

Editorial

Lets turn Trash into Cash

A couple of years back, there was this advertisement about a refuse collection firm. It read “If you are going to need a trash company, at least go for the best in the trash business”.

If there is one menace that is a major concern for all from the individual household levels right up to the political leadership of county governments, it is the management of solid waste.

To address these pressing concerns, NEMA in wide consultations with county governments and other stakeholders developed the National Solid Waste Management Strategy. This is the roadmap that will move us from the current sorry state of 80 per cent wastage and only 20 per cent re-use to vice versa.

This quarter the Authority held another consultative meeting with CECs in charge of environment in county governments to ensure that the roll out of this strategy is successful.

In the past, every time rains fall hard in the cities, the resultant flooding in the streets has partly been blamed on lack of proper solid waste disposal. When we through all sorts of trash out of the car windows, we do not take a second to realize the impact of our actions. Only to be on the same road weeks later to find that we are marooned. We will need every Kenyan to up this collective duty of proper solid waste management right from the household level by embracing waste segregation so that we can make cash from trash.

As a country we must come up with ways to mitigate and create resilience for the effects of climate change. In this regard, NEMA has achieved major milestones in the battle for climate change financing. This is evident in NEMA being the NIE for Adaptation Fund and the recently secured Ksh.1 billion to finance climate change projects in 14 counties in Kenya.

Keen to secure more funding for our suffering local communities, NEMA has also signalled its strong intention to be involved in yet another climate mitigation fund; the Green Climate Fund(GCF).

Based on NEMA's accreditation status with the Adaptation Fund, the Authority qualifies to undergo a fast-track accreditation with the new UNFCCC funding mechanism. It has already been nominated for this accreditation by the National Treasury who is the National Designation Authority for Kenya. Towards this end, NEMA has begun the accreditation application process with the GCF secretariat. We have more inside, dig in.

Despite the myriad of benefits that they provide, wetlands continue to be drained at an alarming rate, to provide space for agriculture, human settlement and urban development among other competing developmental needs. These changes have had significant and deleterious effects to wetland ecosystems and the people depending on them, due to pollution and the resultant loss of important ecosystem goods and services. Folks we got to do something and our Lake Victoria Environmental Management Project (LVEMP II) are on it. Be sure to catch the pivotal role that the project is playing to keep Lake Victoria, fresh-and alive.

Dear reader, dig in and please read on.
As always your feedback is most welcome.



Anthony Ngare
Ag Chief Corporate Communications Manager

Editorial

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Table of Content

NEMA, County Govt to deal with waste management.....	1
Nema Access Green Climate Fund	5
Homabay Green Point Launch	7
Nema ISO Certification	10
LVEMP Wetland protection	12
Nema holds workshop with media	14
Nema hands over RCE project	18
Sand Harvesting in Machakos	20
Waste worth billions	24
Wetland for our future	26
Stakeholders sensitization.....	30
Mitigation and Adaptation Measures	31
Waste Management	32



NEMA, County Governments in Solid Waste Management Deal

By Samwel Irungu



Dr. John Chumo Chairman CECs giving his address during the CECs meeting at KICC (Photo: Anthony Mwangi / Nema)

Solid waste management is a concern for all Kenyans. It is a vice that we all have to work together to deal with it successfully.

In this regard, NEMA is working with county governments to address the issue and a consultative meeting has been held.

The consultative meeting with the county executive committee members took place on 19th March, 2015 at KICC, Nairobi. The meeting marked a milestone in spearheading the management of solid waste in Kenya.

Some of the high profile guests present included; Mr. James Teko, PS MEWNR, Hon. Amina Abdallah, Chair, parliamentary committee on environment and Dr. John Chumo, Chairman CEC and CECs from various counties in charge of environment. Speaking during the meeting,

NEMA DG Prof. Geoffrey Wahungu said, "Solid waste management has for a long time presented a challenge with few counties having proper waste management systems in place. This is compounded by the emergence of new waste streams that are hazardous and more polluting to the environment and few have the proper knowledge of handling them."

He reiterated that the purpose of this National Solid Waste Management Strategy is to guide sustainable solid waste management in Kenya to ensure a healthy, safe and secure environment for all.

NEMA Board Chair, Mr. Maluki Mwendwa stated that the Solid Waste Management strategy seeks to establish a common platform for different stakeholders and lays the framework for improved waste management in Kenya. The county governments are the direct implementers of this strategy. Since the issues and challenges on waste management were found to be similar in all counties, the Authority felt the need to implement the strategy in all counties at the same time because this will have more impact and counties can find it easier to even pool resources and establish common infrastructure for waste disposal.

The chair reiterated that "We as an Authority are committed to improvement of our environment and would urge all the county governments to implement this strategy that looks at waste as a resource that can be used to create



Prof. Geoffrey Wahungu, Nema Director General giving his keynote address during the meeting (Photo: Samuel Irungu / Nema)

wealth and employment for our people.”

Mr. James Teko, PS MEWNR praised NEMA on its effort in developing the National Solid Waste Management strategy. He urged counties to embrace the strategy and implement it at their own level. “Waste has been a challenge for both national and county governments and a concerted effort should be put in place to address this menace,” the PS said.

Chairperson, Parliamentary Committee on Environment, Hon.Amina Abdallah urged NEMA Director General and staff to double their efforts in spearheading the promotion of eco-friendly technologies and best practices on waste management in all County Governments across the country. However, the County Governments are encouraged to invest in elaborate waste management systems to ensure efficient and effective collection, segregation, transportation, recycling and disposal of waste.

Amina added that the National Solid Waste Management Strategy engages the county governments to integrate their plans, programmes and



Hon Amina Abdallah, Chair, Parliamentary Committee on Environment, addressing participants during the event (Photo: Anthony Mwangi / Nema)

strategies with all the necessary environmental safeguards at this early opportunity when the counties are taking off. She urged Governors to take advantage of this process and adopt these plans once tabled at their respective County Assemblies. She reiterated her support together with the committee in this initiative by providing policy direction, formulating legislations and ensuring oversight role in financial

matters.

During the plenary, leaders and CECs from different counties expressed their concern over the increased solid waste and thanked NEMA for coming up with this strategy that will go a long way in spearheading the management of solid waste.

The writer is a corporate communications officer at Nema



Mr. Maluki Mwendwa NEMA Board Chair giving his remarks during the CECs meeting on solid waste management strategy (Photo: Anthony Mwangi / Nema)

NEMA's journey to access Green Climate Fund (GCF)

By Emily Muthoni



Dr. Ayub Macharia, Director EEI & PP making his presentation at the GCF workshop (Photo: Emily Kariuki / Nema)

Climate change is one of the major menaces facing the country today. As a country we must come up with ways to mitigate and create resilience for the effects of climate change.

In this regard, NEMA has moved milestones in the battle for climate change financing. This is evident in NEMA being the NIE for Adaptation Fund and the recently secured Ksh.1 billion to finance climate change projects in 14 counties in Kenya.

Never the less, climate Change Adaptation costs are beyond the budgetary scope of National and County governments in most developing countries. This is because adaptation in most cases requires major infrastructural investments and assets

Where it started:Steps to the accreditation process

In this regard, the Green Climate Fund mission visited NEMA in December 2014 accompanied with officials from the National Treasury in their role as a National Designated Authority (NDA) for Kenya. In this meeting NEMA was requested to start its accreditation process for GCF funding.

Based on NEMA's accreditation status with the Adaptation Fund, the Authority qualifies to undergo a fast-track accreditation with the new UNFCCC funding mechanism known as Green Climate Fund (GCF). It has already been nominated for this accreditation by the National Treasury who is the National Designation Authority for Kenya. Towards this end, NEMA has begun the

accreditation application process with the GCF secretariat.

GCF is a new finance mechanism recently adopted by UNFCCC to support climate action in all developing countries parties to the Convention. This Fund seeks to provide simplified and improved access to funding, including direct access, basing its activities on a country-driven approach.

As NEMA works on the accreditation process, GCF also advised NEMA to submit potential project proposals for funding under the GCF. After this meeting, an internal decision was taken that development and prioritization of these proposals must involve the consultations with all government organs. GCF workshop

It is with this background that NEMA organized a Government wide stakeholder's workshop to generate project concepts for submission to the GCF secretariat. This consultative workshop organised by NEMA was held at Utalii on 5th – 6th of March and was a success. The workshop brought on board institutions of higher learning, Government ministries, Government Agencies, Government Development Authorities that are mandated in various aspects of development and environment to help in the development of project concepts that are to be submitted to the GCF secretariat for funding considerations.

land use, livelihoods of people and communities, infrastructure and built communities, and ecosystems and ecosystem services.

Different themes were developed that would guide the participants in the brainstorming process of the concept notes. Groups were then developed that were headed by representatives from the lead agencies that have been mandated and well capacitated to deal with that area.

Arising from the above thematic clusters, the participants went through a rigorous brainstorming process from which seven concept notes were drawn. (Presentation of these concept notes were later

concept notes will then be presented to the NDA for Kenya which is the National Treasury for endorsement. There after they will be submitted to the GCF secretariat as the official concepts for funding consideration using direct access modality through NEMA.

Key facilitators

There were 4 main presentations delivered during this workshop namely; Green Climate Fund Architecture and Kenyan updates, Kenya's Country priority intervention areas on climate change, Experiences on climate finance in Kenya - Adaptation Fund, and UNEP/UNDP/WRI climate finance readiness programme.

The first presentation was delivered by Mr. Peter Odhengo from the National Treasury, while the presentation on country priorities was given by Fatuma Hussein, the head of Climate Change Secretariat at the MEWNR. On the other hand, Timothy Ranja, UNDP made a presentation on climate finance readiness while Wangare Kirumba, NEMA shared with the participants on climate financing in Kenya.

All the presentations were geared towards creating a perspective on climate financing.

The accreditation process is expected to be complete by June, and therefore the concept notes will have been submitted before then to the GCF Secretariat funding proposals.

The writer is an intern at NEMA 's Corporate Communication Office



Participants in a group discussion during the workshop
(Photo: Emily Kariuki / Nema)

GCF concept notes development In the workshop the methodology employed for developing these concepts was clustering these institutions according to areas of competencies. Seven thematic clusters were formed namely; energy access and power generation, transport, buildings, cities industries, appliances and waste management, forestry and

shared with all the participants in a plenary session). This generated strong discussions around the concepts and a lot of feedback and input was given. The authors of these concepts were requested to incorporate the new inputs into the concept notes and submit to NEMA - NIE secretariat for review.

It is planned that developed

Homa Bay Green Point Launched

By Anthony Ngare



Denmark's Ambassador to Kenya HE Geert Aagard Andersen is assisted by Nema Board of Management Chairman Mr Maluki Mwendwa to cut the tape to officially open the Homa Bay Green Point.
(Photo: Anthony Ngare / Nema)

It was pomp and colour as the first NEMA Green point west of Rift valley was inaugurated in Homa Bay County in mid-January.

The green point, which has taken just two years to put up, is strategically placed in one of Homa Bay town's respected address; along Hospital Road just behind the Governor's office.

Speaking during its inauguration, the guest of honour the Denmark's Ambassador to Kenya His Excellency Geert Aagard Andersen said the establishment of green points in Kenya is a game changer in the way we deal with environmental management as well as promotion of green technologies.

"This centre is demonstration of our future thinking. In the coming years between 2015-2020 we will continue to support Kenya in environment and sustainable growth where young Kenyans can get jobs as well continue to promote for environmental conservation."

He also noted that climate change is an emerging issue not just for Kenya but for other countries in the world. "Climate Change is a major concern for everyone. There are lots of heavy rains back in my country in Denmark. The rains are falling in a way that we have never witnessed before. Here as in Kenya as in many parts of Eastern Africa, prolonged drought is a concern and I'm aware the Kenyan Government has active in dealing

with climate change."

The ambassador reiterated that climate change is an agenda for all the nations of the world.

He also added that the Royal Government of Denmark through Danida is keen to establish more green points so that many other counties can benefit from such a centre.

Speaking at the same event, County Executive Committee member for Environment, Hon Catherine Yambo, who represented the Homa Bay County Governor H.E Cyprian Awiti, welcomed the project saying it comes at a time environmental degradation is causing havoc across the globe. "The effects of Global warming are already taking its toll on natural



Denmark's Ambassador to Kenya H.E. Geert Aagard Andersen (C) is flanked by NEMA Board of Management Chairman Mr Maluki Mwendwa and Environment Secretary Dr Alice Kaudia when they paid a courtesy call to Gov. Homa Bay County office HE Cyprian Awiti (Photo; Anthony Ngare / Nema)

resources and The Climate Change is wreaking havoc as human beings continue to destroy the environment,' noted Hon Awiti in his speech delivered by his CEC.

"It is my firm submission that environmental conservation campaign must be treated as an emergency because in the next few years, we will not have rivers, forests and even grazing fields. Our seasonal rivers are dying because watertowers are being destroyed. Birds that used to sing in the forests to announce the onset of rainy seasons have disappeared. We now have prolonged dry spells more than ever before." reiterated Hon Awiti

It is worth noting, the Governor continued, that our main source of livelihood- Lake Victoria is heavily polluted and can hardly sustain life.

"As a government, I wish to assure you that we are very committed in environmental campaigns as explained in our County Integrated Development Plan." he

declared.

The governor also noted that to help control pollution of the lake, the Homa Bay Sewerage Plant is currently undergoing total face lift and work is expected to end in the next few months.

"We are also in the process of enacting laws that will regulate mining of natural resources such as sand, building stones and minerals to help protect the environment. One such legislation will stop mining of sand at night. It will also criminalize mining in already degraded areas."

Gov. Awiti was optimistic that the centre will create a platform where local communities can benefit from a structured public – private collaboration. "It will also help in greening our county through waste management and renewable energy", he added.

He concluded by assuring NEMA that his government would fully support the Homa Bay Green project to ensure it achieves its objectives.

On his part NEMA Director General Prof Geoffrey Wahungu noted that these centres are meant to demonstrate green practices in and of themselves though their designs and deployments of different green technologies.

"Additionally, they will serve as interfaces for dialogue with the county governments, business sector and local communities on matters patterning to environmental management and 'green businesses'" Said Prof Wahungu.

NEMA Board Chair Mr Maluki Mwendwa noted that the Homa Bay Green point centre will go a long way in raising NEMA's profile in the region, and enhance the Authority's capacity to undertake its mandate besides improvement in service delivery to wananchi.

"I sincerely thank the government of Denmark through Danida, for this magnanimous gesture; this is one out of six such centres built across the country and several more are in the pipeline." Mr Maluki added.

As in any other green point, services to be offered at Homa Bay Green point includes NEMA operational functions such as review of licensing and inspections, among others, advisory functions to county government, business people, and the wider community, exhibitions of appropriate green technologies by the local business community as well as act as an environmental information resource centre.

The earth is under extreme pressure to meet the food, energy, water and other demands of an expanding global population that has surpassed the 7 billion mark. This goes with the attendant



NEMA DG Prof Geoffrey Wahungu introduces senior NEMA managers during the Homa Bay Green Point Launch. [PHOTO: ANTHONY NGARE / NEMA]

WHAT IS A GREEN ECONOMY?

increase in the emission of pollutants to the atmosphere. The global population needs to live within the earth's limits. This is because the earth's resources and its ability to cope with the waste we generate is finite. There is a universal call for countries to embrace the green economy concept i.e. one that is inclusive, resource efficient and low carbon. These are matters that are critical importance to Kenya, as she enters a period of ambitious growth across all sectors as envisaged in Vision 2030.

WHAT IS A GREEN POINT?

The green points have been conceptualized in order to practically interpret the green economy concept in our context here in Kenya. The design and function is meant to lead to as small an ecological footprint as possible. This will be achieved by incorporating aspects such as rainwater harvesting, waste water recycling technologies, low energy consumption, among other features. In the initial phase, five green points have been put up across the country; in Homa-Bay, Isiolo, Embu, Taita Taveta and Kilifi. Plans are underway to develop others across the country. The Green Points have been constructed through funding support from Danida.



Nema Board of Management Chairman Mr Maluki Mwendwa makes his remarks at Homa Bay Green point launch. (Photo: Anthony Ngare / Nema)

The writer is NEMA's Ag Chief Corporate Communications Manager

NEMA Retains ISO Certification!

By Anthony Ngare

The National Environment Management Authority was first ISO certified in 2011 by world renowned Bureau Veritas and the process to retain the certification started in earnest in the first quarter of the current financial year.

The efforts that the entire NEMA family put in place for retain the prestigious certificate have been rewarded. NEMA has been ISO 9001:2008 recertified for the next three years starting in 2015.

The Authority has put in place several relevant documents which include Quality Management System (QMS), Quality Manual and Standard Operating procedures (SOPs). The QMS ensures control of NEMA processes to achieve product and service conformance in a repeatable manner.

To prepare for the audit that would eventually lead to retaining the ISO certificate, the Authority had to undertake two internal ISO audits. These audits established the status of the systems and ISO procedures. To further tighten the Standard Operating Procedures (SOPs), the NEMA ISO auditors, drawn from all the departments painstakingly spent three days combing through the SOPs and the departmental quality objectives with a toothpick.

At the end of that exercise, the NEMA ISO auditors were confident that they had put up a sufficient defence of the 'title'. And they were right. When the team from Bureau Veritas landed at NEMA, they found an institution that had properly greased their systems and fine-tuned their systems. Safe for a few non conformities, that we resolved and closed in a matter of days, it was

smooth sailing. Even the Nairobi County office, as if reading the same script and keen to emulate the head office operations passed the ISO audit examination with flying colours.

The ISO 9001 standard outlines a process approach to implementing and supporting a quality management system. As a result, there is increased involvement of top management with regards to the Quality Management System. Top Management is engaged for the setting of the Quality Policy and Quality Goals and Objectives. It continues with Management Review looking at data from the QMS, and taking actions to make sure that Quality Goals are met, new Goals are set, and continual improvement is achieved.

THE ROLE OF THE QMS SYSTEM

With the QMS in place and working for you, the organization is focused towards the Quality Goals. Management is provided with data on a continual basis and able to see progress or lack of

progress towards goals and take appropriate action. The organized, scheduled process of conducting Management Review ensures that this evaluation takes place. It provides the mechanism of

reviewing goals and performance against goals on a scheduled basis, and for taking action based on the evaluation.

The Results of Certification to ISO 9001

- Well defined and documented procedures improve the consistency of output.
- Quality is constantly measured
- Procedures ensure corrective action is taken whenever defects occur.
- Defect rates decrease
- Defects are caught earlier and are corrected at a lower cost.
- Defining procedures identifies current practices that are obsolete or inefficient.
- Documented procedures are easier for new employees to follow.
- Organizations retain or increase market share, increasing sales or revenues.

THE BENEFITS OF ISO 9001 CERTIFICATION

A well designed and implemented Quality Management System, based on ISO 9001 has been shown to provide organizations with the following benefits:

- You will have consistent, repeatable processes and a common system.
- You will have fewer problems with failures in service or product quality.
- Your people know what to do and how you want it done.
- You will have more business, because you can sell to new markets or having the endorsement will distinguish you in the marketplace.
- You will know more quickly if things are going wrong, and where; you stop spending money or wasting time on the same old problems.
- Many problems will disappear because you know how to prevent them; if they do come up, you will know how to fix them faster.
- Better management control and reporting - which means that you know how your business is doing.

1. ISO 9001 DOCUMENT REVIEW

This is the first step in assessing your quality management system. Your ISO 9001 auditor compares your documented system with the requirements of the ISO 9001 standard. Documentation must be approved before certification can be granted. The document review is normally conducted on-site but may be conducted off-site.

2. ISO 9001 PRE-ASSESSMENT

You may opt to have your ISO 9001 auditor conduct a “pre-assessment” designed to prepare you for the ISO 9001 certification assessment. During this step areas of concern are identified up front and addressed.

There Are Two Types Of Pre-Assessments:

- **Desk audit:** This is primarily an over-the-desk audit, with limited access to records. It assures that you understand and correctly apply the ISO 9001 standard. You receive a written report. This option offers balance by being cost effective, yet comprehensive.
- **Dress rehearsal:** This is an abbreviated version of the ISO 9001 certification audit. Personnel are interviewed; objective evidence is gathered and evaluated.

Your ISO 9001 auditor takes you through the audit process, and provides immediate feedback on your quality system. This alternative is more detailed and lengthy. It reflects what you will encounter during the certification audit.

3. PREPARING FOR THE ACTUAL ISO 9001 AUDIT

Prior to conducting an ISO 9001 certification audit, the following should have taken place:

- The documented system has been reviewed by your ISO 9001 Registrar.
- A complete cycle of internal audits has been performed and the results covered subsequently in a formal management review.
- All pre-identified weaknesses in the system have been effectively corrected.
- The certification assessment date, audit team makeup, and audit schedule have all been developed and agreed upon.

4. ISO 9001 INITIAL ASSESSMENT

The quality certification assessment for ISO 9001 has two main goals:

- Validate the system compliance and implementation.
- Determine system effectiveness.

Additional reporting from Intranet.

*The writer is NEMA's Ag Chief
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LVEMP II Role In Wetland Protection and Conservation

By Solomon Kihui

In Kenya, wetlands cover approximately 14,000 km² (ca 3-4%) of the land area of the country.

They are rich in living and non-living natural resources, and are important sources of food, water, medicinal plants, fuel wood, materials for building and handcrafts. Wetlands also plays an important role in regulating water flow, groundwater recharge, water storage, filtering of nutrients and pollutants, shoreline and microclimate stabilization and are of exceptional importance as habitats for large number of species especially birds.

Wetland habitats are also of high economic importance for provision of water and fisheries. Wetlands in arid and semi-arid lands are an

important refuge for grazing.

Despite the myriad of benefits that they provide, wetlands continue to be drained at an alarming rate, to provide space for agriculture, human settlement and urban development among other competing developmental needs. These changes have had significant and deleterious effects to wetland ecosystems and the people depending on them, due to pollution and the resultant loss of important ecosystem goods and services.

Ensuring sustainable wetland management is not only an international obligation under the Ramsar Convention, but fulfills the achievement of the Millennium Development Goals (MDGs), on poverty eradication and environmental sustainability

and post 2015 Sustainable Development Goals (SDGs), regional level commitments such as sustainable environmental and natural resource management as provided for under the East African Community Treaty and the protocol on Environmental and Natural Resources Management.

The Ministry of Environment, Water and Natural Resources (MEW&NR) continues to recognize the role wetlands play in the economy of this country and therefore has put in place the requisite legislations and policy frameworks to govern environmental and natural resource use in accordance with the Constitution of Kenya 2010 and the development blue print, Vision 2030. The Ministry has



NEMA Board Member Mrs. Agnes Yobuterik and CEC-Environment Kericho County during the Launch of Tienosoyiet Wetland Management Plan. Looking on from Left is Eng. Langat, Chief officer Environment Kericho County, Mr. Steven Katua, Deputy Director, CMF-NEMA, Mrs Mbula, LVEMP II, CDE Kericho County Mr. Palapala Muteshi and LVEMP II Environment Specialist Mr. Solomon Kihui.

embarked on the following strategic interventions in order to reverse wetlands degradation in Kenya: Development of a national Wetlands Policy which seeks to provide guidance on wise-use of wetlands, production of a Wetlands Atlas, which provides reliable and up-to-date visually oriented information regarding wetlands. Additionally, the Atlas provides succinct account of what is happening to various wetlands in Kenya and possible mitigation actions.



Mr. Stephen Katua, Deputy Director, Coast Marine and Fresh Waters at NEMA planting a tree during the Launch of Tienosoyet Wetland Managemnt Plan in Kericho County .

The project's Milestones in Wetlands Management

LVEMP II- Kenya is spearheading the rehabilitation and restoration of Ombeyi, Tienosiyoiyet, Kingwal and kibirong Wetlands in the counties of Kisumu, Kericho and Nandi. The expected output is reduction of Non-Point Source Pollution through community SLM practices. The project has successfully developed four Wetlands Management Plans for Ombeyi, Kingwal, Kibirong and Tienosoyet. These the plans will guide wise use, management and sustainable exploitation of Wetlands resources. This will enable Natural Resources Conservation and Livelihoods Improvement in the Wetlands.

The Integrated Wetland Management Plan (2014-2018) sets the motion for consolidating stakeholder's efforts towards

effective and efficient wetland resource use for posterity. The implementation of the various programmes and actions set forth in this plan, envisions sustainable wetland management by halting the current degradation and loss of essential benefits that this wetland provides.

LVEMP II has started implementing action points/ activities identified in the wetland consultative workshops and the Meetings held with Project Implementation Committee (PIC), NEMA and Kenya Forest Services officials i.e. Mapping and Zonation, training of trainer's workshop targeting PIC members and CDD sub projects. Planting of Bamboo and indigenous tree seedlings is also one of the action points identified for sustainable management of the Wetlands. LVEMP II is spearheading planting

of bamboo and other assorted indigenous seedlings. Provision of alternative livelihoods through procurement of beehives and introduction of fish farming to the wetland communities is ongoing.

The writer is an Environment Specialist at LVEMP II Kenya



NEMA holds a Workshop with Mainstream Media Houses

By Samuel Irungu



Journalists and some members of Nema Management team during a workshop at travellers beach hotel (Photo: Samuel Irungu / Nema)

In order to continually keep the regulated community informed of the latest in matters environmental, NEMA routinely engages the media.

Towards the end, NEMA held a media workshop on 31st March to 1st April 2015 at Travelers Beach Hotel, Mombasa. The event brought together media personalities from various media stations as well as directors, deputy directors and staff from NEMA. The workshop was organized by the corporate communications section.

The objective of the workshop was to create synergy towards environment reporting as well as orient the media on what NEMA does as the principal instrument of government for the implementation of all policies relating to environment.

While opening the workshop, NEMA Director General Prof. Geoffrey Wahungu acknowledged the fact that Kenya is facing a myriad challenges

such as over-extraction of water, eutrophication, fragmentation of land, deforestation of major water catchment areas, overgrazing, invasive species, over-exploitation of wetlands goods, such as fish and plants, drainage for infrastructure and climate change.

Unfortunately, these challenges are rarely reported. He said, "Crimes such as corruption are given more than their fair share of the media, political, and enforcement attention while environmental crimes are generally ignored unless the consequential result has immediate adverse effects"

The DG stated that NEMA has established systems through which environmental crimes or incidences can be reported by the public. He added that there are incident hotlines established to facilitate processing and managing incidents reported to the Authority using Risk-based approach.

Once received, such incidences are categorized and classified

according to their impacts on the environment and NEMA resources. Action is then taken to address the incident to avert environmental degradation.

Prof. Wahungu acknowledged the critical role the media plays in creating and enhancing awareness. He stated that media is the right channel through which the public can learn more on environmental matters.

He added, "NEMA is therefore looking forward to a more informed coverage of environmental matters across the media networks with news reports on prevention and prosecution of environmental crimes in Kenya". He also called upon journalists to come up with initiatives and report environmental stories to raise public knowledge on the state of the environment.

The Ag. Director Compliance and Enforcement, Zephaniah Ouma addressed issues of compliance in relations to matters of

environment which elicited a lot of debate among the participants. Majority of journalists wanted to know the licensing process and how NEMA handles complaints from the public. Responding to the queries from the journalists, Ouma outlined the areas that NEMA covers as well as areas where the Authority works in collaboration with other government Agencies. He also requested media to create an environmental desk in their media houses for environmental reporting.

Director Legal Services, Ms. Irene Kamunge stated that the Authority has been working with the Judiciary and the Office Director of Public Prosecutions (ODPP) to strengthen civil and criminal prosecution of environmental crimes in Kenya. Regarding role of NEMA in construction sector, Kamunge said that NEMA receives designs of the buildings but its main concern is on the environmental aspects. She said that other aspects that are not within NEMA's mandate are dealt by relevant lead agencies.

Various resolutions were made during the workshop which included that; NEMA technical officers and journalists should work together so that they can be able to write and air more elaborated stories, NEMA should organize a visit to Ngong dumpsite, NEMA management should be available to work with journalists to respond to some of the issues related to environmental stories and media should be invited during the presidential launch of the waste management strategy.

Dr. AyubMacharia, Director EEI & PP focused on some of the mega projects that NEMA has been undertaking such as Adaptation Fund, Green Climate Fund, Regional Centres of Expertize

(RCE) among other local projects that the Authority has been undertaking such as the Ngong dumpsite project among others.

Mrs Betty Nzioka, deputy director EA & PP explained some of the awareness projects that the Authority has been undertaking as well as how the Authority engages the public on various platforms such as participation on world environmental days, trade fair, and public hearings shows among others.

During his presentation, Mr. Izaak Elmi stated that one of the biggest challenges facing wetlands is encroachment as a result of lack of proper enforcement on the existing regulations on wetlands management. Mr. Elmi stated that NEMA in collaboration with other agencies has mapped out all wetlands in order to have them gazetted and hence protected from human activities.

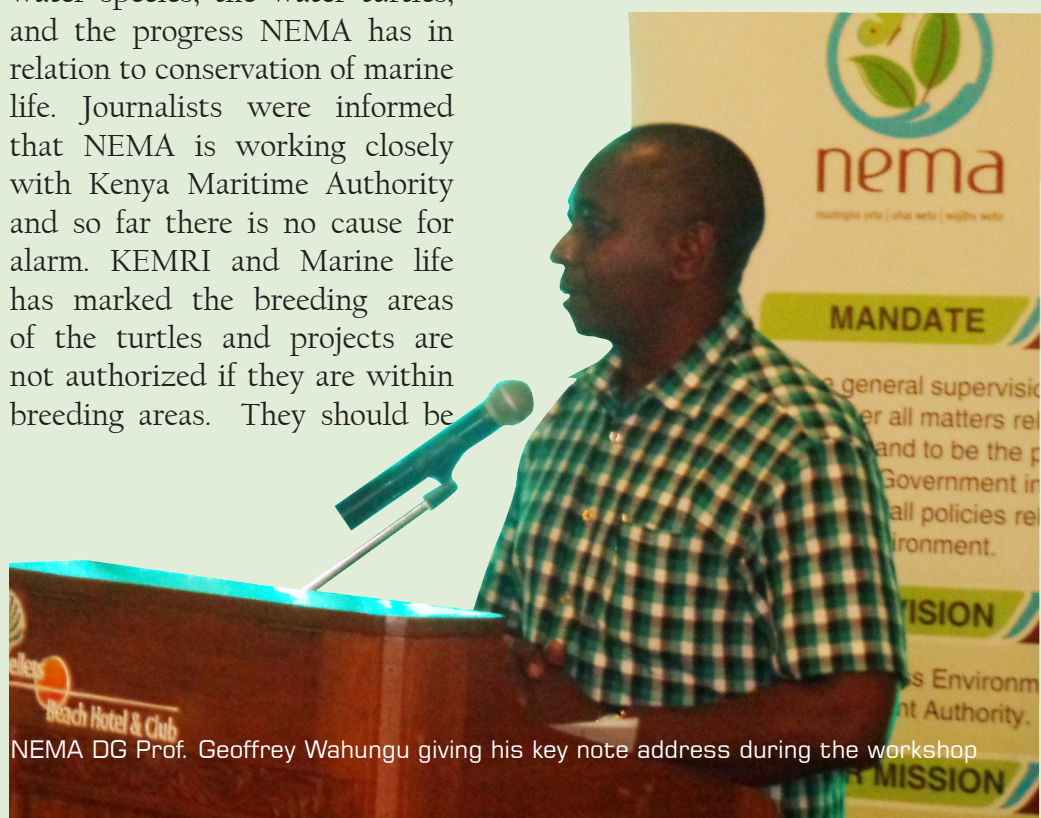
He also addressed the issue of boreholes that have been dug without following the right regulations that are health risks.

Journalists also wanted to know what NEMA is doing to protect marine life such as some of the water species, the water turtles, and the progress NEMA has in relation to conservation of marine life. Journalists were informed that NEMA is working closely with Kenya Maritime Authority and so far there is no cause for alarm. KEMRI and Marine life has marked the breeding areas of the turtles and projects are not authorized if they are within breeding areas. They should be

6m and maximum 30 to 60m along coastal water mark, Mr. Elmi added.

In his closing remarks, the Director, Finance and Administration, Mr. Kennedy Ochuka informed participants that the Authority has made strides in working with the public through various platforms. He added that the workshop offered an opportunity for NEMA to work closely with the journalists as better relationship and networks have been created.

The writer is a Corporate Communications Officer



NEMA DG Prof. Geoffrey Wahungu giving his key note address during the workshop



Denmark Ambassador to Kenya H.E Geert Aagard Andersen joins Kochia Traditional Dancers in a jig during Homabay Greenpoint launch(*Photo: Anthony Ngare / Nema***)**



Mr. David Ongare, The RCE Africa Pre during the event (*Photo: Anthony Ngare / Nema***)**



From left: NEMA boardchair, Mr. Maluki Mwendwa, Dr. Ayub Macharia, director EEI & EI and NEMA DG Prof Geoffrey Wahungu during the World Wetlands Day in Nandi (*Photo: Eric Nyaga / Nema***)**



Participants during Kenya 's 2nd RCE conf



President addressing participants
 (Photo: Tony Mwangi / Nema)



Prof Geoffrey Wahungu, NEMA DG planting a tree during the WWD at Nandi
 (Photo: Eric Nyaga / Nema)



Conference (Photo: Samwel Irungu / Nema)



Some of the high profile guests present during the World Wetlands Day celebrations including Nandi Gov. Dr. Cleophas Lagat, KWS Director William Kiprono, Nema Chair & DG
 (Photo: Antony Mwangi / Nema)

NEMA hands over RCE Central Kenya Project to Community

By Dr Ayub Macharia & Anthony Ngare

The National Environment Management Authority (NEMA) in its bid to work with partners in order to build and nurture strategic partnerships, aimed at enhancing sustainable management of environment handed over a capacity building project for communities in Kieni Sub County by the RCE central Kenya.

Speaking during the event on behalf of NEMA Director General Prof Geoffrey Wahungu, NEMA Director in charge of Environmental Education, Information and Public Participation Dr Ayub Macharia said he was pleased, to hand over to the community some investment done on Climate

Change Adaptation by NEMA in collaboration with our partner Dedan Kimathi University of Technology (DEKUT).

“This project is undertaken within the wider framework of RCEs. NEMA has been spearheading the establishment of RCEs as platforms to spearhead sustainable development initiatives in the country.”

An RCE is a network of existing formal, non-formal and informal education organizations mobilized to deliver ESD to local and regional communities. RCEs are Centres that bring together organizations at local / regional level to jointly promote ESD.

Kenya now hosts nine RCEs

of which seven have been acknowledged by the United Nations University. Kenya has the highest number of RCEs in Africa. Dr Macharia thanked DEKUT for being one of the recently acknowledged RCEs (in November 2014) and for being one of the active players in climate change adaptation through this project.

“The project we hand over to the community is one among several projects funded by NEMA through RCEs. In the last two years, NEMA has disbursed Ksh 6.5 Million to six RCEs to fund diverse initiatives:

Some of these initiatives for the financial year 2013/14 that totalled nearly Sh2.5 million include:

- RCE Pwani for development of the Botanical Garden at Pwani University (1.5 Million). The project serves three purposes namely Educational, Recreational and Research.
- RCE Central through Dedan Kimathi University of Technology (Kshs. 500,000). This was to support Climate change project for communities and schools in Central Kenya
- RCE Mau Complex Ecosystem through Egerton University (Kshs. 500,000). This was meant for training communities and schools and implementing climate change activities in schools

In 2014-2015 NEMA has so far spent Sh 4 million. Some of the projects include:

- RCE Nyanza through Maseno University (Kshs 1,000,000) for management of E-waste in the greater Nyanza Region
- RCE Mount Kenya East through Kenya Methodist university (Kshs 1,000,000) for management of wetlands/river rehabilitation
- RCE North Rift through the University of Eldoret (Kshs 1,000,000) for management of wetland areas and rehabilitation.
- RCE Pwani through Pwani University (Kshs 1,000,000) for further improvement of the Botanical Garden

“Every year, we request RCEs to send applications to NEMA to be considered for funding. The projects are meant to steer actions at the local level to promote sustainable development. NEMA is keen to fund those projects that demonstrate innovation and collaboration and this explains why this project was chosen” said Dr Macharia.

The project on ‘Capacity Building on Adaptation to Climate Change for Communities in Kieni Sub-County’ was funded by NEMA, following a successful proposal application by Dedan Kimathi University of Technology for the activities of RCE Central Kenya. The project was awarded Kes.500, 000 (Five Hundred Thousand) and this amount was disbursed through NEMA Nairobi Regional office. The project aimed at educating the local communities on environmental issues and how to adapt to climate change through water harvesting.

Kieni sub - County was selected due to its dry conditions and adverse effects of climate change in the area. The area has very low water harvesting initiatives both at family level and institutions of learning. The institutions offered better demonstration centres since the catchment is larger and benefits a wider population.

The project was commenced in August 2014 following an inception meeting held in August, 2014. The project period was expected to be three months but it was extended since it was behind schedule to mid-November.

To ensure that the initiative goes on smoothly various planned activities had taken place such as assessment of water resources in Kieni East and Kieni West of

Kieni sub-county and recruitment and mobilization of community members within the identified project sites prior to the handover of the project.

“I am informed that the identified project sites included Labura Primary School, Labura Secondary School, Mweiga Adventist Secondary School and DeKUT Farm which has a large catchment of employees from Kieni who can adopt the technologies.

So far installation of the water tanks and gutters has been done in the above institutions. 6000 litre tanks have been installed each at Labura primary, Labura secondary, Mweiga Adventist secondary schools and 8000 litre tank and gutters installed at DeKUT farmhouse. Today, we are here to hand over this project to the project beneficiaries,” noted Dr Macharia.

Dr Macharia reiterated that climate change is the biggest challenge of our time and appealed to the university to spearhead development of more innovative bankable proposals to secure funds to undertake more climate change activities for the benefit of the community. He promised that NEMA on its part would be a good partner even though the resources may be minimal.

In 2012, NEMA was recognized as a National Implementing Entity under the Adaptation Fund of the UNFCCC and this year NEMA will be rolling out climate change interventions worth Kshs 1 billion funded from the Adaptation Fund. NEMA will implement these projects in collaboration with 11 (eleven) other institutions.

NEMA is also in the process of developing other proposals to access more funds for climate change interventions under the Green Climate Fund of the UNFCCC.

The writers are NEMA Director for Environmental Education, Information & Public Participation and Ag Chief Corporate Communications Manager respectively.



A group photo during the second RCE conference at KICC
[Photo; Samwel Irungu / Nema]

Towards Sustainable Sand harvesting in Machakos County

By Kennedy Odhiambo & Kimitei Isaac

Machakos County is one of the key suppliers of sand in Nairobi booming construction business.

The county is endowed with immense sand resources that are essential in current development of Kenya. Sand as a resource is found in most rivers within the county. Sand is usually harvested through two main ways; Riverbed harvesting and farm harvesting.

Apart from sand being used in construction sector, sand also acts as storage medium for water in rivers because it traps water for domestic use during dry seasons. Sand harvesting is one of the major and booming activities in the county which has led to enhancement of economic status of those involved in the selling of the resource. Over the decades sand from the lower eastern parts

of Kenya has been known to be the best for use in the construction industry. It is because of the increased rate of urbanization and the proposed major cities around Nairobi like the Tatu city and Konza ICT city; that the demand for sand will definitely continue to go up.

This has led to the question; are we depleting Ukambani to build Nairobi and how do the community benefit from sand harvesting and yet secure access to water from the same rivers. Sand harvesting in the county has seen some sub-counties such as Mwala have a security issues due to conflicts arising from different self help groups which have opened toll stations to collect levy from sand along Thwake river which covers Kathiani, Kangundo and Mwala sub-counties.

The groups have undertaken illegal sand harvesting activities without proper authorization from the relevant authorities such as NEMA and WRMA which has caused degradation and conflicts between some of the groups and community members since the money collected from toll stations is not accounted for.

Sand harvesting activities have endangered infrastructure in the county as harvesting is also done under the bridge which pose a great danger to the people using the bridge. Electricity poles are also at a risk of falling due to pressure and force emanating from constructed dams for conservation of water along the river.

The land degradation mostly comes as a result of sand harvesting activities within the county from



Residents from Machakos County lineup to fetch water (Photo: Kimitei Isaac / Nema)

the farmlands and rivers that flow through the county. This has resulted in many rivers to change their course and as a result the county undergoes water shortage and people are forced to walk for long distances in search of that necessity. The activity has become a day to day activity to an extent of being a norm within the county which has led to many young men to drop-out of schools and as a result has lead serious problems within the communities.

The activity has led to high change of our environment leaving huge

destruction to the previous known environment. Loss of safe water and destruction of aquifers are some of the results of unsustainable sand harvesting.

The soil erosion, soil instability, aquatic ecosystem, water quality and quantity are adversely affected from the activity. Land that could be used for agriculture to save the Machakos County from hunger has been seriously degraded. The local community gains the least from sand harvesting, but stands to suffer the most if the degradation of the river system continues.

To ensure proper management of environment we have to balance the economic benefits which are for a short while and environmental consequences which are long lasting and their consequences. With the current rate of urbanization and industrialization, developments are increasingly overlooking the environmental sustainability. We surely forget what sustainable development means. As much as we are putting scars on the environment we are forgetting the pain that will directly come upon us.



Sites Showing effects of sand harvesting in the county

Despite the challenges above, the county government of Machakos has enacted The Machakos County Sand Harvesting Act, 2014 to regulate sand harvesting and related activities and to ensure sustainable exploitation and utilization of sand, to provide for equitable sharing of the accruing benefits and for connected purposes. The objectives of the act include:

- (a) Ensure the registration of sand dealers and sand harvesting Associations;
- (b) Designate sand harvesting areas, sand harvesting hours and sand transportation methods;
- (c) Provide for the institutional framework for management and regulation of sand harvesting;
- (d) Provide for the rehabilitation and protection of the environment from harmful effects of sand harvesting and related activities;
- (e) Provide for benefit-sharing and investing back to the community part of the revenue collected from sand harvesting; and to enable communities to participate in the management of sand harvesting.

The act has also established structures to guide the administration of the act. This includes the county sand harvesting committee chaired by the County executive in charge of Environment and Natural Resources. Other members include the chief officer responsible for matters relating to finance; the chief officer responsible for matters relating to natural resources; a representative of sand dealers appointed by the executive committee member; a representative of special interest groups appointed by the Executive committee member; two representatives of the Sand Harvesting Associations being one man and one woman

THE FUNCTIONS OF THE COMMITTEE SHALL INCLUDE

- (a) Maintain a register of all sand dealers;
- (b) Advise executive committee member on the structure and operations of sand harvesting and related activities
- (c) Ensure that sand harvesting activities are compliant with this Act and any national norms and standards
- (d) Ensure sustainable exploitation and utilization of sand resource;
- (e) Collaborate with other environmental agencies in management of environment as relates to matters of sand harvesting;
- (f) Formulate environmental conservancy programmes in relation to sand harvesting;
- (g) Recommend to the executive committee member designated sand harvesting areas for gazettment;
- (h) Recommend designated roads for Sand harvesting and other excavated material.
- (i) The Committee shall approve the establishment of such number of Sand Harvesting Associations as it may deem fit and in accordance with the law relating to the registration of associations. Self-help groups and community based organizations.

Another structure is the formation of a sand harvesting association which shall be responsible for sustainable management of sand harvesting activities in its area and in particular to:-

- (a) Ensure that before sand harvesting activities are commenced, an Environmental Impact Assessment is undertaken in accordance with the provisions of Environment Management Coordination Act, 1999;
- (b) Ensure that annual Environmental Audits are conducted for all sand harvesting sites including closed sites.
- (c) Ensure sustainable management of sand harvesting along riverbeds; undertake the rehabilitation of the closed sites.

THE ACTS HAS PENALTIES FOR A PERSON WHO

- (a) Carries out sand harvesting or otherwise deals with sand without a valid license;
- (b) Carries out sand harvesting outside designated sites;
- (c) Overloads sand to a vehicle for transportation
- (d) Collects fees or charges and is not authorized to do so under any law;
- (e) Transports sand outside the designated roads for such transportation;
- (f) Does not stop on a barrier erected by the county government, authorized officer or police officer;
- (g) Obstructs any authorized person from conducting their functions under this Act; or
- (h) Establishes a separate entity in a designated site without lawful authority under this Act; commits an offence and shall, on conviction is liable to a fine not exceeding one million shillings or to an imprisonment term not exceeding five years or to both.

It is hoped that full implementation of the county sand harvesting bill will complement and enforce what could not be enforced in the National Sand Harvesting Guideline of 2007 developed by NEMA.

Young men harvesting sand in Thwake River



Over exploitation of sand in the river has resulted to rocky bare river bed and pronounced vertical excursion of the river.



The writers are Machakos CDE & Environment Officer Respectively

Waste worth billions going to waste

By Immaculate Simiyu

At present, commodity prices are high and regulations regarding waste have been developed in the country. As a result, many jobs and waste collection activities have been created. The group highly likely to benefit

In simple economic terms, little profit can be derived from an item produced in significant volume but with little intrinsic value. So how can the global waste market worth an estimated US\$300000 million a year be so profitable? How can waste turn into a tradable good?

Taking Action

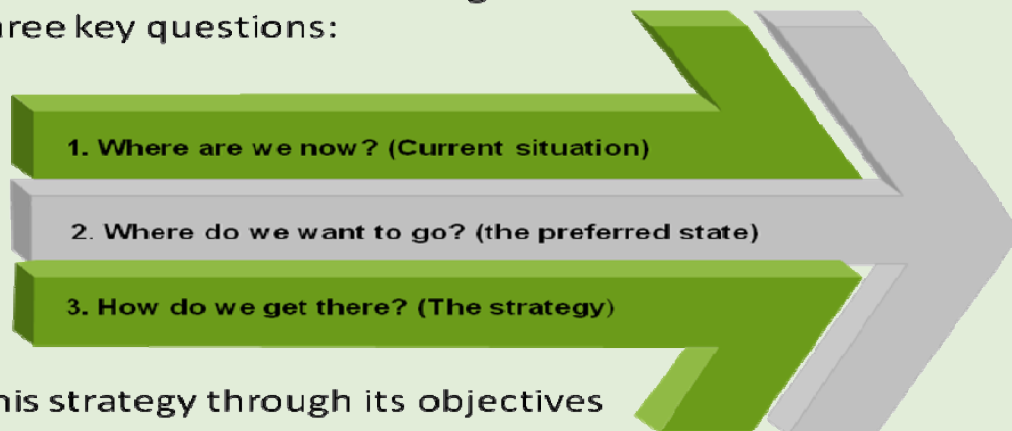
Diagnosis of the growing waste heap reveals little sign of a bright future. Never the less, strategies and tools exist to regain control and ultimately change global trends. Most need resources for their implementation, but everything depends on one of them: the willingness to change.

The National Solid Waste Management Strategy

The waste management unit under the good leadership of the Ag DCE, DDE and Chief Compliance officer, together with other C & E officers has just finalized the National Solid Waste Management Strategy. This strategy seeks to deliver the country from the waste menace by promoting waste as a resource which can be harnessed to create wealth, employment and reduce pollution to the environment by the year 2030. This National Solid Waste Management Strategy (NSWMS) aims at achieving Zero Waste as the guiding Principle while focusing on the Integrated Solid Waste Management concept on the waste hierarchy.

The Strategy

- Its a deliberate and visionary commitment that the country intends to take in the management of solid waste. It answers three key questions:

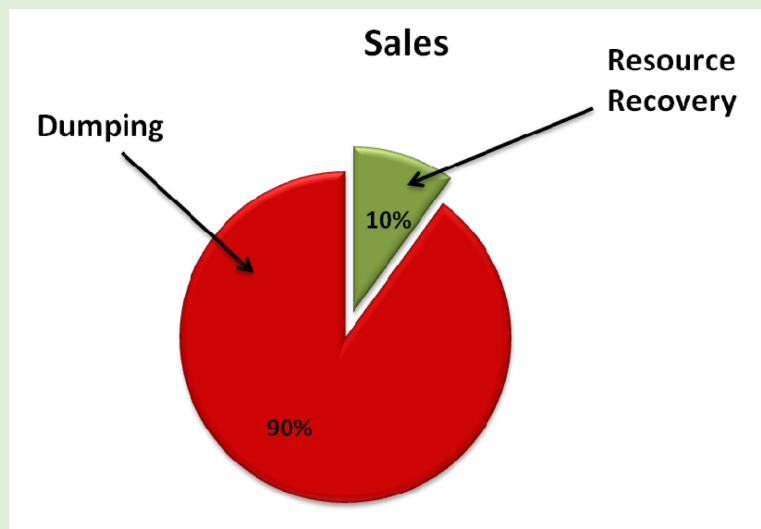


- This strategy through its objectives and targets have spelt out measures needed for the country to attain the **Zero Waste Principal**

Hence ultimately creating wealth, employment and drastically reducing pollution to the environment and green house gases.

CURRENT SITUATION

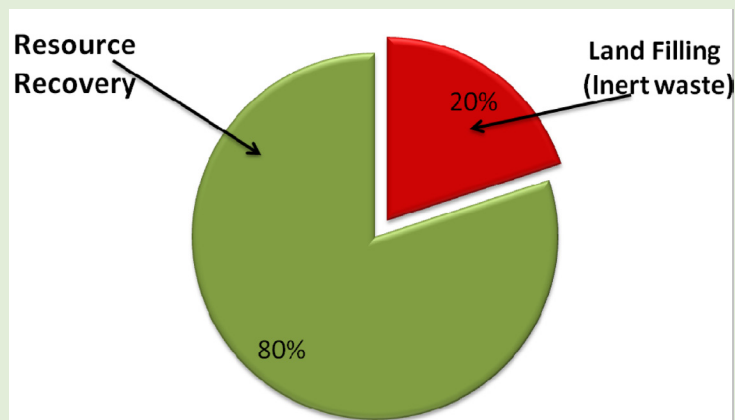
90% dumping and 10% resource recovery,



WHERE WE WANT TO GO

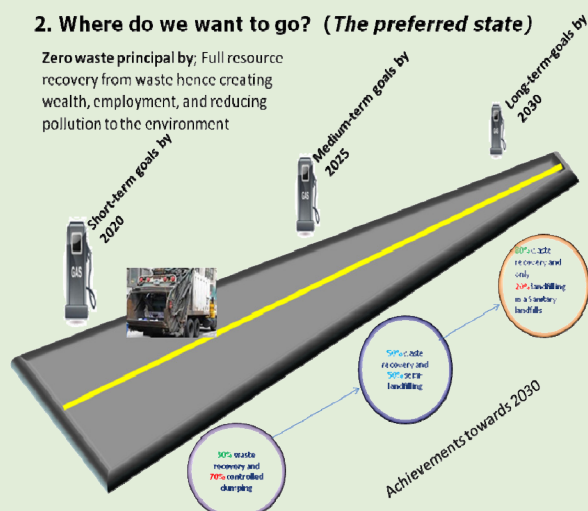
(Preferred state)

With the successful implementation of the Strategy in the 47 counties, the country will realize only 20% land filling and 80% in resource recovery.

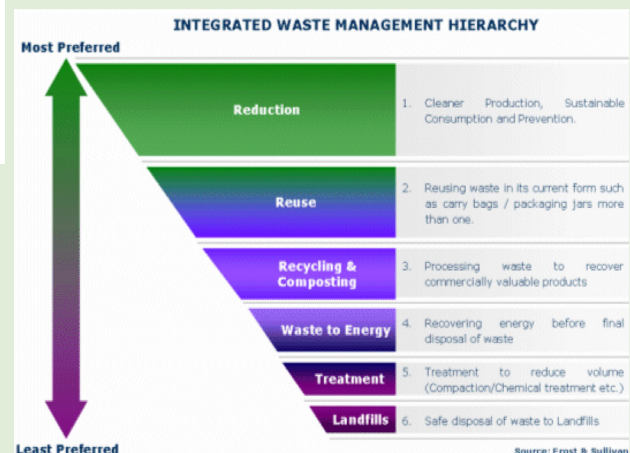
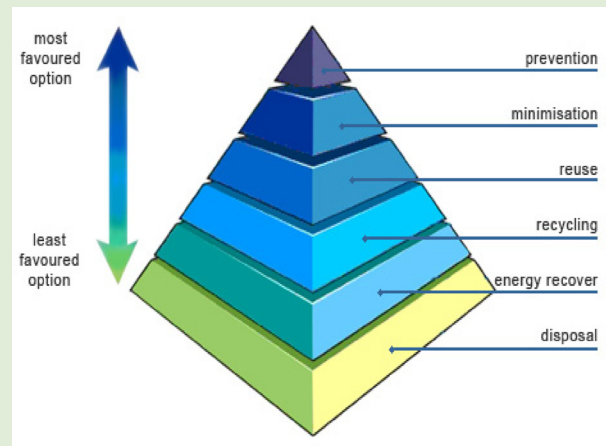


2. Where do we want to go? (The preferred state)

Zero waste principal by: Full resource recovery from waste hence creating wealth, employment, and reducing pollution to the environment



This can be achieved by practicing Integrated Solid waste Management as displayed in the figure below; The Waste Management Hierarchy.



HOW DO WE GET THERE? (The Strategy)

1. By Formulating Policies, legislations and economic instruments
2. Inculcating responsible public behavior on waste
3. Promoting waste segregation at source
4. Promoting Resource recovery for materials and energy generation
5. Establishing Environmentally Sound

Infrastructure And Systems For Waste Management

Happy throwing away, Mr And Mrs Consumer?
Think twice! And think again... the billions!

Towards a 7R oriented society; Reducing; Reusing; Recycling; Repairing; Refilling Rethinking; Refusing; your waste!

The National Solid Waste Management Strategy is in the NEMA website. Please read for more information.

The writer is Senior Compliance & Enforcement Officer at NEMA's Waste Management Section

Wetlands for our future

By Bernard Opaa & Samwel Irungu



Some of the Senior guests join the procession towards the venue of the event (Photo: Eric Nyaga / Nema)

The World Wetlands Day (WWD) is marked annually on 2nd of February. It marks the date of the adoption of the Convention on Wetlands on 2nd February 1971, in the Iranian City of Ramsar on the shores of Caspian Sea.

The Ramsar Convention on Wetlands is an inter-governmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

The Convention came into force in 1975, Kenya which became a party to it in 1990, having designated its first wetland of international importance (Ramsar site)-Lake Nakuru. Additional Ramsar sites include Lakes Naivasha, Bogoria, Baringo, Elmentaita and Tana Delta. The global theme for WWD 2015

was 'Managing Wetlands for Our Future' which was adopted by the National Secretariat. In the recent past, anthropogenic activities have led to the degradation and destruction of wetlands hence the reason for this year's theme that seeks to encourage sustainable management of wetland resources. This year, the WWD celebrations were taken to Kibirong' wetlands in Nandi County; the event was preceded by build-up activities including: the Kibirong' Road Race and the Panel Discussion on the Yala Swamp. The main event was held at Atebwo Primary School in Aldai constituency, Nandi.

Wetlands provide ecosystem services as well as socio-economic functions which are essential for human wellbeing and livelihood as well as animals' survival hence the need for their protection.

As a result, the specific objectives of WWD entail educating the public on the importance of wetlands, building local capacity to tackle wetland management issues and lobbying the Government of Kenya and partner institutions to put in place measures for the protection of wetlands. As climate problems intensify, there is the need to place emphasis on sustainable development to safeguard resources for future use and reduce adverse impacts on ecosystems.

Like other wetlands in the world, the degradation of Kenya's wetlands, (including the Kibirong' wetland) is mainly as result of intense anthropogenic activities. Surrounding communities over exploit wetland resources and thereafter face the consequences of degradation. This is mainly be attributed to ignorance and

therefore creating awareness continuously can shed light on the importance of sustainable use since the same population needs wetland resources.

The National Secretariat in collaboration with the Local Organizing Committee (LOC) and closely involved stakeholders embarked on sensitization activities in preparation for the 2015 celebrations through use of both print and digital media, as well as organizing a panel discussion on Yala Swamp highlighting its major threats.

The Kibirong' Road Race was also organized and open to various members of the community. In addition, a tree planting exercise led by the governor and his aides was conducted. On the day of the main event, brochures and DVDs with information on protection of wetlands was circulated and exhibition stands were set up by stakeholders such as NEMA, WRMA, LVEMP II, KWS, KFS and WWF.

NEMA DG Prof. Geoffrey Wahungu was quick to thank all the people that had made the event successful and those who had participated in gracing the event. "As the lead agency in matters of environment, NEMA continues to work hand in hand with all the stakeholders to ensure wetlands and the environment in general remains a priority for the Authority.

Nandi County Governor HE Dr. Cleophas Lagat could also made his key remarks especially in regards to management of wetlands and forests in his County. He expressed his concern over the continued destruction and degradation of the environment.

He was grateful that NEMA had seen it important to celebrate this year's world wetlands day in his county. "My government recognizes that wetlands are the earth's kidneys through their hydrological and chemical functions and are a key resource

in promoting the County socio-economic development," the governor said. He added that the commemoration of the event was a platform through which public awareness should be raised about the values and benefits of wetlands as well as sustainable development and wise use of wetlands. He urged public to work together with the government to secure our environment and mitigate against climate change.

Speaking during the event, NEMA board chair, Mr. Maluki Mwendwa stated that the the year 2015 provides a platform for the United Nations International Year of transition from the Millennium Development Goals to Sustainable Development Goals.

The chair reiterated that NEMA recently developed a five year integrated management plan for Kibirong Wetland Ecosystem that seeks to reverse the degradative actions that have impeded the sustainable management and



Hon. Dr. Cleophas Lagat Governor, Nandi County addressing the public during the celebrations (Photo: Anthony Mwangi / Nema)



(from left) Mr Maluki Mwendwa, Dr. Ayub Macharia and DG Prof Geoffrey Wahungu consulting during celebrations (Photo: Anthony Mwangi / Nema)

utilization of this once bountiful ecosystem. This Management Plan aims at promoting conservation and sustainable utilization of the Wetland resources within the Ramsar Convention's Wise-use Principle.

KWS Director General Mr. William Kiprono who represented the CS, Judi Wakhungu, Environment, water and natural resources read her speech that highlighted the need to join hands in safeguarding the wetlands for future generations. There also the need to work with Counties to restore and rehabilitate wetlands as well as curb threats resulting from human activities.



Hon. Dr. Cleophas Lagat flagging off the procession to the venue of the event (Photo:Eric Nyaga / Nema)

THE KIBIRONG COMMUNITY ROAD RACE AND TREE PLANTING

The Kibirong' Wetland Road Race was organized by the LOC and took place on 24th January 2015. The objective of the race was mobilise and sensitize the local communities and to ensure maximum participation in the world wetlands day celebrations and to motivate the locals in management of Kibirong wetlands.

Dr.Chumo, the CEC (Minister) in charge of mater environment, land and Natural Resources, Nandi County and also the Chairperson for all the County Executive Committee (CEC) on Lands, Environment and Natural Resources flagged off various races including the women's 10 km, children's 2 km race, veterans' 2 km race and the men's 10 km race. Julius Kogo emerged victorious in the men's 10 km race while Alice Timbilil won the women's 10 km race. Other winners were Wilson Kiprotich, Caroline Cheptoo who managed first place in the veterans' 2 km and students' 2 km races, respectively. The top three runners in all categories were



Prof. Geoffrey Wahungu watering a tree during tree planting exercise (Photo: Anthony Mwangi / Nema)

awarded trophies and cash prizes/ awards while positions four to ten were handed t-shirts.

There was a ceremonial tree planting session where various invited guests and participants planted trees. The trees planted

were of bamboo species. Ms. Anne Owino, County Director of Environment (CDE) Nandi County led the tree planting exercise. Dr.Chumo, CEC Nandi

County graced the occasion on behalf of the Governor, H.E. Dr.CleophasLagat. Other notable participants were Mr. Katua, the deputy director NEMA-KENYA

in the sub-department of coastal marine and fresh waters; he represented NEMA's Director General, Prof. Geoffrey wahungu, Mr.Nyongesa who represented WRMA's regional manager Lake Victoria South Water Services, Mr.Baraza the Regional Coordinator (NEMA) Western Region, Mr. Kobo from Athletics Kenya, and two-time Olympic Champion Alice Timbilil
Interactive Panel Discussion



NEMA board chair, Mr Maluki Mwendwa addressig attendants during the celebrations (Photo: Anthony Mwangi / Nema)



NEMA DG, Prof Geoffrey Wahungu addressing the public during the celebrations (Photo: Anthony Mwangi / Nema)

One of the key awareness activities that the NOC planned was an Interactive Panel Discussion (IPD) targeting government agencies, private sector, civil society and community members. The discussion themed “Balancing Conservation and Development: the case of Yala Swamp” was held on Tuesday 27th January 2015 at ATC Siaya, Siaya County.

The discussion provided a platform for knowledge and information exchange between the experts/ technocrats from institutions with a mandate on wetlands and sustainable development, in line with this year's theme: ‘Wetlands for Our Future’. This Panel discussion aimed at raising public awareness and consciousness about sustainable wetlands management by striking a balance between human development and biodiversity conservation.

The writers are Nema 's Wetlands Officer and Corporate Commutations officer respectively



A wide view of Kibirong wetland

Stakeholders Sensitization on Green Investments

By Agnes Kamiri

NEMA in collaboration with the Kenya Investment Authority (KenInvest) held a joint workshop on Green Investment on 10th February, 2015, at the NEMA Homabay “Green Point”. The main objective of the workshop was to sensitize and promote the recently developed *Green Investment Guidelines*.

The aim was to sensitize stakeholders on the existence of the *Green Investment Guidelines*, to encourage investors use the guidelines as a foundation in environmental compliance, receive regional specific priority areas for environmental protection towards green investments, Enlist stakeholder support in implementation of the guidelines, and to seek any other relevant comments aimed at enriching the guidelines.

The Green point office model was started in 2012, in a bid to promote the Green economy in Kenya. NEMA decentralized its functions to the country's 47 counties. The Green point offices combine the normal NEMA office – function and facility – with an open public meeting, information and demonstration area with the

design based on the concept of the Green Economy. The Green Economy initiative is inline with the Kenyan constitution, vision 2030 and Kenya's devolution plan.

The Green investment concept has gained momentum across the world, largely due to the promise that it offers in addressing the economic challenges and environmental pressures that the world is facing.

In line with NEMA's mandate, the Authority is working with Ken Invest to create awareness on the Green Guide, It will also Identify projects registered with Ken Invest and ensure compliance, The Guide, will Inspect and monitor for compliance before, during and after environmental licensing and will safeguard the environment for green economic growth as outlined in Medium Term Plan II (MTP II).

The Workshop was officially opened by Mrs. Merily Viaza Akua, CEC Water and Environment, Homabay County. In her opening remarks, she said that Green investment calls for individual approach to change. She indicated that the right to a clean and healthy environment is for us all and called

for Homabay residents to plant more trees as climate change is worsening.

The chief officer highlighted the challenges emanating from climate change and its effects to the communities in Homabay County. She further noted that communities in their own small ways can try and adapt to the changes while mitigating the possible effects of climate change. She further noted that the County Government has adopted green economy initiatives and was in the process of implementing various green economy initiatives within the County.

The investors were very grateful to NEMA for working tirelessly in collaboration with other sectors to ensure proper environmental conservation especially along the shore of lake Victoria. The participants also appreciated the effort made by the NEMA headquarter team for funding and sharing with local investors on “green investments

Participants noted the need to invest more in green initiatives such as energy conservation, water harvesting, investments in solar energy, soil and water conservation, investment in wildlife sector especially in the tourism ventures that ecologically friendly, investments in the forest sector such as woodlots for fast growing trees to reduce pressure on limited indigenous forests.

Nema has seconded Eng. Anthony Kariuki Chief Compliance Officer to Ken Invest Authority to help new investors on issues of compliance.

The writer is a Corporate Communications officer at Nema



Ms. Merily Akua, Homabay Chief Officer Water and Environment giving her opening remarks during the workshop (Photo: Agnes Kamiri / Nema)

Mitigation Vs Adaptation In Climate Change

MITIGATION	ADAPTATION
<ul style="list-style-type: none"> • The main action is to reduce Green House Gas emissions and enhance carbon sinks/ reservoirs. • Mitigation policies and measures used focus on the large emitting sectors, such as energy and transport. • Mitigation capacity depends on socio economic and environmental circumstances and the availability of information and technology financial resources, mitigation potential and the policy implementation issues. • Mitigation actions can be economy-wide, cover several or single sectors, such as energy supply and demand, transport, buildings, industry, agriculture, forestry and waste management. • Examples of mitigation strategies: <ul style="list-style-type: none"> » Policies and economy wide packages of policy instruments can be effective in reducing GHG emissions in different sectors. » Regulatory and fiscal instruments were complimented by market based instruments such as GHG emission trading schemes. » Changes in lifestyle, behaviour patterns and management practises can contribute to climate change mitigation across all sectors » A rural electrification projects using solar panels or the installation of more energy-efficient boilers. » Undertaking activities relating to reducing emissions from deforestation and forest degradation. » Conservation of forest carbon stocks. Sustainable management of forests and enhancement of forest carbon stocks (REDD-plus). » Promoting the use of renewable sources of energy, such as solar and wind energy. 	<ul style="list-style-type: none"> • It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. • Elements of adaptation include, observation, assessment, planning, implementation, monitoring. • Adaptation methods take many shapes and forms, depending on the unique context of a community, business/organization, country, region,etc. • There is no one size fits all solution, when it comes to climate change adaptation. They vary from country to country, and from area to area. • It focuses on reducing vulnerability to the impacts of climate change, and increasing adaptive capacity and coping range • Examples of adaptation strategies <ul style="list-style-type: none"> » Building food defences, Setting up early warning systems for cyclones and » Switching to crops that fare better under drought conditions » Redesigning communication systems, businesses operations and governmental policies. » Mainstreaming adaptation to climate change into policies and programmes in different sectors (focusing on disaster management, water, agriculture, health and industry). » Inclusion of climate change issues in curriculum at secondary and tertiary educational institution » Enhancing resilience of urban » Infrastructure and industries to impacts of climate change. » Promotion of research on Drought, flood and saline tolerant varieties of crops to facilitate adaptation in future. » Promoting adaptation to coastal crop agriculture to combat increased salinity. » Providing drinking water to coastal communities to combat enhanced salinity due to sea level rise. » Reduction of Climate Change Hazards through Coastal afforestation with community.

Proper Waste Management at Source



Result of unmanaged waste

The National Environment Management Authority (NEMA) has finalized the National Solid Waste Management Strategy. This is a strategy on solid waste management that seeks to deliver the country from waste menace by demonstrating how waste is a resource.

The strategy creates wealth from waste, employment and at the same time reducing pollution to the environment.

The strategy seeks towards a 7R oriented society that includes; Reducing; Reusing; Recycling; Repairing; Refilling Rethinking; Refusing

***SEGREGATE
YOUR WASTE
AT SOURCE!***

FROM THIS TO THAT



Managed Waste properly disposed



Result of unmanaged waste causes enviromental hazards