



Mazingira News

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**2010:
THE GREEN YEAR**



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Editor's note

It is no longer a question of whether Climate Change and its adversities are real or not, but how much of these extremities will affect us and when they will be manifested in our country and continent. In fact, we are already experiencing these vulgarities globally – some places have been hit by the coldest temperatures ever, while others are facing absolutely very hot ones. All over the world, people are grappling with this phenomenon and searching earnestly for answers.

We hereby strongly advocate for Going Green as one of the most viable measures in mitigation of these adversities in Kenya. Our President has already urged all of us to go green this year by declaring 2010, THE GREEN YEAR. Both our Minister and Permanent Secretary have likewise echoed this same message in their articles carried in this edition. It is a message we plan to drum up support for in the subsequent editions through-out this year, in order to rally our people's actions towards amelioration of adverse climatic changes.

We present some of the steps and actions that we can undertake to lessen the effects of this threat on our lives. We can do this collectively as a nation and also individually either at home or in our offices. Each one of us can contribute to climate change moderation, through mitigation and adaptation, in our own little way. The resultant national impact will be larger and more effective than the total sum of the single efforts put together.

Most of us may have just heard of this phrase - going green - and may not quite comprehend what it means or refers to. This edition has endeavoured to answer these and other questions about various aspects related to going green. We give you the meaning of this phrase and tips of how to do it. The Green Technology Initiative outlines activities which are environment-friendly and aim to cut down on carbon dependency. The Green Glossary lists terminologies that are associated with going green and have become everyday language, from the common names like sustainability and carbon footprint to the incomprehensible ones such as bakeout, black water and cogeneration.

Other highlights include the Green Ribbon used by the Ministry for environmental education awareness - just as the Red Ribbon is used in the fight against HIV/AIDS. Also mentioned are smart ways of going green both at work and at home, and tips to save the environment. Of course, the much-touted Climate Change Conference, popularly known as COP15, cannot be left out and there is an analysis of its progress and the way forward for Kenya and Africa.

El-Nino is now both a boon and bane in Kenya, as the rains it wrought on the country last year led to gloom in some parts and cheers in others, and it is only fair

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that we write about it. Some of the Kenyan delegates to the Climate Change Conference, held in Copenhagen last year, complained about their electronic gadgets, particularly laptops and mobile phones, developing problems due to the extreme cold weather. Therefore, we have featured an article on laptops and changing weather patterns.

If there are two things that have endeared our Minister and Ministry to Kenyans (read Nairobians), then they have to be the Nairobi River Basin Rehabilitation and Restoration Programme and the now pertinent Noise and Excessive Vibrations Pollution Control regulation. And true to your expectations, we have included stories on them in this edition. One of the key Departments of this Ministry is Mines and Geology and we have dedicated two pages to Mineral exploration in Kenya. Lastly, the usual other regular columns that always appear in Mazingira will make your reading more pleasurable.

MULEI MUIA

Message from the Minister:



Hon. John N. Michuki, EGH, MP

His Excellency the President of the Republic of Kenya, Hon. Mwai Kibaki, CGH, MP, set the tempo and the ball rolling when he declared 2010 the Green Year in his New Year speech delivered on 1st January, 2010 in Mombasa. It is in order to quote from that speech:

“We must, therefore, do all in our powers to mitigate the effects of climate change. We now have a National Climate Change Response Strategy. The strategy details the measures to be taken to address the adverse effects of Climate Change on a longer-term basis.

I also urge all Kenyans to individually take responsibility over our environment, to engage more aggressively in water harvesting and to use available water resources prudently. Let us make the year 2010 the GREEN YEAR FOR KENYA.

In this regard, more emphasis will be placed on energy production via green pathways including geothermal and wind energy. We will also begin an ambitious plan of planting trees and get our forest cover to ten percent.”

For a long time, Kenyans and others have accused the Government of doing very little to conserve the environment and have always blamed it for the environmental destruction witnessed in most parts of this country over the years. We should start 2010 with that assurance from the highest office in the land, that the Government is indeed committed to the betterment of the lives of its people and country through conservation of the environment. This has further been entrenched and boosted by the recent tree-planting exercise launched in Mau Forest by the Right Honourable Prime Minister, Hon. Raila Odinga, EGH, MP, with the full blessings of the President. During this function, the PM reiterated the Government’s commitment to conservation of the Mau Forest complex and other vital water towers, and called upon development partners and friends of Kenya to partner with us in making ours the green country that is was once famed for. If the responses

from the development partners represented at that forum is anything to go by, then we are definitely on the right course towards achieving this noble cause.

Enough of the speeches. My Ministry and that of Forestry and Wildlife have come up with an extensive tree-planting campaign, which will see Kenya embark on massive afforestation activities targeting 35,000 schools throughout the country, about 16,350 youth groups and 4,350 women groups in planting of 7.6 billion indigenous tree seedlings. Another step towards going green! The theme of this Mazingira Edition is provoking us to believe that this dream is achievable; ‘green’ is a colour universally associated with safety and hope.

In this respect, the Ministry of Environment and Mineral Resources reduced the impact assessment (EAI) fees from 0.1% to 0.05% of the project fee. We decided to do this in support of the proposed wind power project in the east of Lake Turkana. We have been assured that we shall achieve safe and reliable energy for the present and future generations, if we work for it now and in that way be empowered to salvage and sustainably restore our endangered environment.

As individuals, institutions and stakeholders, let us resolve to selflessly assist our Government, as it aims to exhaustively exploit all existing potential for the development of clean energy systems. Let us deliberately face the challenges that go with fast tracking such development and effectively address them with a view to spreading benefits to all: particularly the poor, disadvantaged and most vulnerable among us.

I wish to assure all of you that my Ministry is on board as a committed team player, who will continue to work hand in-hand with other stakeholders in pursuit of sustainable development. No individual entity can successfully work in isolation. Therefore, let us join up to work as a team in exploiting green energy for Kenya and globally.

Word from the PS:



Mr. Lawrence N. Lenayapa, CBS

The much touted Conference of Parties (COP 15) on Climate Change held in Copenhagen at the end of last year and meant to give the world countries an opportunity to address the looming threat of adverse climate change, ended on a sour note with no agreement reached. Yet, the effects of climate change are already being felt across the globe: ranging from floods to droughts, heat waves to snow storms, very cold temperatures to absolutely hot and unbearable ones. These extremities are anticipated to persist for a while and it is now more crucial than ever before that much must be done to mitigate and adapt to climate change.

Cultivating a green culture of Going Green and doing things the green way is one of the few options left for mankind, in order to survive within this ever-increasingly unfavourable environment. It is imperative that these measures must be taken to ameliorate the situation and counter the predicted worse scenarios.

We, as the Ministry of Environment and Mineral Resources, have decided to be in the forefront of educating our fellow countrymen about these impacts of climate change and lead them in adopting concrete steps aimed at reducing and possibly stopping or rolling back the tide. We have strategically come up with a programme of decisive actions, espoused and outlined in our recently launched National Climate Change Response Strategy (NCCRS), to guide our Nation's efforts in addressing this phenomenon. We have declared 2010 the Green Year because we want to encourage our people to embrace the necessary concept of going green – to assist in not only countering the adverse effects of climate change, but also in the

conservation and preservation of our environment for ourselves and posterity.

Some of the measures are simple and can be implemented by individuals even at home, yet others are quite complex, require big budgets and can only be carried out on a national scale. This is where the NCCRS comes into play, so as to consolidate all our efforts into one large and effective response to this common threat to our nation. One of the simplest and most effective remedies is the planting of trees. We have teamed up with our sister Ministry, Forestry and Wildlife, to come up with a comprehensive tree-planting exercise throughout this El-Nino rains season. This was launched recently by the Right Honourable Prime Minister, Hon. Raila Odinga, EGH, MP at Mau Forest. We are inviting all Kenyans to join us as we endeavour not only to increase our forest cover, from the present less than 2% to the recommended 10%, but also mitigate against the harsh climate conditions prevailing throughout.

People can engage in activities ranging from planting trees to trying to purchase organic and chemical free products, not wasting tap water to turning off lights when they are not necessary, planting a vegetable garden instead of water hugging grass, using bicycles - or going on foot - wherever possible is another simple way of eschewing gas guzzling vehicles, among many others mentioned in detail throughout this Mazingira Edition. All of these little things can really add up in one's pursuit to save the world; if enough people begin going green, the planet will surely stand a far better chance.

As individuals, institutions and stakeholders, let us resolve to selflessly assist our Government, as it aims to exhaustively exploit all existing potential for the development of clean energy systems. Let us deliberately face the challenges that go with fast tracking such development and effectively address them with a view to spreading benefits to all: particularly the poor, disadvantaged and most vulnerable among us.

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Going Green: What Does Going Green Mean?

By Mulei Muia

“Going green” is a popular phrase being bandied about these days. Chances are, you have heard it referred to quite a lot. But what does going green mean? In essence, it refers to using various everyday methods to help save the world and its environment. Many people consider going green to be an actual lifestyle; for them, it means basing your actions on working to save the world. From the smallest details to the most sweeping aspects of life, saving the world by implementing a green lifestyle is something that more and more people are aiming to do.

Definition of Green

Living a green lifestyle - or going green - can begin in small, easy to manage ways. Recycling is a huge, obvious part of helping to save the world through green living. Reducing one's reliance on oil-based energy sources is another popular method employed in trying to save the world. Purchasing only all organic, chemical free products is another way that many people begin going green, and is considered a very effective method at trying to save the world and all of its resources. Green living is infiltrating all parts of daily life, and the planet is sure to be better for it.

Going Green Pros and Cons

Like any other type of lifestyle, going green and trying to save the world through environmentally friendly habits has its pluses and its minuses. The plus side is pretty obvious: saving the planet and contributing to a healthier earth.

However, there are some cons to going green. Saving the planet can be a costly proposition; many organic

products have far higher price tags than traditional products. Similarly, hybrid vehicles - another popular mechanism for helping to save the world - are also very expensive.

Going Green At Home

Besides big ticket purchases, there are plenty of ways of going green at home. People can make their contribution to saving the world by trying to purchase organic and chemical free products wherever possible. Doing so encourages healthy farming practices, which can substantially work to save the world.

Going green at home can also mean being conscientious about not wasting tap water, and turning off lights when they are not necessary. All of these little things can really add up in one's pursuit to save the world; if enough people begin going green, the planet will surely stand a far better chance.

Going Green Tips

Some people find that an easy way of going green and helping to save the planet is by creating a compost pile in their backyards. Planting a vegetable garden instead of water hugging grass is another method being used by many people who are trying to save the world. Using bicycles - or going on foot - wherever possible is another simple way of eschewing gas guzzling vehicles and saving the world. Going green is an overall life philosophy, and it can be employed in even the most mundane details of one's life with success.

The writer is the Head of Public Communications - MEMR



President Kibaki opening the 25th UNGC-GEMF conference under the banner "Green is the new big deal"

The Green Technology Initiative

By Dan Maangi

The green technology initiative is the adoption of development initiatives and activities, which encompasses a continuously evolving group of materials, methods and techniques, which are environmentally friendly. Once fully adopted, the green technology initiative will bring innovations and changes in our daily life, by cutting down on carbon dependency.



Hon. John Michuki, Minister for Environment & Mineral Resources watering a tree after planting it. Investing in our ecological infrastructure such as forests, is one part of green technology initiative.

The technology, which will have a resultant of diversifying livelihoods and incomes via the emerging carbon markets, will be catalysed by tapping resources such as solar, rainwater harvesting, wind and geothermal energy.

For the green technology initiative to be successful, its technologies will have to address the following:-

- Be sustainable and meet the needs of society in ways that can continue definitely into the future, without damaging or depleting natural resources
- Create products that can be fully reclaimed or re-used

- Reduce waste and pollution by changing patterns of production and consumption
- Develop alternatives to technologies that damage health and the environment and
- Create economic activities that benefit the environment and trigger an employment boom, by creating new careers that protect the environment, hence an epitome of clean, innovative and sustainable development.

Some of the environmental challenges to be addressed by the adoption of the green technology initiative include - shrinking water sources, destruction and plunder of water catchment areas, radical shift of weather patterns, droughts, desertification and dwindling economic opportunities.



A woman inspects an installed rainwater-harvesting tank in the rural areas. The green technology initiative calls for such innovations of tackling water scarcity through intelligent management of natural resources.

The writer is a Technical Officer - MEMR



Tips to Save The Environment

Since so many people are looking for ways to save the environment, knowing a few important tips can be very helpful. It is surprising to find out how even small, seemingly insignificant changes can actually help save the environment.



Teaching the youth how to take care of their environment.

What kinds of tips are especially useful? Being conscientious about not running the faucet unless absolutely necessary is one excellent example. Changing the light bulbs in your house from standard to fluorescent is another tip for helping to save the environment. Indeed, there are many little tips and tricks that, when implemented on a regular basis, can make a huge difference. Even just changing one or two regular habits can have an incredibly positive impact on working to save the environment and planet earth.

Keeping your yard, neighborhood and community clean is a really good way to help save the environment. Global change really does begin at home; almost all tips regarding going green and living a more environmentally friendly lifestyle encourage changing how you lead your life right at your own home and on the level of your local community.

You can increase the scope by helping your community save the planet; share important tips that you have learned about ways to save the planet with the city council or the mayor of your town. With any luck, some earth friendly ordinances can be passed which may have an incredible effect and help save the environment.

Recycling To Save The Environment

Recycling is certainly nothing new; it has been relatively popular for quite some time. As a means

of helping to save the environment, though, it is vital. There are many tips that can help you be more conscientious about recycling in your everyday life. Even something simple - like requesting paper grocery bags in lieu of plastic ones - is a tip that will have huge ramifications and can save the environment at the same time.

Some people are skeptical when they hear about recycling tips; they feel like their own meager efforts simply won't make a good enough impact to really save the environment. However, in combination, everyone's efforts help tremendously.

How To Save The Environment Everyday

There are many surprising tips regarding how you can help save the environment in your everyday life. For example, did you know that simply shutting the refrigerator door promptly and not leaving it hanging open can add up to a lot of energy savings?

It's little things like this that can converge and have a major, positive impact on helping to save the environment. Donating old toys to a worthy and needy cause - rather than throwing them into the landfill - is another great tip for helping to save the environment. Purchasing organic produce whenever possible is a superb tip for changing everyday habits and turning them around to help save the environment. If enough people begin implementing these sorts of practices, the planet will be much healthier for it.

What is a carbon footprint?

A carbon footprint is simply a measure of the amount of greenhouse gases your presence on earth adds to the atmosphere. Greenhouse gases are important because when they build up to unmanageable levels it can cause clouding of the air and lead to global warming according to some scientists. The choices you make in lifestyle activities can cause you to have a larger or a smaller carbon footprint. For example, if you have a private plane and a gas guzzling car you are creating a much larger carbon footprint than the activist who rides a bicycle to work and never flies anywhere even commercially.

This article has been earlier published in other publications



Yearning for Green old days

By Alex Mutua

There are years in my life when I did not know that green mattered to the world. Those little years when I loved to disappear in a green thicket in our farm and take a long walk soothed by a cooling breeze beneath the canopies, then listen to the chorated wheezing and singing of trees with chirping little bird musically comforting my little mind. In those years, pollution was not an issue and plastic had not choked three quarter of our ecosystem.

Those years I tasted the sweetness of biodiversity. I was a little herdsboy from Ukambani in Eastern Province where rain is appreciated like a golden opportunity of a life time. There was a pond near our place and we, the village urchin would go and deep our selves in the dirty waters and enjoy the mysteries of nature and it's blessing... moments we have carried in our history and even our present time. After a swim, we would chase little pink butterflies and green looking grasshoppers, admiring different kinds of beautiful rain frogs and salamanders... within the glory and reach of green. Funny! The memories have lingered long enough... to this day about one season that came twice every year.

A few weeks ago I woke to the shock of my life that the earth is burning down and it can not sustain itself any more. My mother years ago warned me about banana peels and littering the compound with plastic papers or our Anglo-Nubian milk goat would swallow and die. Then I heard the myth of the sea and the fish by one old white filmmaker as I grew up. He said that before man came up with industrialization plus modernization, fish gave birth in the sea, grew in the same sea, made love in the same sea, played in the

same waters and when they grew old , they would die and the sea would feed on the fish... tricky nature... it took care of itself without man's interference but today this waters are no more safe for the little innocent fish who know nothing about science and civilization. Man is responsible for the most significant causes of climate change and global warming.

Over population plus man uncontrolled migration to urban centers has led to wanton use of natural resources for construction, as fuels and even consumption leading to deforestation ,encroachment and other little



environmental vices threatening our future, bloating out the color of nature.

When nature had carbon dioxide, trees were born to use it and balance its existence in the universe; the secret cycles that have ensured man has lasted for over one billion years of existence guarded by green nature. Global warming is a made issue set on a broken blanket called ozone hurt by high percentage of carbon dioxide making its way to atmosphere.

Trees are our life. Green is our guarantee so let's return forest cover in the universe. One tree plus two more equals to less carbon dioxide and a beautiful green land with less chronic chest ailment.

The writer is an intern in the Corporate Communications Dept - NEMA





The Green Ribbon

The *Green Ribbon* is the Ministry's symbol of the Environmental Education Awareness Initiative launched by the Minister for Environment and Mineral Resources, Hon. John N. Michuki, EGH, MP, on 26th August, 2008 at the Arboretum Park, Nairobi.

Understanding and Responding To Climate Change

By Mulei Muia

The release of the fourth Assessment Report of the Intergovernmental Panel on Climate Change has made the science of Climate change even clearer: Climate Change is happening and is caused in a large measure by human activity. It has many serious and damaging effects and many of the vulnerable countries and communities that largely reside on the African Continent will have their lives that are already very difficult, made impossible.

The earth is warming up and the green house gases emitted from industry, transport power plants, agricultural and other man-made sources are the primary causes. They are known as greenhouse gases (GHGs) because they trap heat and raise air temperature near the ground, acting like a blanket near the surface of the planet.

Carbon dioxide and other greenhouse gases have always been present in the atmosphere, making life possible on earth by trapping heat. Since the industrial revolution, emissions of these greenhouse gases from human activity have increased steadily, trapping more heat and exacerbating the natural greenhouse effects. As a result, global average temperatures have risen both on land and in the ocean, with observable impacts already occurring. Kenya is already witnessing the disappearance of the glaciers on Mt. Kenya. The country's hydropower potential is on the water system fed by glacial melts from the Mt. Kenya.

The disappearance of the glaciers will affect agricultural activities, availability of water from both rural and urban population and tourist activities. The economic implication of these phenomena on our future plans for the country has yet to be appreciated. Other impacts of global warming are greater and more rapid sea level rise, increased incidences of extreme weather events, substantial reduction in surface water resources, accelerated desertification in arid and semi arid areas (80% of Kenya's land mass is arid to semi arid) greater threats to health (e.g. malaria) biodiversity (e.g. bleaching of coral species on the East African tropical reef systems).

Overall the projected impacts of unmitigated climate change in Kenya is likely to have significant impacts on human livelihoods, health, water resources, agricultural production and food security as well as nature-based tourism. All these would undermine the country's prospects.

Climate change is a real problem, but it also has real solutions. Some of its effects are already inevitable and it is necessary that work on building the adaptive

capacity of the vulnerable communities start immediately.

Dealing with climate change however requires deeper international co-operation in many areas notably in promoting adaptation particularly for developing countries, spurring technology research, development and deployment and enhancing the carbon markets.

To avoid the worst effects, science tells us that we will need to stabilize greenhouse gas emissions by about 50 to 80%. It is a major challenge that will require unprecedented cooperation and participation across the globe, yet the tools exist to begin addressing this challenge now. Around the country and throughout the world, many political, business and community leaders are working to prevent the consequences of global warming because they understand that if we do not address climate change, we will perish.

What can we as a country contribute towards addressing climate change?

The developed countries are obliged to:-

- i) Cut down their emission of GHGs;
- ii) To support developing countries in contributing in meeting the objective of the United Nations Framework Convention on Climate Change.
- iii) Assist developing countries fight poverty, meet their sustainable development objectives and contribute in meeting the objectives of the convention.
- iv) To provide financial assistance and technology transfer.

Kenya as a developing country is supposed to be assisted under the four areas indicated and in the process facilitated to operationalize policies on sustainable development that contribute to climate change mitigation. These are in the areas of energy efficiency, renewable energy, maintenance of valuable ecosystems, afforestation and reforestation programs.

The country has embarked on an initiative that contribute to both mitigating and adapting to climate change - *afforestation*. The Ministry has set a target of increasing the forest cover from the current 2% to 10%. This will have positive impact on the local and the regional climate.

The writer is the Head of Public Communications - MEMR



The Outcome of the COP15

By Richard Mwendandu

The main objective of COP15 was for Parties to negotiate new legally binding emission reduction targets that would come into force post-Kyoto and also to develop and agree on a Long term Co-operative Action dealing with climate change. The UNFCCC-COP15 took place amidst tension between Developed and Developing countries over the issue of Greenhouse Gas (GHG) emissions reductions for the Second Commitment Period beginning 2013.

Developed Countries were adamant that they would not commit to a legally binding instrument unless other Emerging major economies such as China, India, Brazil, and South Africa also are brought under the low emissions development path. In addition, the European Union and other Annex I (developed nations) Parties are keen to have America on Board on any new legally binding commitments, and clearly followed the USA proposals.

Africa, G77 and China were of the opinion that Developed Countries were shifting goal posts as it is the Developed countries, historically and presently responsible for GHG emissions which cause negative impacts of climate change. Africa and G77 & China reiterated that under the principle of common but differentiated responsibilities and respective capabilities and in view of the mandate of the Kyoto Protocol, it is the Developed countries to undertake GHG legally binding emissions reductions for the post-2012 Period. Developing countries may only undertake voluntary measures to limit GHG emissions as provided for in the Convention.

As a result of the failure of both Developed and Developing countries to come up with a legally binding agreement, with new emission targets, which would have been adopted at the end of COP-15, the Conference failed to achieve its main objective.

After the COP15 failed to generate an agreement by the Parties, the COP Presidency introduced the Copenhagen Accord which had not been negotiated by all the Parties of the UNFCCC, but by a select few (26 Parties). The rest of the Parties (167 parties) rejected the Accord due to lack of transparency in negotiating the document. The so-called Accord, although well-worded, with some promises, remains a political statement which absolves Developed countries from any legal commitment.

Kenya's position was in conformity with the African group, G77 and China on the way forward.

In view of the foregoing, Kenya is of the opinion that the threat of climate change is so grave that we must continue to push for a legally binding agreement at COP16, in which Developed countries commit themselves to ambitious GHGs reduction targets, so as not to compromise our survival and sustainable development.

Emphasis on the two track approach should be continued in the interest of Africa. Africa should consolidate her position before Mexico (COP16), particularly with respect to the negotiations under the Kyoto Protocol and Long-Term Co-operative Action which remain contentious.

The so-called accord was developed in a manner considered un-procedural under the UNFCCC procedures and rules of engagement (annexed). Consequently, the UNFCCC-COP only noted the accord instead of adopting it as a COP decision. Kenya will, therefore, undertake further consultations with the African Group, AMCEN and African Union to guide concrete decision on the accord. Under these circumstances, the accord has no legal status and, therefore, Kenya should be cautious in embracing it.

Africa must not allow itself to be pressurised to sign a flawed document in order to access financial and technological resources. We remind Developed countries that they are historically responsible for the negative impacts of climate change and that under the principle of common but differentiated responsibilities and capabilities, they have committed in the Convention and Kyoto Protocol to provide financial and technological resources to Developing countries to assist them to mitigate and adapt to climate change.

In conclusion, Kenya wishes to propose that despite the lack of concrete results due to the flawed process of COP15, fellow African countries to continue developing their National Strategies to Combat Climate Change.

The writer is the Director of Multilateral Environmental Agreements (MEAs) - MEMR

Companies Going Green - How Your Company Can Go Green

As a way of giving back to their community - and of demonstrating their concern about the environment and the health of the planet - many companies are going green and implementing various techniques and strategies for improving the environment. The number of companies going green is increasing on a daily basis and is sure to only continue to rise as people insist that the products they use go green and support the planet.



What Does Going Green Mean?

Most people have undoubtedly heard the phrase "going green" being bandied about in the media and by others. In addition to being urged to go green by many celebrities and other spokespeople, it's becoming more and more common to hear about companies going green as well.

Surprisingly enough, many do not even really understand what going green means. Basically, companies going green will implement a series of strategies that reduce their impact on the environment - or that improve the environment in key ways.

There are many different ways for companies going green to achieve this goal; they might adopt a stretch of road to keep it free from litter, or enforce policies in the workplace about not wasting paper. Many companies going green implement strict policies about recycling within their facilities, and encourage their employees to practice green habits. Going green, then, means doing anything within your means to improve the planet and leave it better off than it was before.

Which Companies Are Going Green?

Some of the most recognizable names in business are among the companies going green these days.

General Electric is one key example of a company that has decided to go green; GE sells important components for solar panels as a part of that effort.

Fast food giant McDonald's has joined the ranks of companies going green, primarily by insisting on certain criteria for how the food they use is grown and how the land it is grown on is treated.

Starbucks decided to go green by using cup sleeves made out of recycled paper - a practice that has saved approximately 78,000 trees per year.

Dell - the computer manufacturer - has also joined in with companies going green by recycling used Dell computers free of charge for anyone who owns one - reducing the number of computers that end up in landfills.

Tips To Getting Your Company To Go Green

If you'd like to see the company that you work for get in on the act and go green, there are several small but important measures that you could encourage them to implement. Many companies going green begin recycling programs - you could ask about adding recycling bins to areas of your workplace to encourage this. In restrooms, you could promote others to go green by using as little water as possible. You can point out all of the large companies going green to your superiors in the hopes that those examples will spur them to go green themselves.

This article has been earlier published in other publications



Green Walls: Save The World at New Heights

An emerging new technology may have the potential to save the world: green walls. Imagine a skyscraper, towering 80 stories into the air, its walls covered with plants, flowers, and shrubs, and you have imagined the exciting potential of green walls to save the world. These eye-catching walls provide numerous environmental benefits, both to the buildings themselves and the climate as a whole. With a growing population and an environment in need of help, green walls may be what we need to save the world.

What exactly are green walls?

Originating in crowded cities like Hong Kong and Tokyo, green walls developed as a method to save the world from the poor air quality and other environmental issues associated with crowded cities. Usually made up of plant-filled panels, green walls may be attached to any existing structure. While any type of plant may be chosen, choices such as ferns directly impact the reduction of air pollution. Plants that combine beauty with purpose are favorites. Green walls are easy to maintain. Watering can be provided through the building's plumbing system, and gardening chores, like weeding, are not required. The walls also provide natural cooling to the structure. The landscaping of green walls are meant to provide beauty as well as the potential benefit to save the world.

Green wall technology

Green wall technology comes from the concept of green roofs, another technology developed to save the world from environmental destruction. To construct green walls, aluminum panels are pre-filled with vegetation and then attached to the building's existing frame. The panels contain most everything the plants

need including irrigation systems and growing mediums. A variety of different plants may be used, adding to the beauty and environmental benefits of the walls, including flowers, shrubs, ferns, and edible plants

How can green walls save the world?

Green walls may save the world in a time when the population is growing and cities are becoming more and more crowded. Beginning with the building itself, green walls provide insulation, helping cool the building naturally as well as retain heat during cold weather. The plants filter air particles, providing a natural reduction in air pollution.

Green walls absorb rainfall and release it slowly into stormwater systems as well as the atmosphere. Animals and insects may find a habitat in the walls, depending on the kinds of plants used. The overall effect of green walls is that of a microclimate, which helps to modify the entire city's climate, with the long-term potential to save the world from climate destruction. Rather than harming the environment further, a building with green walls has the ability to save the world from environmental destruction, should the technology be used on a large scale.

Other green design breakthroughs: panels, roofs, and houses

In cities like Hong Kong, where most buildings are skyscrapers, it made sense to look to walls as beneficial alternatives or additions to green roofs because the walls of skyscrapers have more area to cover. Green roofs, however, offer a similar potential to save the world from environmental damage.

The panels that are used for green roofs and walls are portable and interchangeable, so there are many possibilities for this kind of technology on all different kinds of buildings. An entire house may be covered with green panels, providing homeowners with significant benefits. As a means to save the world as well as provide personal benefits, green houses will appeal to many homeowners.

Beautiful and environmentally sound, green walls just may save the world.

This article has been earlier published in other publications



El-Niño 2009

By Bahati Musilu

When the Kenya Meteorological Department announced in August that the short rain period would be accompanied by El-Niño type of rainfall lasting up to February 2010, most people were skeptical. Critics announced that this was just one of the “wrong” predictions that the Department had been giving, even from the past.

Interestingly, the El-Niño type rain did come and with it floods and destruction in some parts of the country. It was predicted to begin in October with an increase in November through to January of 2010. It begun at the Coast province, and continued to cover the rest of the country in the following months. The downpour took a break of one month (November) before returning ferociously during the month of December and into January 2010, with two storms being reported during the period. These storms damaged properties of immense value within the city.

What then is El-Niño?

El-Niño is the Spanish term used by South Americans, Peruvians, which means “The Christ Child,” because it comes about the time of the celebration of the birth of the Christ Child.

El-Niño normally occurs around Christmas and lasts usually for a few weeks to a few months. What we now call El-Niño seemed to the Peruvians like a stronger event of the same type, and the usage of the term changed to refer only to the irregular strong events. It wasn't until the 1960s that it was widely realized that this was not just a local Peruvian occurrence, but was associated with changes over the entire tropical Pacific and beyond.

El-Niño is the abnormal warming of surface ocean waters in the tropical eastern Pacific Ocean. It is defined by ocean surface temperatures rising by more than 0.5C above the average. When this warming occurs the usual upwelling of cold, nutrient-rich deep ocean water is significantly reduced. The formation of an El-Niño is linked with the cycling of a Pacific Ocean circulation pattern known as the southern oscillation which is characterized by changes in surface pressure in the tropical western Pacific Ocean. The Pacific Ocean is a huge mass of water which controls many climate features in its region and as a result, the trade winds over the Pacific Ocean move strongly from east to west. Its equatorial expanse, far

larger than the Indian or Atlantic Oceans, is critical to the development of the Southern Oscillation and El-Niño.

El-Niño happens when weakening trade winds (which sometimes even reverse direction) allow the warmer water from the western Pacific Ocean to flow toward the east. This flattens out the sea level, builds up warm surface water off the coast of South America, and increases the temperature of the water in the eastern Pacific (Peru). Climatically, the development of an El-Niño brings drought to the western Pacific, rains to the equatorial coast of South America, and convective storms and hurricanes to the central Pacific.

After an El-Niño event, weather conditions usually return back to normal. However, in some years the trade winds can become extremely strong and an abnormal accumulation of cold water can occur in the central and eastern Pacific. This event is called a La Niña. Prior to the 1980s and 1990s, strong El-Niño events occurred on average every 10 to 20 years. In the early 1980s, the first of a series of strong events developed. The El-Niño of 1982-83 brought extreme warming to the equatorial Pacific. Surface sea temperatures in some regions of the Pacific Ocean rose 6° Celsius above normal. The warmer waters had a devastating effect on marine life existing off the coast of Peru and Ecuador. Fish catches off the coast of South America were 50% lower than the previous year. The 1982-83 El-Niño also had a pronounced influence on weather in the equatorial Pacific region and world-wide. Severe droughts occurred in Australia, Indonesia, India and southern Africa.

El Niño rains arrived with devastating consequences which include flooding which left communities isolated, contaminated clean water sources, farmers who had planted and lost their first crop, disease outbreaks, among other negative effects.

The writer is the PRO - KMD.





Linking sports with environmental conservation:- Hon. Michuki kicks the ball to start off a youth soccer match at general Kago stadium in Kangema.



Fruits of hard work and dedication:- Senior Ministry officials displaying the two trophies awarded to the Ministry during last year's Public Service Week at the K.I.C.C.



Ministry excels during the Public Service Week:- Permanent Secretary, MEMR Mr. L. Lenayapa, CBS, receives a trophy from the Vice President, Hon. Kalonzo Musyoka, watched by Ministers Hon. S. Poghiso and Hon. D. Otieno. The Ministry was awarded the 2nd position in Showcasing and Computerization of Operations.



Hon. John Michuki receiving the Basel Solution Circle Award from UNEP's director for Environmental Conventions Mr. Bakari Kante, for his efforts in cleaning the Nairobi Rivers.



Assistant Minister, Hon. R. Kajembe opening the 43rd Governing Council meeting for the Regional Centre for Mapping, flanked by the PS, Mr. L. Lenayapa



V.P Hon. Kalonzo Musyoka presenting the Ministry's certificate to Mrs. J. Isiaho, (MBS) SDS, during the last year's A.S.K show.





Members of the public viewing DVD copies of environmental documentaries at the Ministry's stand during last year's Public Service Week.



The Head of Public Communications in the Ministry, Mr. Mulei Muia presenting a biodegradable echo bag to the PS, Ministry of Lands, Dorothy Angote, during a function held in a Mombasa hotel.



Senior Director of Administration Mr. Paul Olando, CBS, presents presidential medal to Mr. Muusya Mwinzi, DG- NEMA, with the Elder of the Burning Spear (EBS) Presidential medal



The Ministry hosted a Christmas party for its staff at the Kenya Met. Hqts, where all cadres of staff mingled, ate and made merry with their seniors.



Hon. John Michuki presenting a copy of the first ever atlas of environment to the speaker of the National Assembly, Hon. Kenneth Marende,



Ministry's staff following proceeding during the World Aids Day at KICC.



Laptops and Changing Weather Patterns

By Silas Wachira

A laptop is a microcomputer small and light enough to sit on the user's lap and containing, in a single unit, a keyboard, LCD screen, microprocessor, and, usually, a rechargeable battery. It has been noted that laptop screen are cracking or other malfunctions occurring to it especially if exposed to extreme weather patterns, causing anguish to the users especially when they travel abroad on official duties.

Are there any concerns I should have about my laptop and the cold weather?

Yes. The main component that you need to worry about is the LCD screen. The screen is filled with liquid that will freeze if your laptop computer is exposed to cold temperatures for long. The recommended temperature range for use of your laptop is 50 degrees to 95 degrees (10 degrees Celsius to 35 degrees Celsius). Anything lower or higher than the recommended temperatures could result in damage. If your laptop is extremely hot or cold, give it at least 20 to 30 minutes for its temperature to equalize before use. The best way to clean your laptop screen is to use a soft dry cotton cloth to remove fingerprints and smudges from the screen. If this is not efficient, use a small amount of isopropyl alcohol on the cleaning cloth that has been dampened with water. Spray the liquid on the cloth and never directly onto the screen.

How can I extend the life of my battery?

There are all sorts of power saving features that will help you squeeze every last bit of computing time out of your battery. Some of the power saving features includes: Amount of time until the hard drive



An example of a laptop affected by extreme cold weather.

suspends, Amount of time until the screen suspends, Amount of time until the computer hibernates.

What is the best way to store my power supply?

When you are putting your power supply into your laptop bag, don't wrap the cord around the power supply. This will cause it to twist which eventually breaks the wires. The best way to wrap your cord is to just gather it together without wrapping it around the power supply. When travelling, never check your laptop as luggage. It can be easily stolen and it won't be handled as delicately as it should be by airline employees. Take your laptop as carry-on with you onto the plane. Also, make sure you have some battery power, as security might want you to turn your laptop on.

How do I properly handle my laptop?

When you carry your laptop, never hold it by the front right/left corner. This can cause the entire laptop to flex in the middle which could eventually cause damage to the system board. Also, never carry your laptop by holding onto the top of the screen. This can cause the screen to crack or the screen's hinges to break. The best way to carry your laptop is to close the screen and put it in your laptop bag. If you need to carry your laptop while it's running with the screen open, put one hand on the back of the screen and the other hand flat on the bottom middle (think of carrying a pizza.). This keeps stress to a minimum and secures your laptop in case someone bumps into you in the hall.

How can I extend the life of my hard drive and avoid data loss?

To extend the life of your hard drive and help avoid data loss: Avoid jarring the system while the hard drive is operating. Suspend, hibernate, or shut down the computer completely before moving it.

Wait 30 seconds after initiating suspend, hibernation, or shutdown before moving the system so the hard drive can spin down.

Keep your computer at least 13cm away from any electrical appliances that generate strong magnetic fields. These fields can cause data loss.

Take corrective actions immediately when the battery status indicator is blinking orange and your laptop sounds three consecutive beeps. Data loss may occur if your computer suspends or shuts down due to a low-battery condition.

The writer is the Chief ICT Officer - MEMR.

The Basel Convention on The Control of Transboundary Movements of Hazardous Waste and Their Disposal

By Regina Waweru.

The Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal, usually known simply as the Basel Convention is an international treaty that was designed to reduce the movement of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs). It does not, however, address the movement of radio active waste. The Convention is also intended to minimize the amount and toxicity of wastes generated, to ensure their environmentally sound management as closely as possible to the source of generation, and to assist (LDCs) in environmentally sound management of the hazardous and other wastes they generate.

Because hazardous wastes pose such a potential threat to human health and the environment, the guiding principle of the Basel Convention is that in order to minimize the threat, hazardous waste should be dealt with as close to where they are produced as possible. Therefore, under the Convention, transboundary movements of hazardous waste or other waste can take place only upon prior written notification by the state of export to the competent authorities of the state of



A factory emitting hazardous gases

In addition to conditions on the import and export of the wastes, there are stringent requirements for notice, consent and tracking for movement of wastes across national boundaries. It is of note that the convention places a general prohibition on the exportation or importation of waste between parties and non-parties. The exception to this rule is where the waste is subjected to another treaty that does not take away from the Basel Convention and has a number of such agreements for allowing shipping of hazardous waste to Basel party countries.

In the coming decades, more emphasis will be placed on creating partnership with industries and research institutions to create innovative approaches to Environmentally Sound Management (ESM). One of the most critical aspects of (EMS) is lowering the demand for products and services that result in hazardous by-products. Consumers need to educate themselves as to the methods used in production processes and think about what they buy every day.

A central goal of the Basel Convention is to protect human health and the environment by minimizing hazardous waste production whenever possible. Environmentally Sound Management means addressing the issue through an integrated life cycle approach which involves strong controls from the generation of hazardous waste to its storage, transport, treatment, reuse, recycling, recovery and final disposal.



A man looks on as lorries dump waste suspected to contain hazardous waste at Kibarani -Mombasa.

import and transit. Each shipment of hazardous waste or other waste must be accompanied by a movement document from point at which a transboundary movement begins to the point of disposal. Hazardous waste shipments made without document are illegal.



Alas! There is life: The Case of Nairobi River

By Gicia Simon

Green represents life and growth it signifies renewal, health, and well-being and that is the story of Nairobi River. Just two years ago, the river lazily snaked across Nairobi carrying with it all manner of filth ranging from toxic chemicals, raw sewerage, plastics, you name it. Today however, mudfish have been spotted in the river, YES, FISH; at last, there is life in the river. A good background of the river's journey would do good to make us appreciate the efforts that have been made to make it what it is today.

Nairobi was established in 1899 as a railway depot for the then Uganda Railway. As at that time, Nairobi River had clean water suitable for drinking and domestic purposes. In fact, the name "Nairobi" is derived from one of the local communities, the Maasai, which simply means a place of cool and clean waters. As time went by, Nairobi became a major industrial and commercial center in Kenya with agglomeration of industrial, urban, commercial and settlement activities. However, timely planning and law enforcement did not match the rapid growth of these activities and the river's natural ecosystem quickly lost its original quality. Untreated industrial effluents, raw sewage, and waste from commercial activities and human settlements situated along the rivers turned the river waters into sludge. The prevailing situation continued unabated for decades despite short-term efforts by individuals, groups of people and civic organizations who attempted to clean the river with minimal impact. It soon became clear to all that there was need to put in place serious mitigation strategies to reduce and finally stop pollution and manage the water quality status of the river, as it had become an environmental health hazard. In addition, there were people who at one time or other depended on the river as a source of water for domestic use and in the worst cases, for drinking. The status of the river also gave Nairobi a bad image, something not good for the tourism industry.

With this in mind, reversing the state of the river became a concern at the highest level of Government. In the year 2007, the Government through the Ministry of Environment and Mineral Resources under the



Rehabilitated Nairobi River Basin

strong leadership of Hon. John Michuki decided to take the leading role in co-ordinating the already ongoing initiatives [by Government, private sector and individuals] in order to have a fully integrated approach to rehabilitate and restore the river. This was to be done in conjunction with other stakeholders who included UN agencies and the private sector.

A campaign to educate people on the importance of a clean environment and the danger of polluted waters was also initiated. Indeed, without the support of the public rehabilitation efforts can end up being useless. The Rehabilitation work has received a big boost from youths under the Kazi Kwa Vijana (KKV) Initiative who are cleaning, planting trees and acting as security to prevent pollution in areas that have already been cleaned. Tree planting is still going on within the cleared area by the youths and more than 2,000 have been planted.

But of all successes, Mud fish have been spotted in the river. Birds are hovering on top of the river, indicating that there are other living organisms in the river that the birds are feeding on. The success of this programme under Hon. John Michuki has generated sufficient public interest and created environmental awareness and change of attitude and behavior among the city residents.

But of all successes, Mud fish have been spotted in the river. Birds are hovering on top of the river, indicating that there are other living organisms in the river that the birds are feeding on. The success of this programme under Hon. John Michuki has generated sufficient public interest and created environmental awareness and change of attitude and behavior among the city residents.

The writer is an Intern in the Public Communications - MEMR

Why not to Pop up that Volume!

By Wangari Kihara

“That is the furthest we can reduce the volume madam,” the matatu conductor told me in response to my request to reduce the volume. “My matatu was the first to be compliant in noise measurements,” he assured me.

It has been two months since the Noise and Excessive Vibrations Pollution Control regulations came into effect, and there are still mixed reactions among the populace. For some, the regulations are long overdue and a reprieve to a culture of noise, which is unhealthy. For others, it is perceived to be infringing on their rights to worship and make a living, contrary to the spirit of the regulations’ development and implementation.

A major concern has been keeping to the permitted noise levels. The country is divided into various zones, the most quiet being around hospitals and the noisiest being commercial areas. In between are residential areas. However, because zoning has not been strictly adhered to there tends to be a mix of either residential/commercial areas, while some churches are also found in residential areas. Irrespective of this, all zones must adhere to the same noise levels at night.

The regulation was gazetted by the Minister for Environment and Mineral Resources, Hon. John Michuki on May 22nd 2009 and came into effect six months later on November 22nd 2009. During the time



You need a NEMA licence to have such a road show.

between gazettement and coming into effect, there was extensive awareness creation countrywide among all stakeholders.

Noise meters are being used to measure noise levels in decibels (db). So far, more than 30 people have been arraigned in court on charges of refusing to comply with the regulations mostly in Nairobi, Kisumu and Mombasa. Most of them have been released on a Kshs.100,000 cash bail pending hearing of their cases in March. The bulk of these cases have been in Nairobi and other major towns such as Mombasa and Kisumu. Most cases have involved the matatu industry and pubs and restaurants.

One may wonder why the noise regulation, and how does it affect the environment. The Environment Management and Co-ordination Act (EMCA) of 1999 is a framework law that has laid out general aspects of the environment that require to be regulated. To this end, the National Environment Management Authority (NEMA) is mandated to develop and enforce regulations on these general aspects. Noise is covered under Sections 101 to 103 of EMCA.

The Act enshrines the right to a clean and healthy environment, which includes people and animals. Scientifically, noise above 60 levels becomes annoying and then gradually as one increases the volume and duration of exposure ranges from annoying to hearing loss and eventual eardrum rupture. Also long exposure to loud noise over time can lead to loss of productivity due to lack of enough sleep. In some cases it can also lead to heart ailments and high blood pressure.

Ministry officials have been calling for voluntary compliance. Simply put, turn down the volume and protect yourself and the environment.



You need a NEMA license for that party

The writer is the Head of Corporate Communications - NEMA





MINISTRY OF ENVIRONMENT AND MINERAL RESOURCES

REGULATIONS ON NOISE AND EXCESSIVE VIBRATIONS

What is noise?

'Noise' is any loud, unreasonable, unnecessary or unusual sound that annoys, disturbs, injures or endangers the comfort, health or safety of others and the environment.

In determining whether noise is loud, unreasonable, unnecessary or unusual, the following factors may be considered: time of the day; proximity to residential area; whether the noise is recurrent, intermittent or constant; the level and intensity of the noise; whether the noise has been enhanced in level or range by any type of electronic or mechanical means; and, whether the noise can be controlled without much effort or expense to the person making the noise.

What is excessive vibration?

'Excessive vibration' means the presence of vibration that is of such intensity, duration, frequency or character which annoys, disturbs, or causes or tends to cause adverse psychological or physiological effects on persons, or damages or tends to damage Personal or real property; and, exceeds 0.5 centimetres per second beyond any source property boundary or 30 metres from any moving source;

Permissible noise levels & exemptions

This is noise that is reasonably necessary to the preservation of life, health, safety or property. These Regulations shall not apply to:

- the emission of noise for the purpose of alerting persons to the existence of an emergency;
- the emission of noise in the performance of emergency response;
- the emission of noise in connection with the protection of the health and safety of residents or their property during emergency conditions;
- warning devices necessary for the protection of public safety, such as police, fire and ambulance sirens, and train horns; or
- Parades and national celebrations.

Sources of noise and excessive vibrations

- Radio, TV, sound amplifying device;
- Parties and social events;
- Machinery- motor vehicles, construction equipment, pumps, fans, air-conditioning apparatus or similar mechanical devices; commercial and/or industrial activities. For motor vehicles the provisions of the Traffic Rules shall apply to this Regulation mutatis mutandis.
- Operation of construction equipment at night - Exemptions include work of an emergency, domestic nature and public utility constructions. However, no person shall operate such machinery so as to cause noise within a residential building or across a residential real property boundary;
- Hawkers, peddlers, tout, street preachers in silent zones in CBD, residential areas, and silent zones. A "silent zone" is a designated area that includes health facilities, educational and research institutions, courts, and any other area declared as such by the Authority. The provisions of this regulation shall not be construed to prohibit the selling by shouting of merchandise, food and beverages at licensed sporting events, parades, fairs, circuses and other similar licensed public entertainment events, and
- Noise and excessive vibrations from construction, demolition, mining or quarrying sites. The relevant lead agency shall ensure that mines and quarries using explosives and machinery are located in designated areas and not less than two kilometers away from human settlements.

Licensing

- Where a sound source is planned, installed or intended to be installed or modified by any person in a manner that such source will create or is likely to emit noise, or excessive vibrations such person shall apply for a license to the Authority.
- No person shall use any sound-amplifying equipment in such a way that such equipment is or will be heard outside of any building between 9:00 p.m. of any day and 7:30 a.m. to the next day, without a valid license. Where any person uses or plans to use a public address system that will emit sound outside of a building, such person shall secure a valid license.
- No person shall carry out activities such as fireworks, demolitions, firing ranges and specific heavy industry without a valid permit issued by the Authority.

Additional powers to the lead agencies

In order to further the purposes of these Regulations and to facilitate compliance and enforcement, the relevant lead agencies shall have power to impose such other conditions in relation to these Regulations as they deem necessary on the license or permit that the lead agencies issue.

The following shall be the designated mapping bodies for the purpose of making and approving strategic noise or vibration maps:

- the Ministry responsible for physical planning
- the local authorities;
- for railways, the Kenya Railways Corporation;
- for airports, the Kenya Airports Authority;
- for mines and quarries, Mines and Geology Department;
- for weather and instrumentation, Meteorological Department;
- for calibration of equipment, Kenya Bureau of Standards; and,
- for major roads the Kenya Roads Board
- where such roads are classified as national roads in accordance with the Highway Act, and (ii) for any other road, the relevant local authority; or any other body or institution as the Minister may decide.

Closure Notice

Where there is continuous emission of noise or excessive vibration after the Environmental Inspector has issued an improvement notice, the Environmental Inspector may, with the approval of the Director General, and in consultation with the relevant lead agency, order the closure of an establishment or undertaking emitting such noise or excessive vibrations.

Transition Provisions

Any person carrying out activities that emit noise or excessive vibrations immediately before the coming into force of these Regulations shall, within six months from the coming into force of these Regulations, take all necessary measures to ensure full compliance with these Regulations.

General Penalty

Any person who contravenes any of the provisions of these Regulations, for which no penalty is stipulated, commits an offence and is liable, upon conviction, to a fine of not more than three hundred and fifty thousand shillings (Kshs. 350,000) or to imprisonment for a term of not more than eighteen months (18) or to both such fine and imprisonment.

Bringing into fore Minerals Treasures in Kenya's Bowels

By S.M. Kimomo

The history of mining in Kenya is as old as its inhabitants. Kenyans in those early days used to mine Iron Ore, smelt it to get iron, which they then used to make hunting tools and fighting implements. Early notable sites for smelting iron ore can be found in Busia Hills, southern Kitui, Meru and in Migori to mention but a few areas.

But well documented and fairly organized mining activities in Kenya started in earnest in 1930's when gold was discovered in western Kenya, setting off a flood of prospectors and fortune seekers in the area to mine the valued metal. The area was booming with activity to the extent of overshadowing the scrambling, which was then going on for the white highlands in central Kenya. Kakamega became a major mining centre and indeed very important economically, thus putting Kenya on the world's mining map.

Mining of gold in those days was in haphazard manner. It was this state of affairs which jerked the then colonial government into thinking of establishing an institution to regulate and control the activity. Mines and Geological Department was borne out of this realization through a mining ordinance of January 1933 as an annex in the ministry of Local Government, Lands and Settlement. The following year, 1934, it became a full-fledged department headed by a Commissioner under the same ministry. Its main challenge then was overseeing exploration and exploitation of gold, which was then controlled by prospectors who had organized themselves into partnerships and syndicates, the equivalent of present - day cartels.

Later in late 1960's with the growing confidence in the new government, mining activities started catching up, this time not in gold alone but also in other precious minerals particularly the gemstones. This reached fever pitch when ruby gemstones were discovered in Taita - Taveta district, Coast Province. Mining of these of these minerals has continued over time with more discoveries being made in other areas like Isiolo, Kitui and Samburu districts. And the recently discovered ruby gemstone in Baringo district is bound to give the minerals industry a renewed impetus and impart positively on the socio- economic situation in the areas these minerals are being mined thus considerably arresting the poverty manace suffocating the nation. Besides Gemstones, other minerals especially heavy ones like iron ore and lead are also being mined. Iron



An official of Mines and Geology, Mr. Marube explains a point to a gemstone dealer in Taita Taveta.

ore is mined in Migori, Kilifi, Meru and Kitui districts not for smelting but for use as an additive in cement manufacturing. In addition, Titanium mining in the near future will play a major role in Kenya's economy when mining of the vast deposits of it at the Coast Province becomes operational.

Presently, mining industry contribute slightly less than 1% of the country's GDP. In 2008, Kenya produced minerals worth Kshs 18.84 billions (US\$ 251.2 millions), which are far below expectation given the country's great mineral potential. Nonetheless, many international and local mining companies are investing in the industry and are carrying out mineral exploration and development activities which are giving promising results. This is a positive and encouraging trend and the Department of Mines and Geology will continue to urge more prospective investors to follow suit. In addition, the Department is gearing itself to tackle the enormous task of steering the mining industry through this period of rejuvenation, environmental concerns and unpredictable challenges. This will entail undertaking a tight act of balancing the need mineral resources development with that for environmental conservation for sustainable development.

Therefore, in future priority will be to attract, guide and encourage private sector investment in the industry and incorporate the artisanal miners, who contribute significantly to the sector, in to the mainstream mining industry. The proposed draft bill on the industry is expected to give investors such incentives as waivers of taxes on imported mining equipment and provide more security of tenure. The Department is supporting, and will continue to do so, the recently established Kenya Chamber of Mines (KCM) in dealing with all aspects of mining particularly marketing and capital development.

The writer is a Mines Engineer - Mines and Geological Department.



Gemstones Prospecting and Mining in Developing Countries

By Moses N. Masibo & Ng'ang'a Kuria

Recent accounts on the potential of Africa in terms of gemstone production have underscored the importance of East Africa in world's coloured gemstone market. Kenya and Tanzania, both of which are renown for gemstone production, do not have a long history in the industry but have in the recent times become sources of the most important colour gemstone. The two East African countries are endowed with a variety of unique gemstones such as tsavorite, tanzanite, aquamarine, ruby, sapphire, rhodolite, tourmaline, kornepurine, spinel, peridot, hessonite and amethyst among others.

Gemstone deposits occur in many different and varied geological settings, and each deposit usually has its own characteristics. For instance, many ruby and sapphire deposits, as well as some tourmaline, iolite and rhodolite deposits are the result of metasomatic phenomena involving felsic rocks, fluids of metamorphic origin, and ultramafic rocks. Graphite-rich gneisses usually host tsavorite and tanzanite deposits. Some gemstones such as tourmaline, aquamarine, amazonite or topaz occur in medium-size pegmatite bodies. Others such as spinel, ruby, and tourmaline, are associated with meta-limestones, either as rock forming minerals or as the product of metasomatic reactions between fluids and the meta-limestones. The association of gemstone deposits with tectonic structures such as faults and shear zones has been shown in Sri Lanka and more recently in Kenya.

The first step in gemstone prospecting is normally geological survey, which provides useful information on the nature of the rock associations and identifies areas that have potential for mineral occurrence. The plotting of known gemstone occurrences and deposits on a geological map is a good way to understand the setting of gemstone deposits. The use of Global Positioning Systems (GPS) instruments provides a fairly easy and accurate means of mapping gemstone occurrences.

It is important to have prior knowledge of the type of gemstones that can occur in different geological environments, and also the type of indicator minerals. For example, in southern Kenya, ultramafic rocks consist mostly of magnesian minerals that weather easily. These rocks often contain minor amounts of

chalcedony, which is more resistant to weathering. Thus, even in areas where rocks do not outcrop, chalcedony floats on the surface have been found to be good indicators of underlying ultramafic rocks, and indirectly, of associated gemstones such as ruby and rhodolite.

Many of the gemstones occurring in metamorphic rocks are coloured by trace elements such as Vanadium (as in tanzanite) and Cr (as in ruby). These elements usually originate either from graphite-rich meta-sediments, having originally been associated with organic matter, or from ultramafic rocks. Ultramafic rocks are also characterised by high Nickel and Cobalt content (Austromineral, 1978). All these elements can therefore be used as indirect geochemical pathfinders for gemstones.

Small-scale mining is expanding rapidly and often uncontrollably in many developing countries, employing large number of people including children in dangerous conditions and generating a workplace fatality rate up to 90 times higher than mines in industrialized countries. While it is impossible to say how many deaths and accidents occur in small-scale mines, due to under-reporting and the clandestine nature of much of the work, the risks of fatal and disabling accidents are high, particularly in underground mines. Furthermore, most miners lack skills to acquire appropriate geological information and have no access to appropriate equipment. This is often coupled with operation under unfavourable laws and lack of direct markets.

There are no universally accepted grading systems for any gemstone other than white (colorless) diamond. Historically, all gemstones were graded using the naked eye. The Gemological Institute of America (GIA) system included a major innovation, the introduction of 10X magnification as the standard for grading clarity. Other gemstones are still graded using the naked eye (assuming 20/20 vision). For the past several hundred years, gemstones have been broken down into two categories; precious and semi-precious. Though today we think primarily of diamond, ruby, sapphire, and emerald as "precious", these categories are based mainly on fashion and the composition of these two lists has changed frequently over time.

The First Conference of Ministers Responsible for Meteorology in Africa

By Ayub Shaka

The First Conference of Ministers Responsible for Meteorology in Africa will be held in Nairobi at the Kenyatta International Conference Centre (KICC) from 12 April to 16 April, at the invitation of the Government of Kenya. The first part of the Conference, from 12 to 14 April, will be a preparatory meeting of experts and partners of all sectors concerned, while the Conference of Ministers itself will take place on 15 and 16 April. The objective of this conference is to:

- Create of a high-level mechanism for Ministers responsible for meteorology in Africa to discuss policy and strategic matters related to meteorology and climate;
- Heighten awareness among top political officials of the current and potential contributions of meteorological services to the fulfilment of the Millennium Development Goals in Africa, the Strategic Plan of the African Union Commission, and the objectives of the New Partnership for Africa's Development (NEPAD), and also to the drafting of national and regional sustainable development plans;
- Facilitate dialogue among African Ministers responsible for meteorology with a view to achieving mutual understanding and outlining measures to mitigate the negative impacts of global warming;
- Identify strategies that are likely to enhance the capacities of meteorological services to meet the challenges posed by climate change in sectors such as agriculture and food security, management of water resources, public health, tourism, transportation, energy production, the environment, trade, and forestry from the standpoint of sustainable economic development;



The Kenya Meteorological Department headquarters.

- Promote active participation by local communities in programmes for the observation and monitoring of meteorological and climatic phenomena;
- Adopt a Ministerial Declaration on Meteorology and Climate, and a related Action Plan.

The Ministerial Conference is expected to endorse high level support to the expert-based Conference Statement from government representatives and to adopt a Conference Declaration for the development of weather, water and climate services in Africa.

The Conference provides a unique opportunity for governmental and non-governmental organizations, international and national institutions, research institutes, private companies and other stakeholders to join the discussion on the challenges and opportunities that better weather, water and climate information and services offer. It is expected that about 250 delegates will attend the meeting. Meteorological and earth science instrument manufacturers will also exhibit their technologies during the meeting.

Olando, MBS, Senior Director of Administration.

The writer is an Assistant Director, Public Weather and Media Services - KMD



Ministry Feted

By Margaret Maina

In the calendar of events of public service, recognition of excellence in various spheres of service delivery is held with utmost importance. In this case, the Ministry's outstanding performance was noted in two major events namely: Nairobi International Trade Fair and Kenya Public Service Week.

In 2009, the Nairobi International Trade fair was held from 29th September to 4th October at the Jamhuri Park Showground under the theme "Driving Agribusiness in Attaining Food Sufficiency and Vision 2030." The Ministry was in the frontline to showcase its activities to the public. Though there were limitations faced in the preparation of the trade fair, the Ministry beat all the odds and came second in three of the five categories it had entered. It was awarded three certificates in the following categories:-

- 1) The best stand that interprets the current show's theme
- 2) The best stand exhibiting information and communication, technology and documentation services
- 3) The best stand demonstrating application of environmental and quality standards

The Ministry formed sub-committees under the main committee and they were tasked with different activities. The committees worked tirelessly within a short time frame to ensure the stand was ready for the judges and the show attendants on time. This was



The PS, MEMR Mr. L. N. Lenayapa signing the visitors book when he visited the Ministry's stand during the Public service week in K.I.C.C

a great achievement for the Ministry considering the previous performances that were not rewarding.

On the other hand, the Kenya Public Service Week (KPSW) is historically based on United Nations Public Service Award programme which is designed to recognize and award excellence in service delivery, transparency, accountability and responsiveness in public service around the world.

This annual event provides a one-stop shop, with all Government Ministries, State Corporations, local Authorities and other Government Agencies showcasing and demonstrating significant contribution of public service to national development. In 2009, the KPSW was held from 18th -20th August, 2009 at the

KICC Grounds under the theme "Mainstreaming Quality Service for Prosperous Kenya" 'Huduma Bora ni Haki Yako.'



The Vice President, Hon. Kalonzo Musyoka touring the Ministry's stand at Jamhuri Park during last year's A.S.K show.

The Ministry scooped two trophies:-

- 1) Excellence in showcasing (2nd position)
- 2) Excellence in computerization of operations (2nd position)

The first category acknowledges the efforts made by Ministries in displaying their publicity materials, i.e. brochures, service charter, organograms e.t.c. The second category recognizes the efforts by Ministries in computerizing their operations.

Celebrating the World Meteorological Day, 23 March 2010

By Ayub Shaka

Every year on 23 March, Kenya Meteorological Department joins the World Meteorological Organization (WMO) and the international meteorological community in celebrating World Meteorological Day, to commemorate the coming into force of the WMO Convention on 23 March 1950.

Under the guidance of WMO, marked improvement in weather forecasting soon followed: whereas in 1950 we only could hope for 24- to 36-hour forecasts, today we have useful seven-day predictions, an achievement of WMO's international coordinating role in observations, research, analysis and modelling, and also led to longer-range predictions. This would not have been possible without the free and unrestricted international exchange of data and products, a concept so implicitly structured in the spirit of the WMO Convention that it had not been formally included initially.

Natural hazards pose very serious threats to human security, so WMO has devoted substantial efforts to develop operational warning systems and effective preparedness measures, which have contributed to a significant decrease in the associated loss of lives. To ensure that these benefits reach its Members, WMO has devoted considerable attention to the development needs of the National Meteorological and Hydrological Services, in particular in the least developed countries, to warrant that they have ready access to advanced products and the capacity to use them according to their national requirements and their global commitments, an objective driven by WMO's fundamental mission.

National Meteorological and Hydrological Services are working together in collecting and assessing air-quality data and enhancing modeling capabilities that are essential for forecasting atmospheric pollution and for protecting communities against its health and economic impacts.

It is today traditional to focus the annual World Meteorological Day celebration on a special theme and in 2010 the theme is "the World Meteorological Organization – 60 Years of service for your safety and well-being", a specially appropriate theme at a time when communities around the globe are striving to achieve the United Nations Millennium Development Goals, in particular concerning health, food and water security and poverty alleviation, as well as to improve

their resilience in the face of recurrent natural disasters and to assist them in proactively responding to the mounting impacts of climate variability and change. benefits that can be achieved by many sectors through cooperation in meteorology, especially in terms of human safety and well-being. Obvious examples include agriculture and food security, health, transportation, tourism, construction and energy, among others.

It can be recalled that Heads of State and Government, Ministers and senior government officials of 160 countries, who participated from 31 August to 4 September 2009 in the High-level Segment of World Climate Conference-3 (WCC-3), unanimously agreed to establish a Global Framework for Climate Services (GFCS) to strengthen the provision and use of climate predictions, products and information worldwide.

This GFCS will be crucial to support climate change-resilient societies. Through strengthened observations, research and information, as well as novel interaction mechanisms between climate information users and providers, the Framework will ensure that all societal sectors have user-friendly climate products enabling them to better plan ahead in the face of a changing climate.

The writer is an Assistant Director, Public Weather and Media Services - KMD



THE MURANG'A QUARRY DISASTER

By Dan Maangi

Tragedy befell the otherwise quiet village of Mukangu in Murang'a East District, on the 1st February 2010, when the walls of a quarry five villagers were excavating crumbled and came tumbling down, burying them.

The quarry, which has been in operation since 1928, had for many years acted as a source of livelihood for many residents of Mukangu sub-location and had developed a cliff, which was towering about five hundred meters. Boulders from the quarry fell with intensity, burying the five villagers who were eking out a living by chiselling the quarry stones for sale to provide for their families. According to area residents, about 20 people working alongside the five were lucky as they were away for lunch when the quarry came tumbling down on their colleagues.

On learning of the tragedy, the Minister for Environment and Mineral Resources, Hon. John Michuki, accompanied by his Permanent Secretary, Mr. Lawrence Lenayapa and other senior Ministry officials, visited the site to assess the magnitude of the devastation. During the visit, the Minister noted that though quarries were vital sources of livelihoods, they faced serious challenges, including lack of proper regulation and effective management to ensure the safety of miners. He announced the suspension of stone excavation in all quarries in the larger Murang'a region and directed the Permanent Secretary to set up a task force that would conduct an environmental audit of all quarries in the district, seek views from families living near the quarries, assess the safety of the sites, give recommendations on the state of the quarries and submit its report to him within a month.

The Minister reiterated that his Ministry would push on with the implementation of laws on Noise and Excessive Vibration Pollution, which apply to quarries, in order to safeguard human life. He announced that activity in each quarry would only resume after inspection and certification as being safe for operation.

The writer is a Technical Officer, Public Communications Division - MEMR



Military personnel giving directives during the rescue operation as an earth mover removes boulders to reach the buried bodies

STOP PRESS

The Minister has released the report of the task force and directed as follows:-

- All quarry operations within residential zones in Nairobi Province (Kayole, Embakasi and Donholm estates) should be relocated, as planned, to the designated quarry zones in Mlolongo area of Athi River District. Consequently, I instruct NEMA not to approve any requests for further extension of time for relocation.
- Lift the ban on the six (6) quarries that were found to be safe with immediate effect. These are Karia, Thengeini, Gathamba, Kabugi, Kandundu and Wemba.
- facilitate the eighteen (18) quarries that need to be made safe and re-open them after meeting the minimum safety requirements as per the audit checklist.
- closure and rehabilitation of the twelve (12) quarries that are unsafe by the quarry/land owners.

2010 Environmental Events - By Dan Maangi

World Wetlands Day - 2nd February

2nd February each year is the World Wetlands Day. The day marks the date of the signing of the Convention of Wetlands on 2nd February 1971, referred to as the Ramsar Convention, in the Iranian city of Ramsar. The Convention provides the framework for national action and international co-operation for Wetlands Day. Each year, citizens at all levels undertake actions aimed at raising public awareness of wetlands values and benefits.

World Meteorological Day - 23rd March

This day commemorates the entry into force of the World Meteorological Organization Convention in 1950. Each year, the worldwide Meteorological community, of which Kenya is a member, celebrates the day on every 23rd March. The theme for this year is "Weather, Climate and Air we breathe", which is geared to reminding humankind about the relationship between air quality, the weather and climate.

World Biodiversity Day - 22nd May

The United Nations proclaimed the International Day for Biological Diversity, referred to as World Biodiversity Day, in December 2000, in order to increase understanding and awareness of biodiversity issues. The theme for this year is Biodiversity, Development and Poverty alleviation.



Environment Minister Hon. John Michuki receiving the Copenhagen seal from UNEP's Henry Dede, during celebrations to mark the 2009 World Biodiversity Day.

World Environment Day - 5th June

World Environment Day promotes the understanding that communities are pivotal to changing attitudes towards environmental issues and advocates partnerships that ensures all nations and people enjoy a safer and more prosperous future. WED, which was established by United Nations General Assembly in 1972, to mark the opening of the Stockholm Conference on Human Environment, falls each year on 5th June, and it is celebrated in over 100 Countries. This year, the theme will be "Biodiversity, Ecosystems Management and Green economy."



The PS, MEMR, Mr. Lawrence Lenayapa presenting a gift to Mr. Environment, Eastern Province during the 2009 WED celebrations, held in Mwingi

World Day to Combat Desertification 17th June

Acknowledging that desertification and drought were global problems as they affected all regions of the World and that, a joint action by the International community was needed to combat Desertification, the United Nations General Assembly declared June 17th the World Day to Combat Desertification in December, 1994. This year, the Day's theme will be "Conserving Land and Water = Securing our common future".



Ministry officials touring a stone from a quarry in Taru, Coast Province during last year's WDCD celebrations..



Publication Policy

Publication:

Four issues of the magazine are published every year (Jan-March, April-June, July-September, Oct-December).

Editorial Board:

The Permanent Secretary in the Ministry is the Chairman of the Editorial Board, which comprises members of staff from the Ministry, departments and parastatals.

Articles:

Each magazine focuses on a theme identified and published in the Editorial Commentary prior to the quarter. Contribution of articles to the magazine is from a cross-section of people, including the Ministry's officers, environmentalists, professionals, institutions and corporate bodies. Articles must be submitted to the Ministry in soft copies, as well as high resolution digital photos or hard copies of newsworthy photos.

Disclaimer:

The views from the contributors of articles are not necessarily those of the Ministry.

Editing:

The Editorial Board reserves the right to edit articles and photos within standards that will ensure a clear environment agenda and quality of the publication.

Advertisements:

Limited space for advertisements by companies and institutions is reserved in the magazine to support the production costs and wide distribution of copies to readers. Advertisers are required to book the space(s) for the upcoming magazine before the end of the first month of the quarter. The Editorial Board reserves the right to vet all advertisements and advise the clients on appropriate ones that can be carried in the magazine. Environmental-related adverts are encouraged as they play an important role in enhancing the purpose of the magazine.

Subscription:

Readers and institutions wishing to receive the magazine are required to submit their names and addresses to the Ministry. A commendable financial support from the Environmental Support Programme (EPS) of the Danish Government, and advertisers, has enabled the Ministry to issue the magazine free of cost to various institutions and readers.

Online Publications:

A PDF copy of the magazine is posted on the Ministry's website (www.environment.go.ke).



MINISTRY OF ENVIRONMENT & MINERAL RESOURCES

Vision

A clean, secure and sustainably managed environment and mineral resources conducive for national prosperity

Mission

“To promote, monitor, conserve, protect and sustainably manage the environment and mineral resources for national development”

Mandate

The mandate of the Ministry is to monitor, protect, conserve and manage the environment and natural resources through sustainable exploitation for socio-economic development aimed at eradication of poverty, improving living standards and ensuring that a clean environment is sustained now and in the future.

Ministry of Environment and Mineral Resources

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