were chosen for domestication at Haller Park because of its usefulness. The Eland produces milk which is nutritious and has antibiotic properties which allows the milk stay fresh for months. Elands are also resistant to most livestock diseases and tamed easily.

ii) **Oryx:** Rene Haller also introduced Oryx to supplement the Eland group. The Oryx adapt to cope with poor grazing. They feed on dry, nutrient poor grasses. They have a great capacity to digest fibres. During droughts and desert conditions, the Oryx can survive. They are independent of permanent water sources. The Oryx were the perfect candidates for the condition of the park.

g) **Aquaculture:** Water was an essential resource for the development of the plant life in the quarry. Water played an important role in the economic and ecological development of the project. The aquaculture system at Haller Park is a commercial viable unit. The unit consists of the fish farm, crocodile area, and the biological water treatment area (Nile cabbage ponds and rice paddy fields). The Nile cabbage is a special plant which removes excess nutrients and impurities form the water body.

i) **Fish Farm**

The fish farm is a crucial part of Haller Park. In 1971, the fish farming project started alongside the reforestation project. Rene Haller created a fish tank system. The purpose of the tank system was to give the fish a chance to swim in a constant current. A Tilapia farm was also created in 1980 because of the success of the fish tanks. It produced 30–35 tons per year.

The committee had the following concerns:

i) What protection does Bamburi Company give to the environment?

ii) What are the ideal stages of rehabilitation?

iii) Does the company use another source of energy?
• Mr. Albert Musalo responded by saying that mining leaves a trail of destruction. He added by saying that mining is an activity that can never fail to take place as long as a country wants to develop. Therefore Bamburi Company has contracted a company by the name Lafargical Systems that checks and preserves the nature; plants and animals.

• He added by saying that naturally it is believed that industries fight Nature but Bamburi Cement is a good example of a company that protects the nature. Therefore to rehabilitate the land; first ripping is done to compact soil and make it useful to support life. The second initiative is Ecological Restoration that involves planting of trees, introduction of animals and controlling of Biodiversity.

• Mr. Musalo concluded by saying that the company was on the stages of developing an environmental initiative to reduce air pollution. There was a plan for the company to use tyres for industrial purpose so as to reduce over-reliance on fossil fuels that have high carbon materials.

6. PHOTO GALLERY:
Part of the mining land at Bamburi
Committee members on the rehabilitated land

Fish farming
**Elands**

**Buffalos**

### 7. COMMITTEE RECOMMENDATIONS

#### i) Environment and Mining matters

- Civic education; the committee recommends that the County Government propels on awareness creation as far as mining activities are concerned in issues such as the rights of the public.
- Liason Committees; guided by the Guidelines passed by the Assembly there should the County Government should ensure and initiate the establishment of proper liason committees to tackle issues concerning compensation and handling other disputes that may arise over mining issues.
- Information sharing; the Committee recommends that there should be proper information sharing between the Central and the County Government especially the Ministry of Mines and Geology on decisions made over mining issue such as Acts and Regulations passed by the both stakeholders.
• The Committee recommends that the county Government to liaise with the National government and other stakeholders to seek intervention over the mining activities that have stalled such as the court cases.

• Passing and implementation of the mining and Act; the Committee recommends that the county Government of Kitui to play the major role in the issues of mining other than receiving directive from the Ministry of Mines and Geology and this can be well steered by the Assembly passing the Mining Act.

• Land compensation; the Committee recommends that inorder to solve the current land dispute between the investor and the community, it would be reasonable first for the County government to compensate the people to first secure the land before the investors who are wrangling lead our people in the wrong direction.

• Surveying; the committee recommends that the County government to first track the survey and demarcation process so as to make sure that the affected people are issued with tittle deeds.

• Land rehabilitation and compensation; the committee recommends that the County Government to come up with good structures for compensation and land rehabilitation so as to ensure that mining land does not end up as a waste land and affected are comfortably resettlement.

• Infrastructure improvement; the committee recommends that the County Government should ensure that there is good infrastructure such as roads, communication networks to facilitate mining activities.

ii) Tourism matters

• Conservation and preservation of historical sites; Kitui County is endowed with a variety of historical sites such as Mountains and hills, rivers, shrines, valleys e.t.c. therefore the Committee recommends that the County Government should come up with a plan to conserve and preserve historical sites in within the County which in the long run will create employment opportunities and raise revenue for the County Government.

• Conservation of wildlife and Game reserves; the Committee recommends that the Country Government to develop measures such as employment of game rangers to protect wildlife and forest cover within the game reserves.

• Encouraging investors in the County; the Committee recommends that the Country Government should encourage investments to develop facilities
such as Hotels and Restaurants in the reserves along the two major gates of Tsavo East National park. (Kasaala and Ithumba gates)

- Advertising and marketing; the committee recommends that the County Government of Kitui to develop an initiative to advertise and market our game reserves and historical sites
- Sanctuary development; the Committee recommends that the County Government to establish a snake park and a butterfly farm at Mutomo sanctuary which will create a lee way for educational research and tourist attraction.
- Water catchment and conservation; from the respondents point of view, water shortage is a major challenge in the game reserves. Therefore, the County Government should ensure Creation and conservation of water resources in the Game reserves and parks.

iii) Natural Resources matters

- Forest cover conservation; the Committee recommends that the County Government of Kitui to discourage deforestation and encourage afforestation so as to conserve and increase the forest cover in Kitui County
- Proper implementation of the Kitui County Charcoal Management Act, 2014; the Committee recommends the lifting the Charcoal ban and ensure proper implementation of the Kitui County Charcoal Management Act, 2014
- Resource mapping; the Committee recommends that resource mapping will help to identify Historical rocks, rivers, valleys and shrines and then the County Government to initiate a plan to preserve and Conserve them.
- The Committee also recommends Creation of nature trails for on the mining land to encourage educational research, recreation and tourist attraction.
- In conclusion , the Committee recommends reviving and strengthening of the wildlife clubs and C.B.Os respectfully to help converse biodiversity

We, honourable members of the Environment, Energy, Mining and Natural Resources Committee, do hereby affix our signatures to this report to affirm our approval and confirm its accuracy, validity and authenticity:-

Members  
Signature
1. Hon. Stanislous Mulongo
2. Hon. Ruth Kinyumu
3. Hon. Mwendwa Munyoki
4. Hon. Antony Muthui
5. Hon. Felix Kinuva
6. Hon. Titus Kasinga
7. Hon. Titus Mbiti
8. Hon. Allan Kavindi
9. Hon. Johnray Ngava
10. Hon. Kalovo Musau
11. Hon. James Munuve
12. Hon. Boniface Katumbi