



NEMA NEWSLETTER

National Environment Management Authority

Inside the National State of the Environment Report 2018 - 2019

The 13th National State of the Environment Report (NSOER) for Uganda has been released.

Turn to page 3



What's Inside

- Inside the National State of the Environment Report 2018 - 2019...1
- NEMA Celebrates Scientific WED.....1
- NEMA Builds Capacity to Boost Customer Experience.....5
- World Environment Day - Celebrations Organised by NEMA in Uganda Over the Years.....10
- The Impact of Corona Virus on the Environment.....11
- NEMA continues to fight the Spread of Corona Virus12
- Nema, Mpigi District in Capacity Building Workshop.....13
- The Vicious and Virtuous Cycles in Ecosystem Services14
- How COVID 19 has impacted school environment in Gulu and Omoro districts.....15
- Accounting for Nature to Inform Climate Change Action.....16
- Manufacturing in Uganda16
- NEMA Board Visits New cities, Interates with leadership.....18

Some of the flooded areas including lake shores, river banks and roads washed away in Kasese District.

NEMA CELEBRATES 'SCIENTIFIC' WED

The World Environment Day (WED) was this year commemorated in a style that has been widely described as 'scientific'. A 'scientific' function is now used to refer to an occasion attended by only a few necessary guests.

Turn to page 6

Editorial



William Lubulwa
Senior Information, Education and Communications Officer

Nature is Speaking: Let Us Listen

The last time we met in this magazine, Covid-19 was a new, and still seemingly small, world health challenge. Now it is fully raging on and has put all developed and developing countries on their knees.

In that edition we reported that National Environment Management Authority (NEMA), together with the Ministry of Information Communications Technology, the National Enterprise Corporation and other stakeholders, was planning to establish a national e-waste collection and disposal centre. As you read this, this project is near ready. Our hope is that by the next edition, it shall be in full operation.

Our major story today looks at the 13th National State of the Environment Report (NSOER) for Uganda which has been released. The NSOER is a two-year report prepared by the NEMA. The 2018 - 19 runs under the theme: 'Managing the environment for climate resilient livelihoods and sustainable economic development'.

On June 5, this year the international community celebrated the World Environment Day (WED) under the afflictions of the corona virus. Under the theme: Time for Nature, the global WED 2020 was hosted by Colombia.

Traditionally, in Uganda, WED brings together thousands of Ugandans to show case their commitment to the environment and demonstrate their achievements and efforts towards achieving environmental sanity.

This time, a few of us celebrated it at the NEMA offices despite the earlier plans to have it in Masindi District. The national theme was: ***Nature is Speaking, Listen!***

State Minister for Environment Hon. Betty Anywar graced the scientifically organised occasion on behalf of the Minister of Water and Environment Hon. Sam Cheptoris. The event was attended by the NEMA Executive Director Dr. Tom Okurut, Mr. Muhwezi Onesimus from UNDP among other dignitaries. We are grateful that despite the

minister's busy schedule, and despite the very challenging times, Hon. Anywar afforded us time.

In the speech, that echoed President Yoweri Museveni's directive on driving people out of the wetlands, shorelines and river banks, the minister said: "The theme invites us to rethink our actions and relationship with Nature. It challenges us to remember that nature hosts us and as such we have an obligation to respect and handle it with utmost care and responsibility. It therefore implores us to become diligent stewards to avoid turning ourselves into agents of self-destruction and advocates of unsustainable development."

We are in total agreement with her. Beyond that, educating the populace against the abuse of the environment is within the confines of our mandate.

In this magazine we share the need for all of us to listen to nature. For many months now, nature has been speaking not only to Ugandans but also to the entire humanity across the globe. Many people have not listened, and now Mother Nature is being forced to shout at the top of her voice and reclaim her territory. This is evident in many places across Uganda with rivers surging, lakeshores eating up previously inhabited places and washing away whole settlements. We have seen this in eastern Uganda, in western Uganda, in the central part of the country and many other areas.

Why must we refuse to listen when Mother Nature speaks? Are we not aware that the future of this nation rests on us being responsible and environmentally friendly beings? Nature is speaking, let all of us listen!

With every successive edition, we make great efforts in improving content, not only in quality, design and outlook but also in diversity. This edition is a refreshing read!

Covid-19 has, indeed, affected the way all of us do things. Unlike the practice of publishing this newsletter on a quarterly basis in a year, this time we have been unable to do so. In this edition, we bring to you content from as way back as June this year – a period of six months. We hope as the economy finally opens fully despite Covid-19, we, too, shall revert to our quarterly publications.

We continue to be grateful to all our partners and the various publics who always move along with us in whatever we do.

We hope that you continue to find this magazine an informative source of news and facts about the sustainable use of our environment, even amidst the global challenge of Covid-19.

Enjoy the pages.

of the country.

From page 1



By William Lubuulwa

The 13th National State of the Environment Report (NSOER) for Uganda has been released. The 2018/19 NSOER runs under the theme: 'Managing the environment for climate resilient livelihoods and sustainable economic development'. This is the 13th report. NSOER is a two-year report prepared by the National Environment Management Authority (NEMA).

The report targets a wide audience, providing information to various stakeholders including policy and decision makers, the private sector, community leaders, universities and colleges, schools, libraries, researchers, the media, development partners and special interest groups.

Purpose of NSOER

The NSOER aims at informing the public about the state of the environment in the country, the importance of the environment and natural resources in the development process and their value to society, trends and projections, key issues and challenges and opportunities for improvement.

Releasing the report, the Minister for Water and Environment Hon. Sam Cheptoris said: "... the state of environment and natural resources is a major determinant of the overall

national macroeconomic performance and human wellbeing of its citizens." And to the NEMA Executive Director, Dr. Tom Okurut, the NSOER 2018 -19 can be used "for planning and decision making in order to enhance the management of our environment as infrastructure for sustainable livelihoods and development".

The report is premised on the fact that the country's social-economic transformation and human wellbeing is hinged on effective and efficient utilization of its diverse environment and natural resources. Environment provides resources to the economy and acts as a sink for emissions and waste. Poor environmental quality, in turn, affects economic growth and wellbeing by lowering the quantity and quality of resources or through impacts to health.

In drafting the NSOER NEMA engages a selection of key persons, Ministries, Departments and Agencies of government, academia, beneficiaries of the environment and natural resources and other stakeholders.

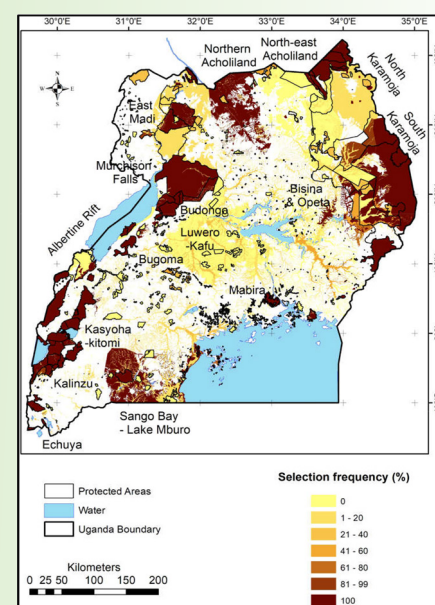
Why environment matters

Environment is categorized as a crosscutting issue in the national planning and budgeting processes and as such deliberate efforts must be put in place to mainstream environment actions in sectoral plans with budget allocations as necessary and sufficient conditions for sustaining the environment. Mainstreaming environment has extensive backward and forward linkages to the wider economy and if harnessed it has the potential to contribute to job creation, sustainable economic growth and the transformation

Key issues

The report highlights a number of threats to the environment which include: "Conversion of wetlands to small scale agriculture, establishment of housing settlements in urban areas, illegal industrial developments and public infrastructural developments". NSOER further reports that: "Kampala sub-region was found to have good Material Living Conditions (MLC) but with poor Quality of Life (QOL). For Ankole, Central 1 and Central 2 sub-regions, they had good MLC as well as good QOL. Meanwhile sub-regions of Kigezi, Tooro, Bunyoro, Elgon and Busoga had poor MLC but good QOL. However, Teso, Acholi, Karamoja, West Nile and Lango had both poor MLC and poor QOL."

Due to the uniqueness and diversity of ecosystems and variation of climatic conditions in Uganda, the country hosts a high number of globally threatened species, for instance, 39 mammals, 25 birds, 12 amphibians, three reptiles and 45 plants. At the national level, the number of threatened species is



Areas important for biodiversity conservation in Uganda
(Source: Plumptre et al., 2019)

even much higher, underscoring

the need for increased species protection in Uganda.

Wetlands

According to the report wetland coverage reduced from 15.5% in 1994 to 13% in 2017. Wetland degradation was highest in Lake Kyoga and Edward basins (42% and 34% respectively) and lowest in the Kidepo and Aswa basins (1% each). Further analysis showed that Mbale District had the most degraded wetlands with 99% of its wetlands under threat. Ntoroko had the lowest percentage of degraded wetlands standing at two per cent.

Wildlife

Although there was an overall increase in wildlife species in protected areas, species population on private land is steadily declining as a result of conversion of existing habitat for cultivation and grazing. For example, between 1995 and 2017, elephant populations increased from about 2000 to 5,808, buffaloes increased from about 18,000 to 37,054, and giraffe increased from 250 to 880.

Fisheries

The NSOER reports that fish production in the country remains higher than it was 20 years ago. Total fish production in 2018 was 456,000MT compared to 451,900MT in 2017. Over fishing and use of illegal fishing gears have, however, led to a decline in fish productivity.

Oil & Gas

Uganda has six sedimentary basins namely the Albertine Graben, the Hoima basin, the Lake Kyoga basin, the Lake Wamala basin, the Kadam-Moroto basin, and the Lake Victoria basin. The impact of the

Oil and Gas development on environment has mainly been through vegetation clearing for infrastructure construction such as roads, electric power lines and the airport.

Minerals and extractives

By 2019, the value of mineral resources produced was worth UGX158.75b. The increased mining activities have, however, impacted the environment through excessive release of mercury into the air, water and land by artisanal and small scale gold mining.

Air, Water & Soil quality

The NSOER indicates that Uganda's air quality, particularly in urban areas is above the World Health Organisation recommended levels. NSOER further says that reported air pollution-related illnesses reflect that pneumonia remains the most prevalent among such illness and could be indicative of the associated health burdens of deteriorating air quality.

The data obtained during the monitoring of the water quality for the various major rivers projected gradual increase in the concentration of organic matter and pollutants in the water.

Soil health, too, is declining due to increased erosion and poor land management practices. Soil degradation is a major threat to food security and livelihoods in Uganda.

Environmental hazards and disasters

The NSOER also outlined major hazards that have caused destruction in the different parts of Uganda. It details the current status and trends of natural hazards and disasters including, among other things, occurrences, causes and impacts

on the environment and society, and human responses. The hazards that have devastated the country majorly include droughts, floods, hailstorm, landslides/mudslides; pests, diseases, human epidemics, accidents, fires, terrorism, displacement of persons, and human-animal conflicts. For example, the following districts were most affected by drought: Karenga, Kaabong, Arua, Madi-Okollo, Nebbi, Packwach and Zombo. Others were: Mbarara, Kiboga and Lira.

Refugees and environment

According to UNICEF, Uganda is the largest refugee-hosting country in Africa with more than 1.29 million refugees and asylum seekers; majority of whom come from South Sudan, DRC, Burundi and Somalia.

Topical environment management issues in refugee settlements and host communities in Uganda, therefore, featured in the report. NSOER further highlighted analyses of utilization of natural resources and, interventions undertaken as well as their impacts on refugee settlements and host communities and the environment.

Recommendations

On biodiversity the report recommended, among other things, that future funding and biodiversity conservation actions should focus on control of Invasive Alien Species, including addressing their ecological and socioeconomic impacts, strengthening enforcement to control illegal wildlife trade, increasing investment in restoration and value addition, and strengthening protection of biodiversity outside protected areas. Interventions to control water pollution, according to NSOER,



Tree nurseries in Palabek Refugee Settlement (Photo credit, NEMA 2019)

should include containment of tailings erosion, demarcation, isolation and treatment of underground mine water and leachate, mapping highly contaminated soils and prohibition of cultivation or grazing animals on such soils, enforcement of waste management regulations and protocols, strengthening enforcement of the existing legal frameworks and expansion of the Integrated Water Resources Management framework to include other aspects like poverty eradication and disaster preparedness.

NSOER endorses to demarcate and gazette wetland reserves for future purposes. Restoration efforts too should be increased and communities directly involved in conserving specific wetlands.

Policy and action responses

The report highlighted policy and action responses in the eye of Uganda's environment challenges. Among others, different types of responses and actions have been made including; policy reviews, development of guidelines and tools, design and implementation of strategies

and plans, institutional strengthening, projects and legislation.

It is hoped that if implemented, these recommendations will ensure nature sustainability, climate resilient livelihoods and sustainable economic development.

The NSOER 2018 -19 can be accessed online, and in the NEMA library.

William Lubuulwa is the Senior Information, Education and Communications Officer at NEMA.

NEMA builds capacity to boost customer experience



By William Lubuulwa
Senior Information, Education and Communications Officer, NEMA

The National Environment Management Authority (NEMA) will not tolerate individuals who extort money from members of the public on fake claims.

The warning was sounded by the NEMA Executive Director (ED) Dr. Tom Okurut while opening a one-day training workshop for select top management and senior personnel of the organisation held at the Ministry of Water and Environment headquarters in Luzira, Kampala recently.

The Customer Experience training aimed at sharpening NEMA employees' skills in handling their internal and external publics.

"People who extort money from members of the public, claiming they are NEMA officials will not be tolerated. NEMA does not get money like that," Dr. Okurut warned, adding: "This will not derail us from doing our work."

The ED thanked the staff for a work well done despite the challenges.

During the training, NEMA employees went through a number of exercises which challenged their passion for work, and also their general paradigms in as far as their daily duties are concerned.

The trainees learnt that there was still a performance gap between what NEMA offers and what customers would want to experience from the organisation.

The training, facilitated by Francis Egbuson, and assisted by Boba Kabaramagi and Andrew Gidoi, was conducted by FranklinCovey, Uganda

From page 1

NEMA CELEBRATES 'SCIENTIFIC' WED

Running on the global theme: 'It's Time for Nature'; and the national theme: 'Nature is Speaking, Listen!' the 2020 WED celebrated with a press conference held at the National Environment Management Authority (NEMA) head office in Kampala.

Unlike the tradition that had been around for years when a multitude of environmentalists, politicians, journalists, other stakeholders and the general

public would converge, this year WED was attended by less than 10 media houses and a few individuals. Reason? Public gatherings had been suspended because the country and the rest of the world were, and are, under siege by the deadly Corona virus that has claimed millions of lives already.

Under the leadership of NEMA executive director Dr. Tom Okurut, the Authority hosted the event in the boardroom.

This year there was no fanfare that usually includes community activations, processions and public gathering.

Urging all Ugandans to use and manage the environment responsibly, Dr. Okurut said: "The environment we live in sustains us and we must learn to respect it."

Officiating at the event, the State Minister for Environment, Hon. Beatrice Anywar delivered a speech from the Minister of Water and Environment Hon. Sam Cheptoris.

In his speech, minister Cheptoris said celebrating WED in the usual style: "... has not been possible due to yet another nature and environment related challenge Covid-19 which has, by surprise, taken the whole world hostage and dictated a complete overhaul in the way we do things."

He also assured Ugandans of the government's role in environment management. "Government has done whatever is possible with the available means to ensure that available natural and environmental resources are appropriately harnessed for sustainable socio-economic transformation and poverty eradication," the minister said. The minister's full speech can be accessed at the NEMA website:

It gives me great pleasure to take part in the commemoration of the 2020 World Environment Day under the global theme: 'Time for Nature', and national theme: 'Nature is Speaking, Listen!' speech at the World Environment Day Celebrations 5th June 2020

This year's World Environment Day (WED) is commemorated under very unique circumstances. In our traditional style WED would have brought together thousands of Ugandans to showcase their commitment to the environment and demonstrate their achievements and efforts towards achieving environmental sanity.

The 1995 Constitution of the Republic of Uganda requires the State to protect natural resources including land, water, wetlands, minerals, oil, fauna and flora; and also requires the State:

- a). To promote sustainable development and public awareness on the need to manage natural resources in balanced manner for the benefit of the present and future generations;

- b). To create and develop parks, reserves and recreation areas and ensure conservation of natural resources;
- c). To promote the rational use of natural resources so as to safeguard and protect the biodiversity of Uganda;
- d). To hold in trust for the people and protect natural lakes, rivers, wetlands, forests reserves, wildlife reserves, national parks and any other land to be reserved for ecological and touristic purposes for the common good of all citizens.

The NRM Government has carefully pursued the above aims and this has been central to achieving the rational use of its natural resources and ensuring sustainable development.

This year's global and national themes, implore us to pay great attention to nature and check our human actions now. The local theme also reminds us that our actions have had detrimental impacts on the environment and that nature is now speaking back to us through various ways including: landslides in mountainous areas, floods and extreme weather conditions i.e. wet and dry conditions.

The theme invites us to rethink our actions and relationship with nature. It challenges us to remember that nature hosts us and as such we have an obligation to respect and handle it with utmost care and responsibility. It therefore implores us to become diligent stewards to avoid turning ourselves into agents of self-destruction and advocates of unsustainable development.

I should point out that despite government efforts, natural resources continue to be degraded through;

Destruction of habitats through vegetation clearance, charcoal burning, bush burning causing habitat loss. Wetlands, particularly seasonal wetlands, are rapidly being converted into rice fields, other forms of agriculture, or for seasonal grazing by livestock without measures for sustainable utilisation. Wetland in urban areas, are considered prime sites for industrial developments.

Over-harvesting of resources e.g. fish, leading to fish stocks rapidly declining

Pollution through discharge of untreated or poorly treated effluent into water bodies, poor solid waste management practices including use of improper disposal of polyethylene carrier bags that degrade the environment.

Uganda is also experiencing severe impacts of climate change including the melting of glaciers in Rwenzori mountains, the recent flooding in Kasese and other areas as a result of the bursting of the banks of River Nyamwamba, Nyamugasani, Lubiria among others.

WORLD ENVIRONMENT DAY CELEBRATIONS 2020 IN PICTURES



NEMA DED Ms. Christine Akello (standing right) briefs State Minister for Environment Beatrice Anywar and the media on WED celebrations.



NEMA staff and journalists interact at the 2020 WED media briefing.



State minister for environment Hon. Beatrice Anywar (standing) addresses the media and NEMA staff during the 2020 WED celebrations.



NEMA executive director Dr. Tom Okurut (standing left), minister Beatrice Anywar (centre), and Mr. Onesimus Muhwezi from UNDP launched various environment laws during the WED celebrations.



Guests together with NEMA staff join for lunch during the 2020 WED celebrations.



State Minister Beatrice Anywar, who was also the chief guest (left) interacts with the NEMA ED Dr. Tom Okurut, NEMA DED Ms. Christine Akello and Mr. Onesimus Muhwezi among other guests during a refreshment break at the 2020 WED celebrations.

Celebrating the World environment day at NEMA Offices Board room NEMA Photos 2020

RESTORATION ACTIVITY DURING WED 2020 CELEBRATIONS



As one of the activities to mark the 2020 World Environment Day, NEMA took part in the restoration of the environment at Mt. St Mary's College Namagunga in Buikwe District.



The headteacher of Mt. St. Mary's College Namagunga Sr. Regina Nabawanuka (standing) welcomes NEMA staff and journalists during the restoration activity that took place at school in June 2020.



Mt. St. Mary's College Namagunga staff dressed in the WED T-shirts head to the site where the tree planting took place.



The director DSCPE at NEMA Dr. Daniel Babikwa speaks to Mt. St. Mary's College Namagunga employees before handing over the trees donated by NEMA to the headteacher.



DSCPE Director Dr. Daniel Babikwa handing over the trees donated by NEMA to the Headteacher of Mt. St. Mary's college Namagunga



The Headteacher Mt. St. Mary's college Namagunga watering an orange tree after planting

Restoration of the Environment during the World environment day 2020 at Mt Marys Namagunga NEMA Photos 2020



The director DSCPE at NEMA Dr. Daniel Babikwa plants a mango tree while others, including Sr. Nabawanuka look on.



The director F&A at NEMA Mr. Allan Kasagga plants an avocado tree at Mt. St. Mary's College Namagunga.



NEMA Staff pose for a group photo with Mt. St. Mary's college Namagunga employees at the school during the restoration activity to celebrate the WED.

NEMA Mandate

The National Environment Act, No.5 of 2019 stipulates that NEMA is the principal agency in Uganda responsible for the management of the environment by regulating, monitoring, supervising and coordinating all activities relating to the environment.

World Environment Day celebrations organised by NEMA in Uganda over the years

| Year | Host District | Theme | Chief guest |
|------|-------------------|--|---|
| 1989 | Kampala | Global warming | Before NEMA |
| 1990 | Luweero | Children and the environment | Before NEMA |
| 1991 | Mpigi | Climate change | Before NEMA |
| 1992 | District level | Only one earth, share and care | Before NEMA |
| 1993 | Community level | Poverty and the environment | Before NEMA |
| 1994 | Tororo | One earth, one family | Before NEMA |
| 1995 | Mubende | We the peoples, united for the global environment | Before NEMA started operations in December 1995 |
| 1996 | Hoima | Our earth, our habitat, our home | Henry Kajura |
| 1997 | Soroti | For life on earth | Kintu Musoke |
| 1998 | Wakiso | For life on earth, save our waters | Kintu Musoke |
| 1999 | Mbarara | Our life our earth, just save it | NA |
| 2000 | Lira | 2000 the Environment Millennium: Time to act | Edward Rugumayo |
| 2001 | Luweero | Connect with the worldwide web of life | NA |
| 2002 | Jinja | Give earth a chance: Save Uganda's waters | Ruhakana Rugunda |
| 2003 | Nakasongola | Water: We all need it, save and conserve it | Kahinda Otafire |
| 2004 | Kampala | Proper waste management: Our health, our wealth | Kahinda Otafire |
| 2005 | Kapchorwa | Planned land use: Our wealth, our future | NA |
| 2006 | Kumi | Protect dry lands against desertification | Maria Mutagamba |
| 2007 | Kasese | Global warming is real: Green your environment, plant more trees | Aryamanya Mugisha |
| 2008 | Arua | Save energy for better livelihood | Jennifer Namuyangu |
| 2009 | Kayunga | Your country needs you – let us unite to combat climate change | Jesca Ariyo |
| 2010 | Kanungu | Biodiversity for national prosperity: Conserve it | NA |
| 2011 | Bududa | Forests: Plant a tree, save a life | Gershon Onyango |
| 2012 | Masaka | Green economy: Our actions count | NA |
| 2013 | Kalangala | Think. Eat. Save the Environment | Ephraim Kamuntu |
| 2014 | Kaliro | Raise you voice, save Uganda's fragile ecosystems | President Yoweri Museveni |
| 2015 | Rakai | 35 million people. Limited resources. Consume with care | Flavia Munaaba |
| 2016 | Gulu | Conserve wildlife, sustain livelihoods | Flavia Namugera |
| 2017 | Ibanda | Connect to nature, appreciate biodiversity | H.E Yoweri Museveni |
| 2018 | Mbale | Beat plastic pollution | Sam Cheptoris |
| 2019 | Moroto | Fight Air Pollution to Protect Human Health and Environment | Sam Cheptoris |
| 2020 | NEMA headquarters | Nature is speaking, listen | Beatrice Anywar |

The impact of Corona Virus on the environment



By Tony Achidria
Senior Public Relations Officer

Corona virus has caused a global crisis that has brought the world to a standstill. The crisis has primarily been tackled from a health perspective with the immediate priority by all major players being to limit spread of the virus and subsequently finding a cure or

ultimately a vaccine.

Deaths have been reported in thousands in the worst hit countries, but luckily for Uganda, at the time of this publication 200 deaths had been recorded, while the number of reported cases of the virus was threatening to reach 20,000. The spiraling number of infections and increasing deaths prompted governments to initiate radical measures including total and partial lockdowns in some parts of the world, limited movement not only across international boundaries but also within cities and towns alike; mandatory sanitizing of vehicles, premises and equipment thought to harbor the virus; these and more measures aimed at flattening the global COVID-19 curve and slowing the spread of the virus.

This international interference caused by the pandemic has undoubtedly impacted on the environment in many ways. The impacts of this interference are both on a large scale such as a drop in general air pollution caused by restrictions in motorized transport by air, rail and road; As well as on individual scale such as the psychological stress of not being able to travel to see a loved one or the worry, anxiety and paranoia of catching the virus during normal day to day routines.

Human activity has disrupted natural ecosystems that were designed to sustain life on earth. We have altered ecosystems for settlement, agriculture, recreation, economic development and so on, and yet these same ecosystems are designed to sustain the life of not only human beings but the animals that dwell there in. There is a strong belief that COVID-19 is one such zoonotic disease; i.e a virus originating from transfer of animals (especially those we would generally consider wild animals) to humans. In other words because humans have encroached on the living space and environment for wild animals, the micro-organisms that thrived in such ecosystems are bound to adapt and survive on the new species living with in; - the humans.

As we try to adapt to the current situation there are a number of environmental concerns that have arisen. For instance, more than ever there is a concern about the best way to dispose of protective gear such as face masks, and protective gear worn by front line and other health workers dealing with

COVID-19 patients. The United Nations Environment Program for instance has since developed and urged member states to adopt COVID-19 waste management factsheets that contain information on, National medical waste assessment, policy and legislation linked to COVID-19 and pandemics; household medical waste management strategies; and linkages between Air Quality and COVID-19 among others.

With the pandemic still in our midst one emerging issue is the question of the best possible environmentally friendly way to dispose of chemicals, masks and other equipment used in the management of COVID-19.

The impact of COVID-19 on the environment certainly covers a wide scope from environmental-social, social-economic, humanitarian, public health e.t.c. One key aspect worthy to note for Uganda is the facet of air pollution and air quality. Air pollution is a condition when undesirable extents of materials, solid, liquid or gaseous are introduced into the atmosphere making the air unsuitable for the healthy life of plants animals and humans. Air pollution is a global challenge responsible for a plethora of health problems. In the recent years, there has been gradual deterioration of the air quality in urban centers of Uganda. Contributors to air pollution include; motor vehicle emissions, open burning of wastes, industrial emissions, unpaved roads, poor land use practices among others.

The National Environment Management Authority (NEMA) monitors air quality in selected areas around Kampala. In particular, we monitor the air for particulate matter, nitrogen dioxide and ozone.

When the COVID-19 lockdown was initiated in Uganda, and motorized transport was restricted,

we undertook a study to determine the impact on air quality within the city. An assessment of the ambient air quality was done to analyze the levels of nitrogen dioxide, particulate matter and ground level ozone.

In the findings, Nitrogen dioxide, which is a gas mainly emitted by vehicles and factories during the combustion of fossil fuels and causes haziness in the atmosphere; there was a 57.2% reduction on the concentration of the gas during the partial lockdown (before 1st April 2020), and a 70.2% reduction in the gas during the total lockdown (After 1st April 2020).

Similarly, for particulate matter there was a reduction of 70.6% during the total lockdown and 53.4% decrease during the partial lockdown.

For Ozone, the trends during the lockdown showed a small variation. Ozone is result of chemical

Turn to page 12

From page 11

reactions between oxides and organic compounds during the day. High levels of ozone are usually recorded in the middle of the day when the sun is fully out. The trend for ozone did not change much before and after the lockdown.

From the findings we were able to conclude that vehicular traffic alone was responsible for over 70% of air pollution because factories continued operating even the lockdown.

COVID has enabled us to demonstrate that controls need to be implemented to manage the emissions from vehicular traffic including motorcycles/bodabodas. Vehicles are a major cause of global warming and climate change across the globe.

Away from the emissions, and probably to further demonstrate how humans have encroached on habitats for other species; there have been reports that during the lockdowns and travel restrictions, some animals have been spotted in cities and areas that they once avoided, such as the Bay of Bengal.

The COVID-19 crisis is therefore one that we must learn from. It has shown us in our faces of how vulnerable we are. This crisis is more than just a sickness it is a demonstration of how humanity is biting from nature more than can be chewed and the result is this disease.

This year was supposed to be one when the world would come up with a global framework to protect biodiversity beyond 2020. The global climate meeting was to take place in Glasgow to discuss natural solutions to Climate Change and countries were expected to propose new commitments to lower emissions in line with the Paris Agreement; the meeting would also discuss a framework for better management of chemicals and waste. But thus far, this meeting has not been possible because of the restrictions brought about by COVID-19.

Back home, we had to commemorate the World Environment Day (WED) on June 5, scientifically; a term coined by Uganda's president to refer to an occasion attended by only a few critical guests. This year's global theme was "It's Time for Nature", while the National theme was "Nature is Speaking, Listen!" Unlike the usual public fanfare that included community activations, and public gathering; this year's WED was celebrated with a press conference held in the institutions boardroom with less than 10 media houses. A statement was issued by the State Minister for Environment, Hon. Beatrice Anywar.

Therefore, COVID-19 has demonstrated to us that issues of the environment are cross border, pollution and nature know no borders and as a human race we should not wait for another pandemic to understand that this is a globalized world under threat. The environment we live in sustains us and we must learn to respect it. The solution to all this is in our hands. Nature is Speaking, Listen!

Nema continues to fight the Spread of Corona Virus

- ☛ Washing hands with soap and water at the entrance
- ☛ Screening client's temperature at the entrance



NEMA Photo 2020

- ☛ Use of alcohol based sanitizers at entrance, front desk, lounges, directorates entrances and in the lift
- ☛ All staff, clients, visitors and service providers must ensure that they wear face masks at all times while at NEMA premises
- ☛ Frequent cleaning and disinfection of door handles, lift switches, and flat surfaces with soap and bleach
- ☛ All clients, visitors and service providers shall at all material time observe the mandatory social distancing while at NEMA premises
- ☛ The Library is closed to the public, clients are encouraged to use online library services
- ☛ Frequent fumigation of all offices
- ☛ Persons submitting Environment Social Impact Assessment (ESIA) statements and other documents are restricted to the front desk after Hand washing with soap, hand sanitizing and temperature measurements
- ☛ All procurement of new products and services are to be undertaken online
- ☛ All clients to utilise the electronic channels of communication and correspondence including email, telephone and social media handles as listed below

☛ Email: info@nema.go.ug

☛ Tel: 0414425068, 0414257521
or Toll free 0800144444

☛ Social Media:

Facebook@nemaUg

Twitter@nemaug

Management reserves a right to admission

NEMA, Mpigi District in capacity building workshop

By Esther Nampeera
Senior Environment Officer, Mpigi District

The National Environment Management Authority (NEMA) met the Mpigi District Environment and Natural Resources Committee (DENRC) in a one-day capacity building meeting for DENRC members in September 2020 at the district headquarters.

The workshop aimed at building capacity and experience for the new members to handle environment and natural resources in the district. It also outlined the roles and responsibilities of the committee in management of the environment.

Background

During the year 2019, the National Environment Act Cap 153 was repealed and replaced by the National Environment Act No. 5 of 2019. Under Section 27 of the new Act, the composition of DENRC is highlighted. It's upon this background that Mpigi District Local Government dissolved the District Environment Committee and put in place the District Environment and Natural Resources Committee in February 2020.

Given the fact that the DENRC is a new Committee comprising of both technical and political leaders, some members lacked the knowledge in environment and natural resources management.

The workshop was attended by, among others, the Mpigi District Chairperson Peter Clever Mutuluzza; the Deputy Chief Administrative Officer Edward Ssempala; the Area Member of Parliament Mawokota North, Amelia Kyambadde; the Resident District Commissioner; the Secretary for Environment; the District Natural Resources Officer;

and the District Engineer. Others were: the Town Clerk Mpigi Town Council; the town mayor; the District Planner; the Physical Planner; the Community Development Officer; and the District Environment Officer.

The workshop was facilitated by officials from NEMA who included the Manager District Support, Mr. Edward Odipio, the Legal Officer Ms. Eunice Asinguza, and Ms. Ann Nakafeero, the Senior District Support Officer, NEMA.

Speaking on behalf of the CAO, Mr. Ssempala thanked NEMA for facilitating the DENRC meeting. He also advised that DENRC should visit all project sites first before approval.



The Deputy Chief Administrative Officer, Mpigi Mr. Ssempala Edward giving the Opening Remarks

NEMA officials made the following presentations:

- * Environmental and Social Impact Assessment and Environmental Audit Process and the role of LGs by Edward A. Odipio;
- * Environment management in Uganda: the roles and responsibilities of Local governments by Edward A. Odipio;
- * Legal issues related to environment management in Uganda by Ms. Eunice Asinguza;
- * Environment and social mainstreaming into the district planning and budgeting: Tools for greening investment projects by Ms. Anne Lillian

Nakafeero

Action points

The meeting resolved to always have the District Development Plan to fully incorporate environment and climate change mitigation and adaptation actions; the district to submit to the line ministry and NEMA; quarterly and annual reports about the activities implemented in Mpigi; the District should prepare a District State of Environment Report and should also update the District Wetland Action Plan; among others.

The minister of Trade and Industry Ms. Amelia Kyambadde also addressed the meeting.



Hon. Amelia Kyambadde addressing the District Environment & Natural Resources Committee Members of Mpigi District Local Government

Closing the workshop, Mr. Mutuluzza was so grateful with the work of enlightening the DENRC members on their roles and responsibilities. He noted that the district has got a challenge of encroachers "investors" who encroach on wetlands at a rampant rate. He requested NEMA to always involve the district key stakeholders as much as possible before issuance of ESIA certificates.



The district chairperson Mpigi Mr. Mutuluzza Peter Clever addressing the workshop. (Photos by Esther Nampeera)

The Vicious and Virtuous Cycles in Ecosystem Services



By Tom Geme
Project Officer, Natural Capital Accounting

As we continue to appreciate the Natural Capital Accounting (NCA) approach in natural resource management, in this article we explore the interdependence between ecosystems, the services they provide and human wellbeing. We ground this in a common management approach, systems thinking.

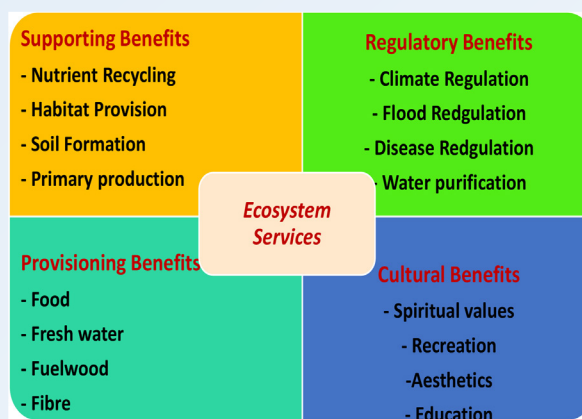
Systems thinking as an approach to integration postulates that parts of a system will act differently when isolated from the system's environment or other parts of the system. This, therefore, implies that components may tend to act in such a way that benefits them and not the system as a whole. The impact of this is that in most cases this undermines the entire system.

Taking an example of the ecosystems, humans are as important to the ecosystem as other biophysical components such as forests, wetlands, water resources, fisheries, soil, air, etc. There is a direct relationship between human wellbeing and ecosystems.

Humans have direct impacts both positive and negative on the health and functioning of ecosystems. Positively, humans are pollination

agents, breathe out carbon dioxide vital for photosynthesis, their excreta can be used as organic matter, sometimes protectors of these ecosystems via in-situ and ex-situ conservation, etc.

At the same time, functioning ecosystems provide a wide array of benefits (goods and services) that enhance human wellbeing. These can be categorised as supporting benefits, regulatory benefits, provisioning benefits and cultural benefits. *See the figure below.*



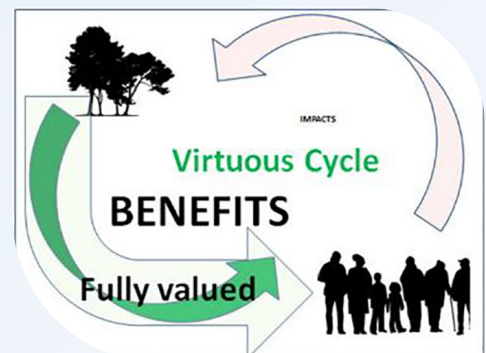
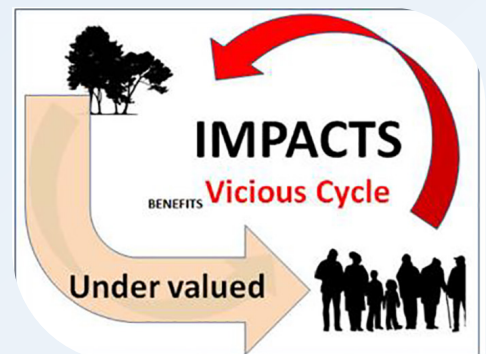
Most of the benefits from ecosystems are undervalued hence this creates a lower appreciation for such resources leading to even higher impacts on them. The increased human impacts through activities that introduce pollutants to air, water, soil, etc. as well as deforestation, overfishing, mining, swamp reclamation and others that have led to destruction of entire ecosystems. This is mainly because humans seek to satiate short-term needs. The destruction of these ecosystems undermines their functionality to produce these services creating challenges for human wellbeing.

The result is a vicious cycle in which the undervaluation of ecosystems and the services they provide creates a feedback loop that reinforces the

degradation of these ecosystems by humans ultimately decreasing the benefits.

On the other hand, if we holistically understand the value of ecosystems, we can incorporate this value into the fabric socioeconomic lives. This certainly will decrease the negative impacts of our activities on the natural capital. This as well will create a feedback loop that leads to positive outcomes, a virtuous cycle. *See the illustrations below.*

The process of ecosystem valuation



as exemplified by NCA is a key ingredient in catalysing this virtuous cycle.

By fully understanding the stocks and flows of environmental resources, planners and decision-makers will then be able to make decisions that foster sustainable livelihoods of communities. This is because such decisions will then be based on information that considers the use (direct, indirect and optional values) and non-use (bequest, altruist and existence) values of ecosystems all of which are vital for human wellbeing both presently and in the future.

How Covid-19 has impacted school environment in Gulu, Omoro districts

By Wilbert Ikiloi

Many schools in Gulu and Omoro districts have been left abandoned and are now bushy because of Covid-19.

The observation was made during a fact-finding assessment conducted in the two districts by the National Environment Management Authority (NEMA) in October. NEMA's Directorate of District Support, Public Education and Coordination carried out the exercise.

The week-long assessment aimed at finding out the status of environment in education institutions in the two districts during the Covid-19 period. The assessment also aimed at informing the planning decisions of NEMA for future interventions such as technical backstopping, greening initiatives and public awareness on environment management. NEMA covered 20 primary schools; 10 from either district.

Schools abandoned

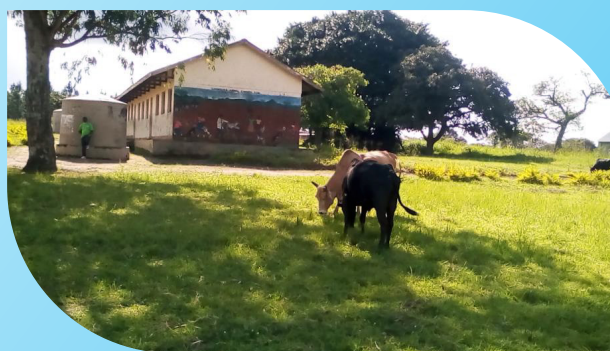
Field observations indicated that:

- ✱ Whereas tree planting had been done in many schools visited, most of these institutions remained bushy and unattended to

An overgrown bush eats up Lokwir P7 School well-constructed pit latrines in Omoro District. Many of the schools visited had their environment looking abandoned in October this year because of Covid-19. (NEMA photo)



- ✱ Many unfenced schools had become grazing land for stray animals; and schools vandalized by unruly community members; with many windows and doors broken; and other property such as books and chairs stolen



Cattle grazing in one of the abandoned school compounds in Omoro District in October 2020 (NEMA photo)

Impact to girl-child

In a brief chat with NEMA, a head teacher in one of the primary schools in Omoro District indicated that some parents had reached him expressing worry about the rate at which young schoolgirls were getting pregnant. The head teacher also revealed that many others were being married off to big men as their parents did not know what to do with their daughters who had been made redundant by the Covid-19 lockdown.

The abandonment of schools as a result of the lockdown had also given natural disasters such as strong winds and flooding an opportunity to rage unabated in the schools. Many of them had roofs to some of their buildings blown off.

Although the assessment took place in only two districts, the impact of the Corona virus to school environments in Gulu and Omoro seem to be representative of the rest of the country.

Whereas Covid-19 has had a great impact to school environments in Gulu and Omoro districts, school communities that include parents and local leadership have greatly abdicated their roles in school management. Otherwise vandalism, illegal cutting down of school trees, and stray grazing of animals in schools could have been minimized.

Action required

There is need for sustained environment awareness programmes on environment management in schools delivered to host communities. Emphasis should be put on the roles of communities in school management and sustainable development.

Accounting for Nature to Inform Climate Change Action



By Tom Geme
Project Officer, Natural Capital Accounting

Climate systems have changed both significantly and rapidly in the recent past. These changes are generally driven by the variability of natural systems and human activities. The latter, research has shown, is the more significant driver of the changes in global climatic conditions. These changes in climatic systems threaten life on earth. Studies have shown that countries largely dependent on the exploitation of natural resource, as is the case for almost all sub-Saharan countries, are most vulnerable to climate changes.

Given the likely adverse impacts of climate change, the subject has received a great deal of attention from various stakeholders. Such attention has included but not limited to calls for urgent action against climate change. The calls suggest combining mitigation and adaptive techniques to increase resilience against climate change. Mitigation involves reducing sources and/or enhancing sinks of greenhouse gases like carbon dioxide, methane, etc. using interventions like improved energy efficiency, increased reliance on renewable energy, etc. On the other hand, adaptation measures increase the ability to cope with climate change and require adjustment

of natural and/or human systems in anticipation or reaction of climatic effects.

Natural capital accounting yet again provides a solution or at least part of the solution to tackling this global phenomenon. This is by recording stocks and flows of resources in the environment and linking these to economic development. A case in point, an account of forest resources may indicate the extent (amount of area under forest cover), condition (types of forests available, species therein, etc.) as well as the supply and use of forest resources in relation to national development. Such information is therefore key to forming a sound basis for climate change intervention. Presence of large frontier forests with many local tree species could, for example, necessitate use of interventions that protect such forests as they much better sinks (stores) of carbon dioxide than forest plantations.

Going forward, therefore, it is imperative that all stakeholders (policy-makers, regulators, planners, civil society, academia and businesses) understand the rationale for natural capital accounting approaches, build capacity and institutionalise such approaches in their day-to-day operations. It is important, therefore, that this International Day of Climate Action, we all reflect on how we leverage novel approaches such as natural capital accounting to inform sustainable management of natural resources whose detriment could trigger adverse impacts including climate change.

Manufacturing in Uganda:

Are industries contributing enough to sustainable plastic management?



By Osborn Jubilee Ogume

The availability of plastics makes them so desirable to users, but at the same time, it makes them undesirable to environment where they are discarded after use.

Recycling industries in Uganda are very few compared to plastic manufacturing industries. According to Global Green Growth Institute's Kampala Municipal Solid Waste Value Chain Mapping report, there are more than 30 companies registered as plastic recycling companies in Uganda but these cannot match the current rate of plastic production and use.

Beverage industries have diverted from glass bottled packaging to plastic bottled packaging. The current dependence on plastics not only as packaging materials but also as construction materials, automotive products, among others, raises a concern as to whether plastic manufacturing industries are contributing enough to sustainable plastic management.

Magnitude of the problem

Available records estimate that

Turn to page 17

From page 16
about 600 tonnes of plastics are released into the environment daily in Uganda.

This gives a total of about 219,000 tonnes of plastics per year. A bigger percentage of this is left uncollected. The collection of 5,310 bottles in one day by Coca-Cola Beverages Africa (CCBA) Uganda in the World Cup Trophy viewing session March, 2018 shows that a lot of plastics

While manufacturing industries pledge to recycle plastics, the practice needs to be fast-tracked in rural areas where users scarcely collect plastics for recycling. Committed companies have tried to fight the evil. For example, Stanbic Bank, CCBA and Nice House of Plastics have signed a Memorandum of Understanding to enable them collaborate in recycling plastics to protect the

management.

Action needed

To overcome the challenge, a lot of emphasis is needed to promote plastic management and to maintain the environment for sustainable development. The National Environment Management Authority should make faster strides to implement the new Environment Act.



are released during gatherings. This implies that the number multiplies when there are bigger gatherings such as football matches and political rallies.

Besides Ugandan enterprises earning less in international markets because of their persistent use of non-degradable plastic packaging that does not meet international standards, plastics are hazardous to both environment and human beings.

Recycling efforts

Poor garbage disposal practises. (KCCA Photo) environment. Coca-Cola has pledged to collect and recycle a bottle or can for everyone it sells by 2030, and Rwenzori Bottling Company has moved to recover and recycle the equivalent of 100% of the bottles they release by 2020.

Research indicates that plastics take over 450 years to decompose. This makes them more dangerous to environment than alternatives. The challenge is industries in Uganda are not contributing enough to sustainable plastic

The trade policy, especially on the importation of plastic packed goods and raw materials into the country should be reviewed. Manufacturing industries also need to turn their pledges into sensible implementations than remaining on paper. Plastic users too need to be more sensitized about the dangers of poor plastic disposal.

Osborn Jubilee Ogume is an intern at NEMA

Nema Board Visits New Cities, Interacts with Leadership



By Tony Achidria
Senior Public Relations Officer

The National Environment Management Authority (NEMA) Board of Directors regularly undertakes field visits to assess the performance of the Authority in environment management, key environmental challenges facing the country and to guide local government partners, the communities, civil society and the private sector on sustainable environment practices.

This quarter, an inspection was arranged for the Board to visit and interact with the leadership of the newly created cities of Jinja, Mbale and Soroti in eastern



NEMA board together with the leaders of Jinja City pose for a group photograph after a meeting to discuss sustainable cities. (NEMA Photo)

Uganda; Masaka, Mbarara and Fortportal in western Uganda; and Lira, Gulu and Arua in the northern region.

Subsequently, there is a need to guide the new cities to comply with environment management

requirements with particular focus on the structure for environment and national resources, waste management, physical planning requirements, greening, among others.

Urbanization, if unplanned, comes with a number of challenges; including encroachment on critical natural resources such as rivers, lakes, wetlands, forests, among others; poor garbage disposal, inadequate housing leading to inhumane settlements, public health hazards, the lack of adequate social amenities such as, markets, schools, transportation infrastructure, hospitals and many others.

The first phase of the meetings happened in Jinja, Mbale and Soroti cities.

Team in Jinja

Led by the Board Chairman Prof. Sandy Stevens Tikodri Togboa, the team made a first stopover in Jinja City to discuss how to build sustainable and inclusive cities as per Sustainable Development Goal (SDG) 11 and other good practices.

The city leadership was advised to ensure proper physical planning; to create conditions that will prevent slums from cropping up and the related public health hazards; solid waste management, pollution control, green spaces and the management of urban wetlands, lake shores and rivers.

"Jinja has the capacity to regain its lost glory. The city leadership should aim at making this city sustainable. We have developed a concept on how to achieve

sustainable cities and it will be shared with you for your consideration," said Prof. Tickodri –Togboa.

In Mbale, key on the agenda was assessment of the Mbale Industrial Park, the solid waste composting project and to document impacts, learning lessons and other recommendations that could be replicated in other districts.

More jobs expected

During a tour of the industrial park, management of the park



NEMA Board and Management inspecting Soroti Rock that the new city wants to turn into a tourist attraction (NEMA Photo)

disclosed that at full capacity the park will host a total of 60 factories when complete and create over 15,000 jobs in both skilled and non-skilled labour. The park already houses factories producing light bulbs, automobiles, textiles, mattresses and detergent.

The major challenge, however, is pollution of the nearby River Nakibiso by informal alcohol distillers in Musoto community. The cumulative number of informal alcohol distillers disposing of their waste into the river has the implication of industrial scale pollution; and yet the river is a major source of water for the industrial park.

NEMA has now started engaging with the communities to find a lasting solution to the problem; among which is helping the communities to set up a proper waste collection mechanism



NEMA Board led by chairperson Prof. Sandy Stevens Tickodri-Togboa and deputy executive director Ms. Christine Akello address leaders of Jinja City in October. (NEMA Photo) where all the distilling waste management aspects for tourism.

The Soroti experience

While in Soroti the board focused on a number of landmarks and developments including Awoja wetland, Soroti Rock and Teju Fruit factory

Proposals were tabled on how to make the city an economic, ecological, physical and socially sustainable city.

The team also toured Soroti rock that will be upgraded to a modern tourist site as one of the avenues to generate income for the city; and Soroti Fruit Factory (SFF) that buys bulk produce from local farmers, and employs several people.

SFF is the first to have been set up in Soroti Business Park, and therefore, will be used as a model for others that wish to set up business in the park.

Key environment management considerations for new cities

The key environment

- (i) Land use and physical planning.
- (ii) Solid waste management.
- (iii) Pollution control (air, water, soils and noise).
- (iv) Green space and peri-urban forests for climate change mitigation and ecological balancing.
- (v) Sustainable management of urban wetlands, lakeshores and rivers for both ecological functions and socio-economic attributes like eco-

- (vi) Value addition to environment and natural resources for education, research and socio-economic activities like water sports, golf and other entertainment events.
- (vii) Infrastructure designing, planning and development such as public transport.

NEMA Board Members

1. Prof. Sandy Stevens Tickodri-Togboa Board Chairman
2. Dr. Nyadoi Priscilla Vice Chairperson
3. Dr. Pascal Musoli Member
4. Ms. Julian Komuhangi Member
5. Prof. Elly N. Sabiiti Member
6. Mr. James Lutalo Member
7. Mr. William Ndoleriire Member
8. Mr. Gideon Badagawa Member
9. Ms. Byarugabe B. Beatrice Member



Nature is speaking, Listen!



NEMA NEWS EDITORIAL BOARD

Dr. Daniel Babikwa

Chairperson

Aidan J Asekenye

Copy Editor

William Lubuulwa

Content Editor

Tony Achidria

Copy Editor

Sarah Naigaga

Editor

Eva Wamala

Editor

Isaac Tindyebwa

Design & Layout/Production



**SUSTAINABLE
DEVELOPMENT**

GOALS



NEMA NEWS

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

NEMA House, Plot 17/19/21 Jinja Road

P.O.Box 22255 Kampala Uganda

Tel: +256 - 414 - 251068, 0716 - 013360 Fax: +256 - 414 - 257521

E-mail: info@nema.go.ug

<http://www.nema.go.ug>

Produced by

The Department of District Support Coordination and Public Education, NEMA