

# MAZINGIRA

yetu

•KNOWLEDGE

•SKILL

•ATTITUDE

•TRENDS

ISSUE No. 11

OCTOBER-DECEMBER



## The cichlid of lake Victoria

11<sup>th</sup>  
issue

MAZINGIRA

INSIDE : **Inspiration: ECCD of Tanzania P18**  
**Education: Cichlid P5**



The reign  
of the great

Nature is magical

# Contents



P9



P12



P5



P16



**SUSTAINABLE DEVELOPMENT GOALS**  
17 GOALS TO TRANSFORM OUR WORLD

P11



P17



## EDITORIAL

Take charge.....4

## INSPIRATION

Reader's review.....4

## PERSONALITY

Talking to Josphine Ekiru.....5

## INSIGHT

Demistifying green economy.....6

## CAREER POINT

Entrepreneurship.....7

## INITIATIVES

Sustainable development using phones.....8

## EDUCATION

Chichlids .....9

Nairobi National Park. ....10

## CAREERS

UN Learning programs.....11

## NEWS FOCUS

News Focus .....13

## NATURE

Action now poster.....14

## OPPORTUNITY

Transforming coconut shells .....15

## BIOGRAPHY

Mukiri Hani .....16

## GALARY

Moments .....17

## Editorial Team

### PUBLISHER

Ideal Community Empowerment  
P.O Box 67 Kisumu  
community.ideal@gmail.com

### BOARD MEMBERS

John Jagero  
Gaudence Auma

### EDITOR

Esther Moraa  
ofienomoraa@gmail.com

### DESIGN

Michael Othili  
mikeothili@gmail.com

### CONTENT DEVELOPMENT

Sam Dindi  
smdindi@gmail.com

### PHOTOGRAPHY

Vincent  
Magina  
Ariaitwe  
Sam

### ADVERTISING INQUIRIES

Mazingira Yetu Magazine  
info.mazingira@gmail.com

### SUBSCRIPTION

Mazingira Yetu Magazine  
info.mazingira@gmail.com

### PRINTED BY

Printed with Support from:  
Gaea pharma (sharing experiences)

Follow **Mazingira Yetu Magazine** on:



facebook.com/Mazingira Yetu

Ideal Community Empowerment  
P.O Box 67 Daraja Mbili  
Kisumu

**MAZINGIRA**

info.mazingira@gmail.com

+254 720968480

+254 725898975

ALL RIGHTS RESERVED. The publisher assumes no responsibility for unsolicited material. No part of this magazine may be reproduced in any form without written permission from the publisher. The views expressed in the articles are those of the author. Return undelivered copies to: Ideal Community Empowerment HQ, P.O Box 67-40117, Kisumu, Kenya.

## Our nature



## Our surrounding

## Our existence

## Protect and conserve

Out of all those millions and millions of planets floating around there in space, this is our planet, this is our little one, so we just got to be aware of it and take care of it.

The best friend of earth of man is the tree. When we use the tree respectfully and economically, we have one of the greatest resources on the earth. Understand that a person who cares about the earth will resonate with its purity.

Franklin D. Roosevelt said that : A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people. This is certainly true and we all must take charge and action in safeguarding our surrounding. It was not until we saw the picture of the earth, from the moon, that we realized how small and how helpless this planet is - something that we must hold in our arms and care for.

Sustainability requires maintaining life-supporting natural capital in order for our socioeconomic goals to be met. Plans to protect air and water, wilderness and wildlife are in fact plans to protect man. The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction. Where the quality of life goes down for the environment, the quality of life goes down for humans. The ecological crisis is doing what no other crisis in history has ever done -- challenging us to a realization of a new humanity.

So as we read this edition of mazingira yetu magazine, let us all remember the need to be mindful of our surrounding since our very existence depends on it.

*Esther Moraa*



The activist is not the man who says the river is dirty. The activist is the man who cleans up the river.

*Row Perot*  
sustainablebabysteps.com

## Reader' views

The 10th issue of Mazingira Yetu Magazine rejuvenated the Wildlife & Environment club of St James Kwang'amor High school located in Teso-South Sub County.

The interview with Fleur Ng'weno on birds has made us realize how fortunate we are with so many species of birds. The magazine has made us plant more trees in the current short rains and we hope to be the most eco-freindly school in Busia County.

Mr Nandeke,  
Environment club patron  
ericknandeke13@gmail.com  
0723 469857



MECODE ecofootprinttd@gmail.com

MECODE (Mikumi Environment Conservation and Community Development) is a community based organization engaging in Environment conservation and community development. The organization is located in Mikumi town, Kikosa district in the greater Morogoro province.

The organization was formed as a result of Eco-foot print Tanzania educating the youth living around Mikumi National Park on the need to stop engaging in bush meat trade and taking narcotics that was having a negative impact in their health and increase rates of crime.

Tanzania is blessed with unique flora and fauna and Mikumi National park stands out as the only national park in Tanzania that has been crossed by tarmac road. The Dar-es-salaam-Iringa highway links Tanzania to Zambia and covers nearly 50 kilometers inside the park. Though the road has eased movement of goods and people, it has resulted to environmental pollution with litter being thrown out of moving vehicles such as Passenger Saving Vehicles.

Plastics bottles and bags are an ugly sight in a National park and in the recent past, ungulates such as Zebras, antelopes and buffaloes have been reported dead as a result of consuming plastic bags. Kikumi National Park management through their social corporate responsibility program, came into agreement MECODE to collect waste along the Dar-es-salaam-Iringa highway inside the park. MECODE saw this as an opportunity of generating income by selling the waste to recyclers.

Waste collection has been of great benefit to the youth group financially. The group has been able to collect 4Kgs of nuts and bolts, 320kgs of scrap metal and 1 tonne of plastic bottles and bags. According to the Assistant Ecology officer in Mikumi National Park Mr Germanus Hape , a tonne of waste is collected every month in the 50 kilometer road span inside the park. The ongoing situation has seen environmentalists in Tanzania advocating for an alternative road through Kilose to save the fragile ecosystem in Mikumi National park from destruction.



# Josphine Ekiru

## The voice of change



### Describe your self

I am Ms. Josphine Ekiru I work for northern Rangelands Trust as peace building coordinator, my work is to promote peaceful relations between pastoralist communities. am on a mission to preach peace and environmental conservation through education and singing. I have a dream of ensuring that communities, especially pastoralists from northern Kenya, live together in peace and harmony and wildlife protected as it's the treasure we have in Kenya.

### when did you discover you had a talent in Music?

I started singing while I was young girl in Sunday school, and I was later inspired to sing in 2002 due to frequent clashes among the pastoralist communities of Turkana, Borana, Somalia among others over cattle rustling. I recalls it was the 2007/08 post-election violence that made my heart bleed and also inspired me to preach peace to the entire nation through music. I first composed my first song Tudumishe Amani that is also the name of the first album

### Northern Kenya has been faced with persistent cattle rustling with devastating negative impacts, how is the situation changing?

There is a big change since communities have realized importance of living peacefully, I can say level of awareness is high than before, conflict actors who were the ones spearheading raids are now transformed as peace ambassadors, several planned attacks have been averted through reformed warriors program, Turkana and Borana communities are now celebrating six years of peace ,many hotspot known as a conflict zone are now peaceful grazing areas, our communities are now sharing resources together without discrimination of any tribe. number of incidences have reduced.

**During the Giants for Elephants forum in Nanyuki, you spoke and represented the people on the grass roots well. What Key highlights did you pick from the forum?**

Mine was to share about community conservation, since the future of wildlife is in the hands of communities living with wildlife. The remaining wildlife should be protected before are gone, the other issue I talked about securing space for wildlife human population growth is became a challenge in the future, empowering communities is the key to success of any planned development.

**Coming from a male dominated society how do you go about preaching and making peace among warring communities?**

At the first time it was really a big challenge for no body could listen to me, but I thank God I never loosed hope of preaching peace and ant poaching campaigns until I got to be listened when both communities elected me as a chair person of the conservancy, there is where I got power now to work for my dream, which was tackling three things in my communities,1, conservation and anti poaching, poverty eradication and promoting peace. And slowly with the impact people saw they started believing that a woman too can make a change if she is given a chance. And I believed no body is born weak or empty gifted is someone who makes her or himself empty, we all have something to over if we are given a chance and try to use our responsibilities faithfully

**Communities have a belief that wildlife belongs to the Government. How are you changing this perception in Northern Kenya?**

By educating them, then with the idea of community conservation in northern Kenya people are realizing the benefit of wildlife and the ownership-its very simple people to learn when they are in touch with what you are talking about and that is what has helped oyr communities to know the importance of wildlife, starting from the recognition, politically and also in terms of legislations as the wildlife act recognizes community conservation, and today we see communities dedicating and sharing their lands with wildlife and again the recent Singed community land bill supporting



community conservation too.

**Poaching and bush meat hunting remain a major threat to the existence of wildlife in Kenya. What are some of the activities that you are doing to address the vice?**

Anti poaching campaigns ,creating awareness in our communities on importance of wildlife, reforming poachers or targeting the real actors of the crimes

**Tell us more about your song titled KITOVU and where one can one access your music album-kitovu chetu song is about**

Your small act might be a dangerous or can cause negative impact to all communities not you alone as individual or actor, its like an umbilical cord of a child in the womb of a woman which feeds a child, or we should all be sensitive like an umbilical cord of a child when born which needs to be taken care. Thus is like our country ,and thus means each and every step we make think about the cause that will bring to the other innocent person.

**How can the youth in Kenya harness their creativity and energy in activities that add value to their lives as opposed in engaging in negative vices?**

Someone need to know or be aware of is purpose in this world, then you realize your potentials then work what your passionate about not because of people, what's talent, gift do have and try to work on that and set your goal, finally you will be happy

**As a role model, what message do you have for Kenyans and the world?**

Don't be part of any destruction in the world we are living today or your surroundings be part positive changes that will make our generations enjoy but not suffer and live in regrets.



GREEN ECONOMY JONATHAN ODONGO

# DEMISTIFYING GREEN ECONOMY

Nairobi National Park is under threat. The government seems hell-bent on ensuring that the standard gauge railway cuts right through the country's first national park that boasts of diverse wildlife population. The second phase has been approved despite a huge outcry from conservationists and pending environmental and social impact assessment.

It was while reflecting on the issue with a bunch of friends that topic green economy came up. As a strong advocate of green economy, I often find myself sneaking the term into even the most casual conversations. This time, a number of questions arose and the diverse group eventually fell into four broad categories: proponents, opponents, skeptics and the clueless.

"What is green economy?" "How different is it from the current economic model?" "Is it achievable?" and so on

The skeptics claimed that it is a figment of imagination that is just good on paper. The opponents dismissed the concept as a strategic ploy by the developed countries to keep the third world countries yearning for development underdeveloped.

These views and debates stem from the belief that development and environmental sustainability are antagonistic.

Well, environment is the foundation on which economy thrives. The sectors that support our economic growth are natural resource based: agriculture, mining, tourism, forestry, water, energy, fishing, infrastructure and manufacturing.

A good economic model therefore should ensure that the environment is well protected and natural resources utilized sustainably while we attain sustainable economic growth. But

proponents of the current 'business-as-usual' economic model believe that there can be no economic advancement without overexploitation of the environment and natural resources.

Sadly, history is replete with catastrophic consequences associated with reckless pursuit of economic advancement without regard for the well-being of the environment.

For example, in December 1952 severe air pollution killed approximately 12,000 people in London leaving over 100,000 suffering from respiratory tract infections in what became known as the worst air pollution in the history of the United Kingdom.

These consequences, coupled with the intensified advocacy for environmentally sustainable practices and backlash from environmentalists and lovers of nature, have placed the developing countries, mostly African, that want to catch up with the first world in a catch 22 situation – to pursue economic growth or to preserve the environment?

African countries are still rich in natural resources but there is a tenacious quest to reach the first world status.

Pursuit of economic growth leads to technological advancement, mega infrastructural developments such as road networks, ports, standard gauge railway for efficient transportation and establishment of manufacturing industries.

However, if we recklessly pursue this path, we risk destroying the very foundation of our economy and jeopardizing future economic growth and ability of the future

generation to meet their needs. Pollution of air, water and land, global warming, ozone layer depletion, environmental destruction, depletion of natural resources, loss of ecosystems and key species will be inevitable.

On the other hand preservation of nature ensures continuous provision of ecosystem services such as rainfall, water purification, absorption of excess carbon dioxide, climate regulation, medicine, spiritual enhancement, aesthetics, disaster risk reduction and sustainable income generation. But preservation of nature means missing out on the trappings associated with developed world stature.

The big question is, should we go ahead and build our economy and forget about the aforementioned consequences and importance and beauty of nature or forget about development and focus on preservation of our natural resources and miss out on first world stature?

Is it possible to strike a balance between economic growth and environmental sustainability? Can development be simultaneously ecologically sensitive, socially just and economically viable?

This is where the concept of green economy comes in. Green economy refers to the economy that aims at development without degrading or destroying the environment by promoting clean production and sustainable consumption of goods and services. It is based on renewable energy, green buildings, sustainable transport, water management, waste management and land management.

According to UNEP's analysis,

green economy results in a faster growth, a cleaner environment and high productivity, as opposed to the current growth scenario. The green growth path is expected to improve gross domestic product, boost life expectancy, create more and better jobs, reduce environmental risks associated, increase resource use efficiency, increase forest cover, save hundreds of acres of forests, save billions of tonnes of water, reduce thousands of tonnes of carbon dioxide in the atmosphere, improve energy efficiency, save energy consumption, restore degraded land and reduce poverty as has already been witnessed in most case studies.

In Kenya it is projected that investing in green growth will reduce the proportion of people living below poverty line by 3% annually, lift additional 3.1 million people out of poverty by 2030 and cause the GDP to grow 12% higher by 2030.

Achieving green economy calls for adoption of renewable energy, sustainable land use practices, sustainable production and consumption models that will ease pressure on natural resources like forests, land and water; public private partnerships to implement of programs, projects and policies that promote resource use efficiency to minimize carbon emissions and depletion of natural resources; investing in youth talent and enterprises to promote environmental best practices like recycling and environmentally friendly technological innovation and advancement.

Question: can Nairobi National Park be saved from the jaws of infrastructural development?

Founder and Executive Director, Kenya Environmental Education Network.  
([www.keenet.org](http://www.keenet.org))  
[kodongojonathan@gmail.com](mailto:kodongojonathan@gmail.com)









The discussion on sustainable development has been with us since 1987 when the Norwegian Prime Minister Hon Gro Harlem Brundtland, while chairing the World Commission on Environment and Development (WCED) first defined the concept. Sustainable development is conceptualized as that development that meets the needs of the current generation while not compromising the ability for the future generation to meet their needs. Over time, the concept has advanced to consider sustainable development as interaction between three pillars namely environment, economy and society.

Numerous methodologies and indicators have been developed to guide progress towards sustainable development. The concept has been refined in all global United Nations meetings to the current state where 17 Sustainable Development Goals have been described and 169 targets adopted by world leaders on 25th September 2015. The education system at all levels (formal, non-formal and lifelong learning) is expected to play a major role in championing public understanding and impetus to implement sustainable development goals. The capacity of educators as well as learning

materials to support educational practice has to be reoriented to capture the letter and spirit of the sustainable development goals.

Since 1987, the practices in learning institutions globally has not shown presence of adequate competence among our educators to champion sustainable development. Teaching and learning methodologies in most institutions have been archaic while learning materials have been lacking. Education has not fostered best sustainability practices among learners and the general public. Education practice requires support by relevant learning materials both printed and digital. Learning materials reoriented to sustainable development must be contextualized to help learners identify with local challenges and formulate appropriate practical interventions. The few available learning materials have been inadequate in addressing our unique contextualized sustainable development challenges. For this reason, Dr Ayub Macharia Ndaruga decided to make a contribution to learning about sustainable development through development of several online learning materials in form of Apps. These resources are a product of Dr Macharia's experience as a sustainable development lecturer in several

universities in Kenya and long service as an educator at the National Environment Management Authority. The Apps are free to access by learners at all levels through Android smartphones and Tablets.

The sustainable development digital resources are in the following areas

1. Education for Sustainable Development – This digital resource has been vetted and approved by Kenya Institute of Curriculum Development (KICD) and can be accessed on this link

<https://play.google.com/store/apps/details?id=captain.ayub.esd.AOVOOCCJHLBFBQM&hl=en>

2. Sustainable Development Questions and answers

<https://play.google.com/store/apps/details?id=captain.sustainabledevelopmentquestions&hl=en>

3. Environmental law in Kenya <https://play.google.com/store/apps/details?id=captain.EnvironmentalLaw&hl=en>

Learners are normally bombarded with numerous reference books and papers on diverse aspects of sustainable development. It is quite challenging to read all literature available in this area. There is also a challenge of sustainable development being facilitated by incompetent educators. These digital resources present a simplified way of exploring sustainable development in form of a book or as questions and answers. The use of Android smartphones and Tablets to access these resources makes the experience very personal. This format also allows flexibility to revise and improve the digital resource to suit the dynamic nexus of sustainable development.

These digital resources are available all over the world for free and enable sharing of expertise and quality-learning materials with all learners including those in remote areas.

*Dr Ayub Macharia-Director,  
Environmental Education-National Environment Management Authority;  
(ayubmacharia2@gmail.com)*

[www.247automart.com](http://www.247automart.com)

One stop shop for your auto solutions



- .CARS
- .BIKES
- .AUTO PARTS
- .CAR HIRE
- .INSURANCE
- .SHIPPING
- .TECHNICAL SUPPORT

LEARNING SAM DINDI

# CHICHLID



Cichlids are fish from the family Cichlidae. This family is both large and diverse. At least 1,650 species have been scientifically described, making it one of the largest vertebrate families. New species are discovered annually, and many species remain undescribed. The actual number of species is therefore unknown, with estimates varying between 2,000 and 3,000.

Cichlids are popular freshwater fish kept in the home aquarium. They span a wide range of body sizes, from species as small as 2.5 cm in length to much larger species approaching 1 m in length. As a group, cichlids exhibit a similar diversity of body shapes, ranging from strongly laterally compressed species such as *Altolamplogus*, *Pterophyllum*, and *Symphysodon* to species that are cylindrical and highly elongated such as *Julidochromis*, *Teleogramma*, *Teleocichla*, *Crenicichla*, and *Gobiocichla*). Generally, cichlids tend to be of medium size, ovate in shape, and slightly laterally compressed, and generally similar to the North American sunfishes in morphology, behavior, and ecology.

Many cichlids, particularly tilapia, are important food fishes, while others are valued game fish like *Cichla* species. The family also includes many familiar aquarium fish, including the angelfish, oscar, and discus.

Cichlids have the largest number of endangered species among vertebrate families. Cichlids are particularly well known for having evolved rapidly into a large number of closely related but morphologically diverse species within large lakes, particularly Tanganyika, Victoria, Malawi, and Edward. Their diversity in the African Great Lakes is important for the study of speciation in evolution. Many cichlids introduced into waters outside of their natural range have become nuisances.

Cichlids are efficient and often highly specialized feeders that capture and process a very wide variety of food items. This is assumed to be one reason why they are so

diverse. All species of cichlids show some form of parental care for both eggs and larvae, often nurturing free-swimming young until they are weeks or months old.

Because of the introduced Nile perch (*Lates niloticus*) and water hyacinth, deforestation that led to water siltation, and over-fishing, many Lake Victoria species have been wiped out or drastically reduced. By around 1980, lake fisheries yielded only 1% cichlids, a drastic decline from 80% in earlier years. About two-thirds of endemic cichlids (about 300 species), especially bottom feeders, became endangered or extinct. Some survivors have adapted by becoming smaller or hybridizing with other species.

The most important food cichlids, however, are the tilapia. Fast growing, tolerant of stocking density, and adaptable, tilapiine species have been introduced and farmed extensively in many parts of Asia and Africa and are increasingly common aquaculture targets elsewhere. Farmed tilapia production is about 1,500,000 tons; annually, with an estimated value of US\$1.8 billion, about equal to that of salmon and trout.

Unlike those carnivorous fish, tilapia can feed on algae or any plant-based food. This reduces the cost of tilapia farming, reduces fishing pressure on prey species, avoids concentrating toxins that accumulate at higher levels of the food chain, and makes

tilapia the preferred "aquatic chickens" of the trade.

Some cichlids readily hybridize with related species, both in the wild and under artificial conditions. Other groups of fishes, such as European cyprinids, also hybridize. Unusually, cichlid hybrids have been put to extensive commercial use, in particular for aquaculture and aquaria. The hybrid red strain of tilapia, for example, is often preferred in aquaculture for its rapid growth.

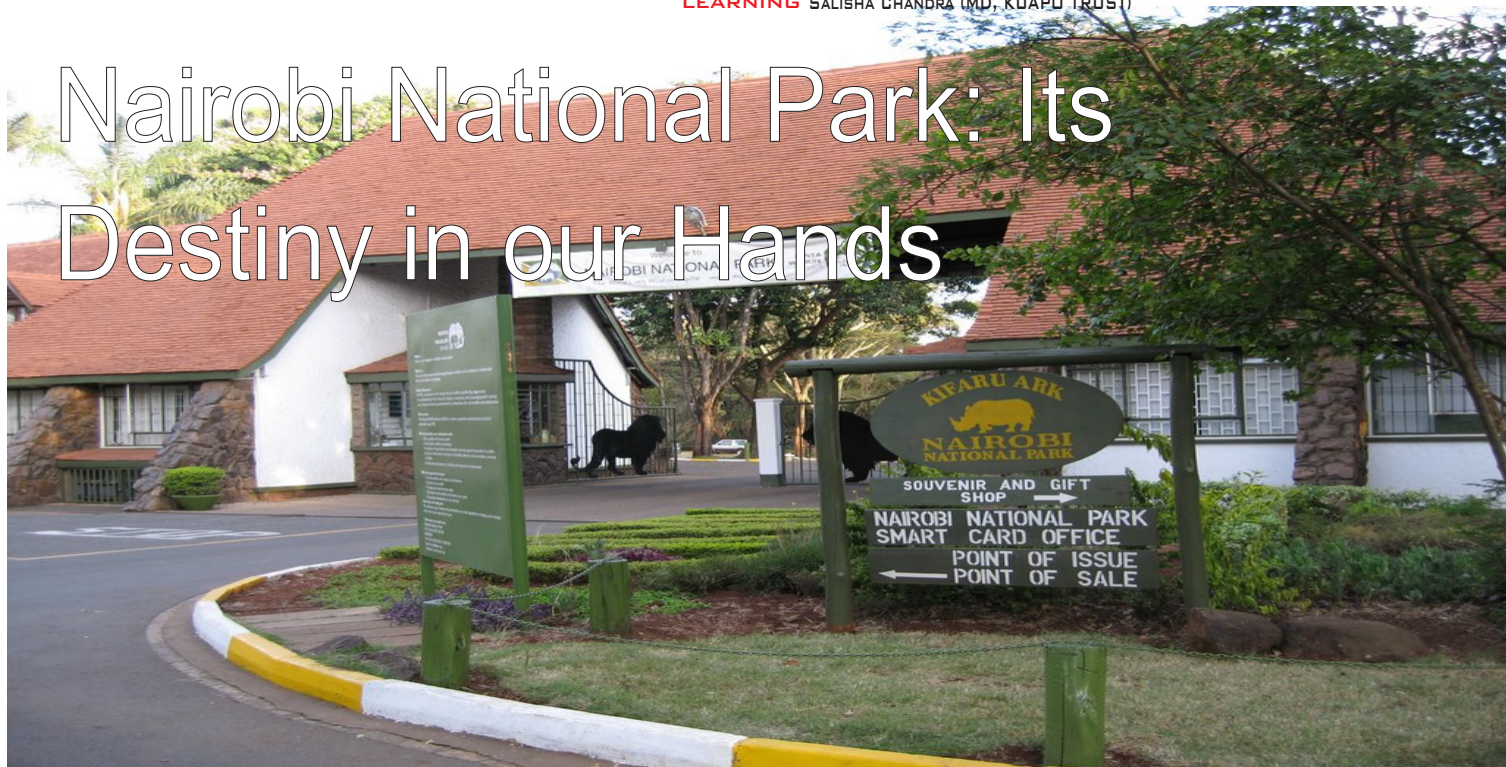
Tilapia hybridization can produce all-male populations to control stock density or prevent reproduction in ponds.

Numerous cichlid species have been selectively bred to develop ornamental aquarium strains. The most intensive programs have involved angelfish and discus, and many mutations that affect both coloration and fins are known. Other cichlids have been bred for albino, leucistic, and xanthistic pigment mutations, including oscar, convict cichlid and *Pelvicachromis pulcher*. Both dominant and recessive pigment mutations have been observed. In convict cichlids, for example, a leucistic coloration is recessively inherited, while in *Oreochromis niloticus niloticus*, red coloration is caused by a dominant inherited mutation.

This selective breeding may have unintended consequences. For example, hybrid strains of *Mikrogeophagus ramirezi* have health and



# Nairobi National Park: Its Destiny in our Hands



Today, in Kenya, we stand at a crossroads. One path could lead us to our ultimate destruction as we move away from our natural instincts of living with and conserving wild life and wild spaces; the other could see Kenya continue to lead from the front as we learn and show the world how a win-win situation can be attained between development and the environment. Bang smack in the middle of it all is the first park to be gazetted in all of East Africa – the world-renowned

## Nairobi National Park (NNP).

Nairobi National Park became an officially protected area in 1946, when Maasai pastoralists agreed to move off these lands so that they could be used solely for conservation. Today NNP remains the only park in a capital city attracting in excess of 100,000 visitors annually and generating more than Shs 45,000,000 per year. It's home to the endangered Black Rhino and another 100 odd mammalian species, over 400 bird species and endemic plants that are only found within the park confines. The park is an education hub for students from all over the country as well. But over and above this are the ecosystem services that the park provides for Nairobi city and its environs – it is a carbon sink that sucks in the noxious fumes from our industrial area and turns it into oxygen. NNP also acts as a water purifier for one of our key rivers and it is also a breeding-site for the white-backed vultures – nature's own recycling machines.

At only 117 sq. kms, NNP is one of the smallest parks in Kenya but its size belies its importance. It is a core area in a larger ecosystem and one that supported the second largest annual migration of large herbivores. In the past, wildlife would disperse up to Kilimambogo (Ol Donyo Sabuk National Park) in the north, Amboseli in the south, Narok in the west and Machakos in the East.

But for many years now, Nairobi National Park has been facing an onslaught. An onslaught from

development. From growing population pressures to land subdivision, the advent of flower farms and gypsum quarries, development has slowly but surely led to these corridors becoming blocked. The wildlife around NNP has decreased more than 70% since the early 70's, so the core protected area has become even more important.

However, since 2014, NNP has had to contend with a new and growing threat – large-scale infrastructure development. It started with pieces being hived off for the Southern Bypass and Phase 1 of the Standard Gauge Railway (SGR). Both of these developments could have been re-routed to leave the park un-touched but through impunity and corruption of due-process, NNP had to give up close to 350 acres of her land. So when the bombshell was dropped that KWS had nominally approved a route that would cut through the center of the park, it sent a tremor through the conservation and pastoralist community members living adjacent to NNP. And our reaction was unprecedented – a cry to save our park echoing from the depths of our hearts.

On September 13, 2016 we learnt that the modified-savannah route (as it is being dubbed) will cut right through the middle of the park and was approved by KWS. The KRC have proposed several supposed mitigation measures to lessen the impact on Nairobi National Park including having the SGR raised on

average 18 meters above ground and a phased construction process that would see it take 18 months to complete. But what we are all wondering is why does the SGR have to go through the park, when there are other route options available? Why have KRC and KWS not thought about the adverse and ill effects of the actual construction process. There was a spate of increased human-wildlife conflict at the time when the southern bypass works were going on – we cannot begin to imagine what that would mean for 18 months of construction right through the center of the park. Wouldn't the park be well and truly be dead by the end? The cynics amongst us say that actually may be that is the end game here; that behind all of this is a ploy to grab this premium land for development...

It is hard to know or even try to understand ulterior motives. As conservationists, we are not opposed to the SGR in principle - we all want a functioning cargo rail service in our country. But we do not want it at the expense of our heritage, our health and our environment. Kenya has the chance to set the right precedent – that, in fact, there can be a win-win situation for both development and environment. One does not have to lose for the other to win. Our vote goes not only to NNP but also to SGR.

#SAVENNP

#DONTYOU DARE DESTROY YOUR PARK



**CAREER CHOICE** BRIAN WASWALA, ENVIRONMENTAL EDUCATION AND TRAINING SPECIALIST  
ENVIRONMENTAL EDUCATION & TRAINING UNIT



# SUSTAINABLE DEVELOPMENT GOALS

## 17 GOALS TO TRANSFORM OUR WORLD

We live in a complex and dynamic world. Many problems we face today involve interdependent structures, multiple actors, and are at least partly the result of past actions. Such problems are extremely difficult to tackle and conventional solutions have very often led to unintended consequences.

A systems thinking approach focuses on systems as a whole: how the parts interrelate and how interconnections create emerging patterns. Systems thinking tools allow us to map and explore dynamic complexity. With a better understanding of systems, we can identify leverage points that lead to desired outcomes and avoid unintended consequences. Environmental problems are often described as “wicked problems” to highlight their complexity and the difficulties they entail. Finding answers to current crises such as fisheries collapse, climate change, biodiversity loss, infectious diseases, and inequitable access to resources will be amongst the greatest challenges of our time. The

ecosystem approach applies systems thinking to gain a better understanding of how ecosystems function. It can help us identify potential solutions to a myriad of problems inspired in part by the complex dynamics of ecosystems themselves.

### What will you gain in this course?

- A well-developed knowledge of the basic features of ecosystems, the ecosystem approach and systems thinking from an interdisciplinary perspective
- An understanding of the distinction between reductionist and holistic thinking
- The ability to apply critical systems thinking
- Enhanced knowledge of the inter-relationships between ecosystems and human systems:
  - Critical ecosystem functions and services,
  - Threats, drivers and direct and indirect impacts to human well-being and development, and

• Opportunities for the wider application of the ecosystem approach and systems thinking in other sectors

• Specific awareness of case studies selected from representative ecosystems and related global issues, demonstrating the benefits and challenges of integrated approaches for ecosystem management and beyond

• The necessary basis for designing creative solutions to ecosystem management and governance problems

This Massive Open Online Course will be offered in English and free of charge. More information and enrolment - [http://unep.org/training/links/MOOC\\_EAS\\_T.asp](http://unep.org/training/links/MOOC_EAS_T.asp)

At present, over 2,000 persons all across the world have registered. You can still welcome to join the course, which will end on 28 October 2016.

I would like to encourage everyone to take this course, and kindly ask you to disseminate this information further to your networks.

## Wicked Problems, Dynamic Solutions

THE ECOSYSTEM APPROACH AND SYSTEMS THINKING

### FREE ONLINE COURSE

**Start date:** September 2016  
**Duration:** Foundations: 6 weeks;  
Advanced Certificate: 1 week  
**(total 7 weeks)**

In 2016, the United Nations Environment Programme (UNEP) in cooperation with Concordia University in Montreal will launch the Massive Open Online Course (MOOC) “Wicked Problems, Dynamic solutions: The Ecosystem Approach and Systems Thinking”. The MOOC will be disseminated through the Global Universities Partnership on Environment and Sustainability (GUPES), which is currently comprised of over 680 universities globally.



collaboration complexity  
resilience  
wellbeing



# ACT NOW



The future of our planet  
is in your hands

## TANZANIA TO BAN USE OF PLASTICS BY JANUARY 2017



The government of Tanzania has reiterated that it will not back down on its decision to ban the use of plastic bags by January 2017. In April 2016, the Minister of state in the Vice President's office, January Makamba told the National Assembly that the Government would impose a total ban on the use of plastic bags. He further said by instituting the ban, the government had revised the 2006 regulations on the production, importation, sale and use of plastic bags which among other things, disallows the use of bags that are below 30 microns in thickness.

## PAINTING EYES ON LIVESTOCK TO PREVENT LION ATTACKS



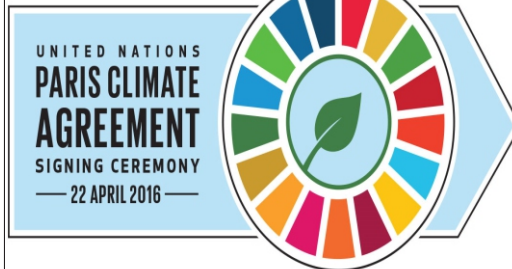
Dr Neil Jordan is working with farmers and the Botswana Predator Conservation Trust to further explore the promising research that is changing the way lions and leopards look at cattle as prey. By painting intimidating eye-patterns on the behinds of cows, researchers hope to trick the big cats into thinking they have been seen. A small study of eye painting was conducted in 2015 involving a herd of 62 beef cattle. None of 23 cows that had eyes painted on their rumps were attacked, yet three of the 39 unpainted cows were killed by lions. Dr Jordan says, "It's a simple, cheap and easy thing to do, so we may take up some offers to expand the study".

## SAVING NAIROBI NATIONAL PARK



The Government of Kenya has dropped the proposed path that the Standard Gauge Railway would use enroute to Naivasha. The earlier path would have cut up to 50kms inside Nairobi National Park compromising about 20% of the park, destroying key habitats and wildlife breeding grounds. The Environment Cabinet Secretary Prof. Judi Wakhungu said the ministry was not involved and demanded it dropped. She further said the Transport ministry is drawing another route.

## US & CHINA FINALLY RATIFY 2015 SAW DUST TOILETS IN KENYA



USA and China have formally joined the Paris climate deal. The move by the world's biggest polluters is a major step forward for the 180-nation accord, which sets ambitious goals for capping global warming and funneling trillions of dollars to poor countries facing climate catastrophe. President Obama and his counterpart Xi Jinping handed ratification documents to UN chief Ban Ki-moon, who said he was optimistic the agreement would be in force by the end of the year.

Sanergy has installed over 700 toilets across nine slums in Nairobi serving around 30,000 people and treating more than 8,000 metric tonnes



of waste. The toilets are efficient because they use sawdust rather than water. After the residents use the rest room, they cover the waste with saw dust. The waste is collected and brought to a central facility where it is converted into products such as organic fertilizer and insect based animal feed.

Sanergy has installed over 700 toilets across nine slums in Nairobi serving around 30,000 people and treating more than 8,000 metric tonnes of waste.

The toilets are efficient because they use sawdust rather than water. After the residents use the rest room, they cover the waste with saw dust. The waste is collected and brought to a central facility where it is converted into products such as organic fertilizer and insect based animal feed.



## EASTERN GORILLAS, PLAIN ZEBRAS UNDER THREAT OF EXTINCTION

The world largest living primate, the Eastern gorilla, has been listed as under threat of extinction in the annual Red List of endangered species. Illegal hunting in the Democratic Republic of Congo (DRC) has reportedly killed 70 percent of all Eastern gorillas in the past two decades and brought the world largest primate to the verge of

extinction. Population of Plain Zebras in Africa has fallen to about 500,000 animals from 660,000 also because of hunting for their meat as well as their skins.



# TRANSFORMING COCONUT SHELL TO BRIQUETTES

Coconut is a crop that has been dubbed a crop with a thousand uses. According to Kenya Coconut Development Authority, Kenya has nearly 7.4 million coconut trees in small holders spread along the Kenyan coast line and its potential remains untapped considering if fully exploited the crop could contribute nearly Kshs 25 billion to Kenya's GDP.

Mr Said Twahir the co-founder of KENCOCO observed thousands of tonnes of coconut shells littered in farms in Kilifi after extracting the copra which is used dried and used to make oil and coconut milk. Mr Said felt with a little value addition the coconut shell could be converted to charcoal briquettes which can be used for cooking and heating and in the long run help in conserving trees that would otherwise be cut to provide fuel for cooking.

Together with his brothers and sisters, they

raised USD 10,000 as the seed capital to finance purchase of raw materials, equipment, training of employees and marketing. KENCOCO sits on a three acre piece of land from which it conducts its activities. The company works closely with farmers especially women in its value chain by purchasing the coconut shells from them.

The coconut briquette is made by burning coconut shells in a limited supply of oxygen in a kiln a process called carbonization. The shells are then crushed into powder allowing manufacturing of different shape and size of charcoal briquettes.

Coconut shell briquettes are eco-friendly, less ash is produced during the burning process, easy to ignite and do not emit toxic gases. KENCOCO cliental includes schools, households, beach hotels and a few manufacturing companies.

The company currently produces nearly 20

tonnes of coconut shell briquettes a month and it targets to reach the 100 tonne mark per month to satisfy the local and export markets. Mr Twahir says with coconut briquettes Kaya duruma forest will stand the tests of time and through its value chain, farmers will be able to generate income through the sale of the husks to KENCOCO instead of throwing it away and the youth and women can create their own jobs by stocking the briquettes for sale.

KENCOCO is looking forward to partner with other organizations for the purpose of technology transfer and acquiring a fleet of trucks to transport the charcoal to various markets across East Africa.

## Blogs and Blogging for the environment

<http://nyikasilika.wordpress.com>

Nyika Silika is an environmental/nature blog that will hopefully, be able to;

1.Reconciling the needs of people and nature using the best available methods.

2.Ensure economic development and conservation do not undermine each other.

3.Educate the public and students interested in wildlife management and conservation on the need for conserving wildlife and the environment in its natural state.

4.Provide a platform for people to air their views and concerns on nature.

Blogs on various topical issues like common bird species in Kenyan towns and wildebeest migration are published each month. It is a wonderful blog for those interested in learning more about Kenya's flora and fauna.

<http://shotsbysHEMA.com>

ShotsByShema Conservation Photography is a photographic blog focused on wildlife research and conservation, mainly in Kenya – where the author is

based.

The aim is mainly to improve people's appreciation for our world's rich biodiversity and inspire them to get involved in its conservation.

Through ShotsByShema Conservation Photography, the aim is to not only show you nice pictures of wildlife and wild places but also to help you see the true value wild life has to all of humanity. Follow ShotsByShema on twitter: [@ShotsByShema](https://twitter.com/ShotsByShema)

<http://washingtonwachira.blogspot.co.ke/>

The blogger is a great photographer with a bias to wildlife. His passion for Wildlife is translated to the blog with great informative posts based on his travels across Kenya. Wachira is at home guiding people from all back grounds through the journey of nature interpretation.

<http://impacthubmedia.com/category/green-impact>

The blog highlights contemporary issues on green economy, food security, illegal wildlife trade among others. It is a one stop shop for those interested in current affairs both locally and globally in the field of environment.

<https://conservationheart.wordpress.com>

Claire Nasike is a Kenyan Conservationist/Environmental, a 3rd recipient of the Wangari Maathai Scholarship Award 2015, a youth mentor and a co-founder of Return of Sisterhood Mentorship Programme.

Claire blogs about various topical issues that is very relevant to everyone. E her blog on environmental laws in Kenya, she goes further to write that it is imperative to have environmental laws for sustainable development to be achieved.

Environmental Management and Conservation Act of 1999 (EMCA 1999) has been explained in details for a common person to understand what it is all about.

<http://www.farmingafrika.com>

The blog is all about agriculture and the latest developments in Agri-business, Agronomy, and horticulture impact of climate change on agriculture. It is a wonderful blog for those interested in farming, seeking market based information on where to buy and sell produces.

## Book review

*BOOK REVIEW*



I have just woken up.  
 Yesterday some men came to my home.  
 With ropes, axes and powersaws.  
 After a short dialogue they chose me for a cut.  
 Here now are the birds looking at me frustrated.  
 Asking me why I decided to bring down their nests.  
 While they kept me company by singing me sweet melodies.  
 I just cry to prove am innocent.  
 He is so cruel and unkind they tell each other.  
 Here comes the same men salivating to cut down my best friend.  
 Here comes the women, they want firewood for cooking.  
 Here comes the children, they want brooms to sweep their classes.  
 Here comes the men, they want timber to build houses.  
 Here comes the rain, I can't stop it from uprooting crops to feed humans.  
 Here comes the sun, I can't provide shade anymore to crops and humans.  
 Here comes the wind, I can't stop it from bringing houses down.  
 I can't stop drought anymore for am too weak to do so.  
 Let's reduce evaporation by depending on me for shade.  
 Let's reduce damage of birds homes by depending on me to attach their nests.  
 If you love me, protect me.  
 If you love me, protect the environment.

By: Vinkythepoet  
 vinkenadkamiru@gmail.com



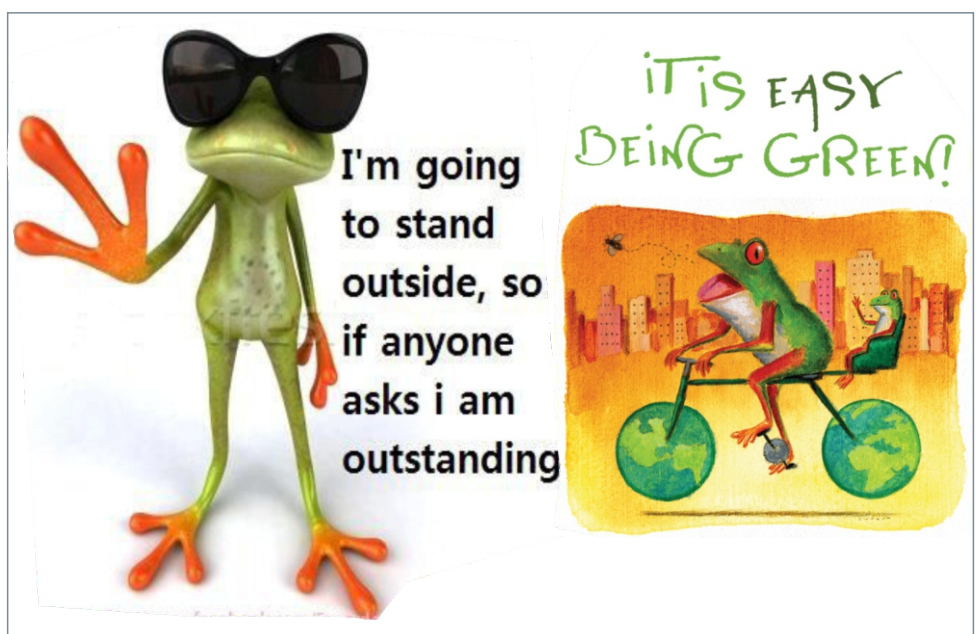
Dr. Dino J. Martins is an entomologist, artist, prolific writer and is currently the Executive director of the Impala Research Centre and Research Assistant Professor with the Turkana Basin Institute at Sony Brook University.  
 In the book OUR FRIENDS THE POLLINATORS, A hand book of pollinator

Diversity and conservation in East Africa, he starts by writing that pollination is often overlooked, yet it offers 'ecosystem service' and benefit that is provided for free by healthy environments which is essential to the well-being of people. And once we recognize that something as fundamental as food production is tied to biodiversity, we can begin to tap into the great potential there is in improvement of human health and nutrition through conservation of the environment.

The book discusses comprehensively the diversity among pollinators like of Butterflies, Moths, Bats and Bush babies, wasps and fig wasps, flies, Beetles and Ants. An interesting example is of the Fig wasps which are tiny pollinators of the mighty fig trees with whom they have a special relationship. The tree cannot survive without the fig wasp, and the wasp cannot survive without the tree. They are wedded together forever.

He highlights that atleast 75% of all crop species and over 80% of all flowering plant species are dependent on pollinators, primarily wild insects.

If you want to understand what pollination and pollinators is all about then this is the book to read.





# THE *bio* Mukiri Hani

Some 25 years I was born to a beautiful couple in a small village called Nkuriga-Meru\_Kenya. A land that is believed to flow with milk and honey. We are known to produce agricultural products such as potatoes ,beans and maize. Unfortunately I wasn't lucky to be under such a family but we had our farm and in order to satisfy our stomachs and pay for school fees. I had to cultivate portions of that land after school, during weekends and holidays. And so farming became my thing since childhood. Watching seeds planted break into roots, stem and leaves was just wow!

Growing older, I realized that I kept thinking about the world and food security. And the knowledge that all eyes are on farmers to feed the growing population simply spiced my passion. Today I am thrilled to be part of a proven solution to such a critical challenge. As a young person ,am proud to be among the few who are helping feed our people. I have met young people who feel that this farming thing should be left to that guy in the village. To them, when farming is mentioned, they think of someone far down in the village living in a shack, who wakes up to go dig-so far detached from civilization and barely wears clothes. They think of African agriculture as use of hoe and machete! But that's not true, agriculture version is exciting. Those of us in it finds it attractive in terms of sustainability, profitability and can support our livelihoods. It has afforded us pleasures of owning our own lands and homes.

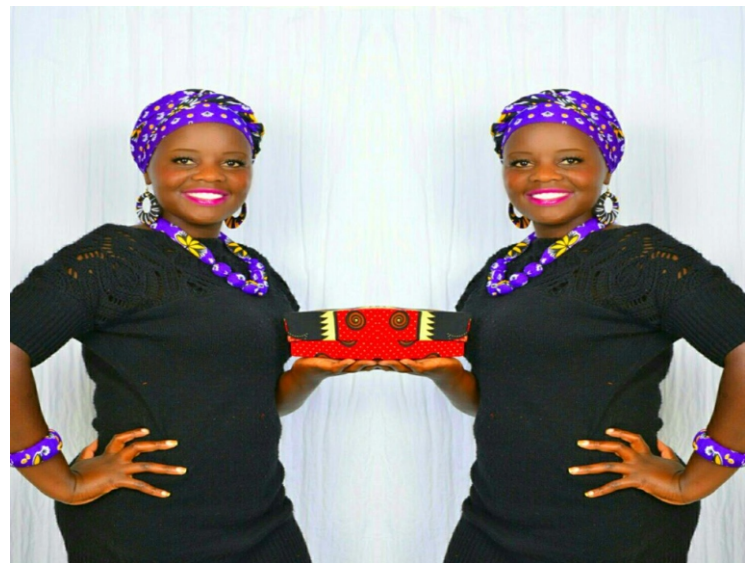
I would love to see more youths practice farming because you realize that generation gap is still a challenge and climate change is here with us pinning farmers who are mostly the elderly down. Young people understand technology, like use of Apps and other innovations that they can use to improve productivity, profitability and often product quality.

## Plastics Recycling

Growing older, environment wellness bothered me. We have become more careless with plastics such that you literally find them everywhere. Was there a way they could be more useful even after use? And being the tough cookie that I am, I would collect gift wrappers, boxes, plastic bags, plastic bottles and lids. I would then open them up ,shape them into different shapes and using some glue I would piece them together as baskets, handbags, clutch bags, shoes ,earrings, bangles and necklaces. I was that girl who always read everything about environment. I needed to do something! I thought of many sustainable ideas but though some were unique and original, they called for large capital .I knew this is not what I wanted. I wanted to come in humbly, develop myself as I impacted my community.

Early this year, it became so clear. There were raw materials everywhere! Yes plastic bottles everywhere, in different sizes and shapes, tailors were suffocating of unused material pieces. Its then that I started designing jewellery, handbags, clutchbags and shoes. You may wonder who inspired me in this journey. I believe I am because Dr.Winnie kiilu is. To the young people out there, remember that you got no other planet to run to. Its wellness therefore should be your greatest concern.

*.Mukiri Hani  
Farmer and Designer.  
Meru-kenya.*



# moments

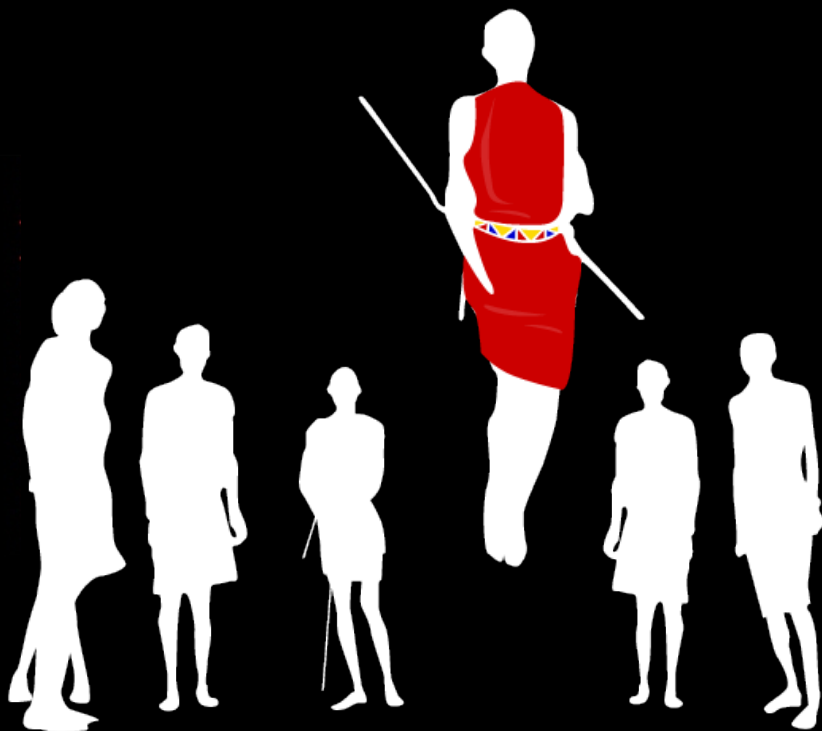
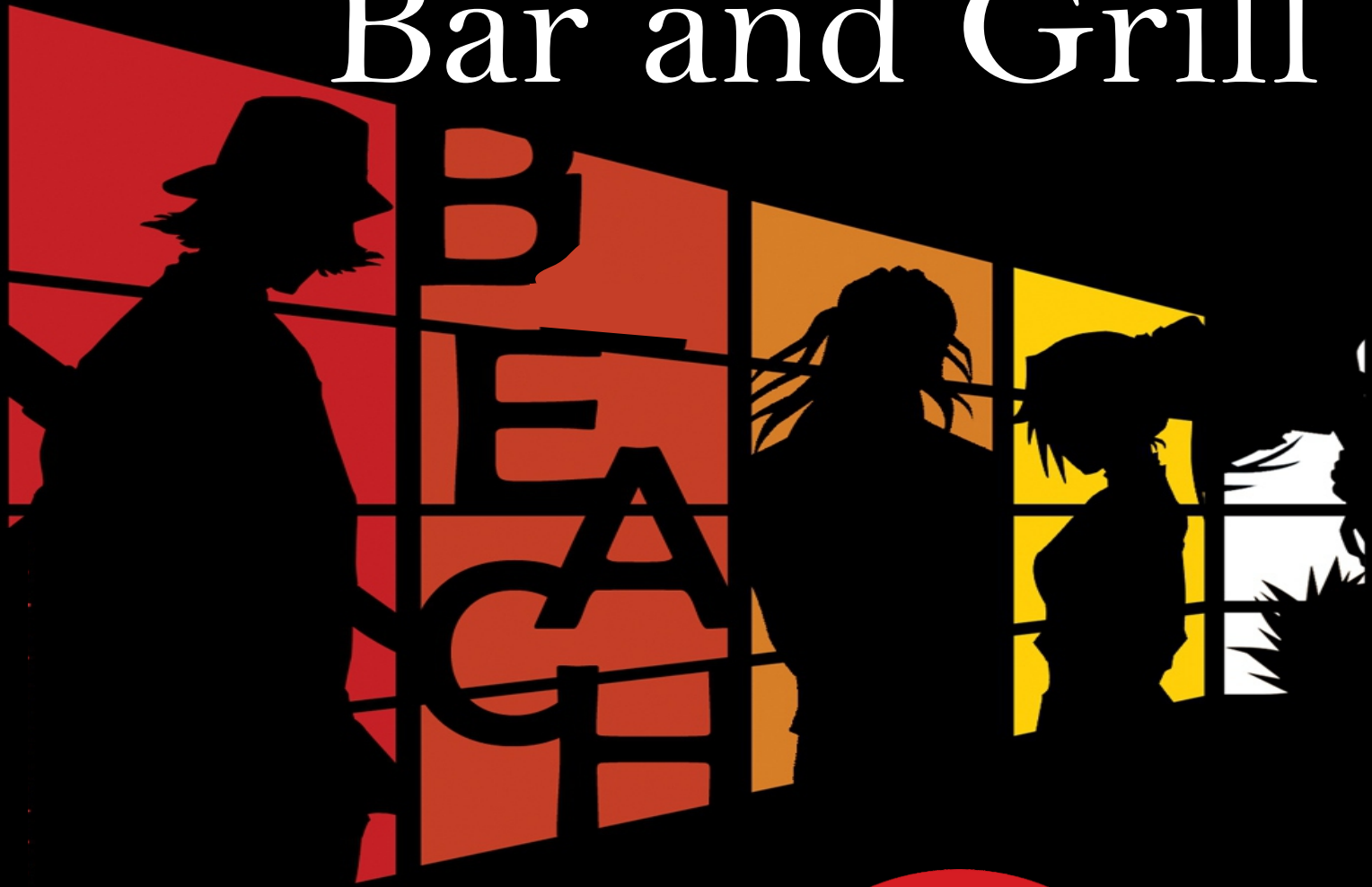


*Washingtonworks Photography*



# RED MASAI

## Bar and Grill



For delicacies,  
barbecue,  
variety of fruit juices,  
coast dishes  
entertainment,  
relaxation and more...

Visit us at South Coast Lungalunga border, Mombasa for a red experience

0723 965435/ 0772 056099

RIDE THE TIDES



AND DISCOVER THE  
MAGIC

Discover  
LAKE VICTORIA