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SCIENCE

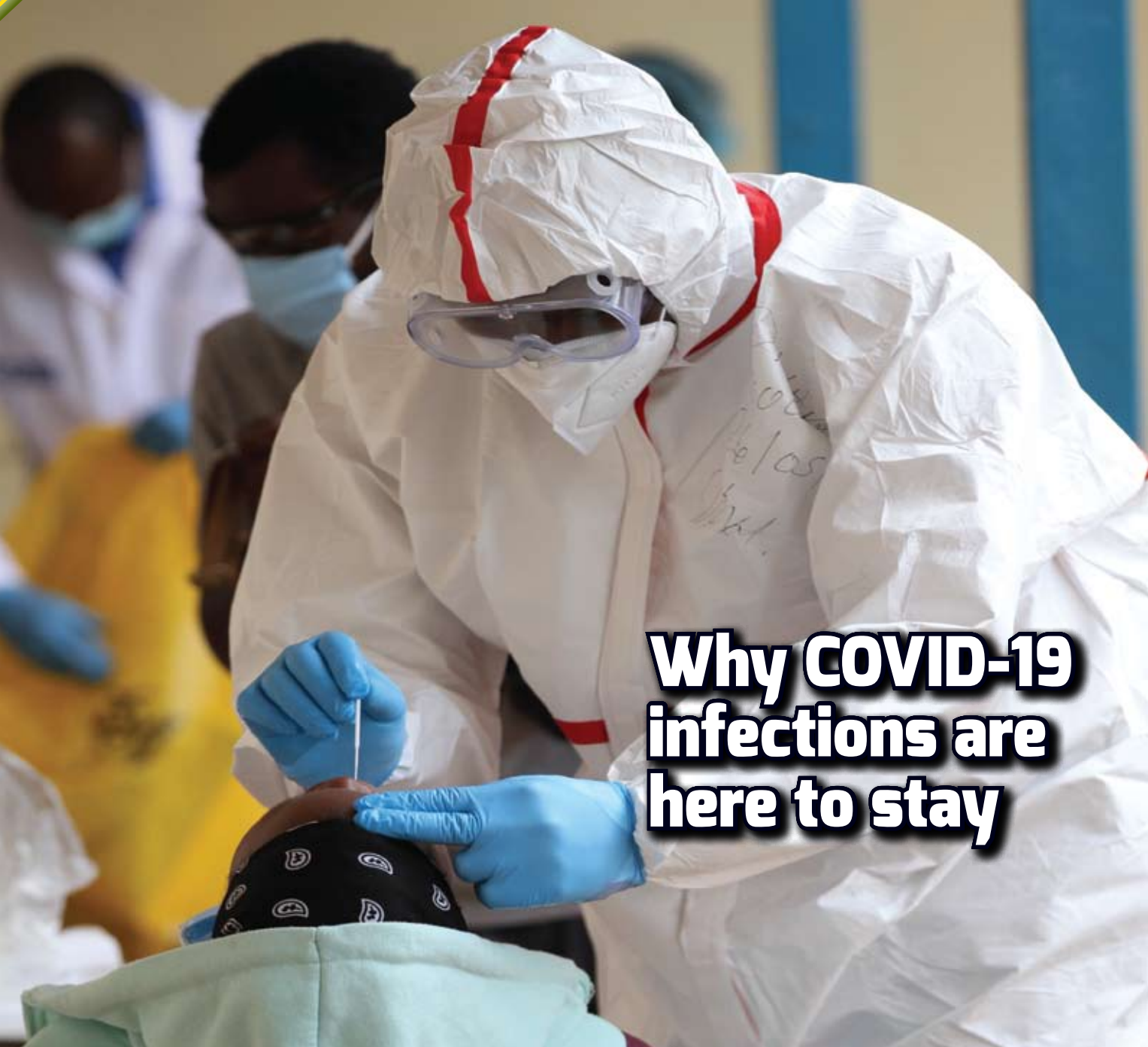
SAYANSI

Telling the African science story

Issue No. 16

www.meshascience.org

July 2020



**Why COVID-19
infections are
here to stay**

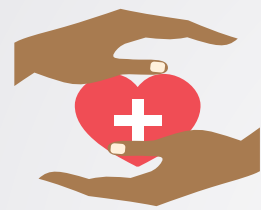
In this issue

**Women with disabilities
want inclusion in
reproductive health**

**Potato disease
from hell**

**Businesses
earmarked for
relief fund**

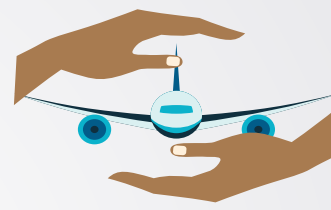
All The Cover You Need



Health



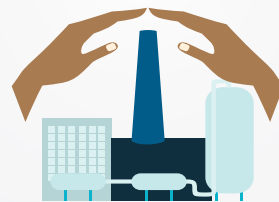
Home



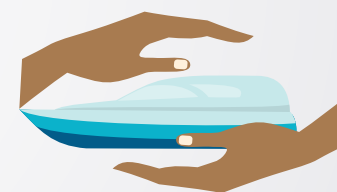
Travel



Motor



Business



Marine

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Contents

The Media for Environment, Science, Health and Agriculture (MESHA) was founded in November 2005 in Nairobi, Kenya and is an organisation that provides support to science journalists covering health, development, technology, agriculture and the environment. It does so by offering training workshops, consultancies and encouraging networking through meetings and conferences among journalists, scientists and other stakeholders in Kenya.

The association emphasises on rural journalism and communication.

The idea for the formation of this association sprang up from the fact that there were many organisations and communicators in the fields of agriculture, environment, health and development. However, few organisations in the region bring journalists covering these issues together, for better reporting in the media.

MESHA believes that in a democratic society where science must be answerable to the public, there is need to find new and innovative ways of effective mass communication about the benefits of science, and other areas of concern to the general public.

MESHA aims to ensure continuity, sustainability and consistent coverage of science and development issues as they arise.

SAYANSI

is a publication of MESHA,
P. O. Box 44199 - 00100, Nairobi
email: info@meshascience.org
www.meshascience.org

Mesha Kenya
 Mesha Science

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Photos: All photos used in this edition have been taken by Aghan Daniel unless stated otherwise.



Health
What COVID-19 teaches us about One Health concept

12



Disability
Women with disability excluded from health issues

20



Agriculture
Outdated methods stifle farming

42



Technology
Varsity students' app for social issues

47

Why science journalists must report the pandemic professionally

The beauty of science is that it helps humankind visualise things with their senses. A chemical is described as pungent and through the nose we smell it, a bacterial culture will be described by colour and can be confirmed by seeing with naked eyes or aided by a microscope. Models like the ones on COVID-19, wrong as some turned out to be, appeal to our eyes.

Then there is history, which science uses to explain past events. Scientists are seldom good story tellers. This leaves the burden of effective story telling on the journalist.

Naturally, we hardly imagine that a pandemic would occur in our lifetime, yet when it does happen, it finds us, journalists, struggling to inform the world about it particularly when it is as complicated as coronavirus has been to us.

Today, with the background of the COVID-19 landscape, journalists are confronted with so many issues contrary to their expectations, just a few months ago. On the hand, scientists do not seem to agree on various facts – making COVID-19 one of the most dynamic beats in the life of a health journalist. Besides, neighbouring countries are divided on common interventions yet super powers have taken divergent standpoints. Yet we, journalists, must stay true to the cause by telling the stories accurately in a way that does not hurt or cause alarm among our readers. Our stories must attempt to heal through information that positively informs and changes behaviour.

Maybe our ancestors in journalism had the advantage of reporting on straight forward pandemics. Maybe they had a monopoly of sorts, without social media to confuse the masses. This is not our case; COVID-19 has defied the current epidemiological knowledge. It has dodged simulation models, gone against principles of immunity and re-attacked patients initially claimed to have been healed and should have naturally attained immunity. Who had prepared us to report on this? Nobody because this pandemic is novel in many aspects.

In the middle of this thick forest of information and misinformation, science reporters must burn the midnight oil to inform the public in a manner that promotes the control efforts by authorities. Continuous reading, and engaging scientists and the lay public should feature in the building blocks of all our stories, more than ever before. We must all agree and learn from what other journalists are doing in other countries in matters of the pandemic. Consequently, we must avoid their mistakes and run away with best practices.

Above all we must keep safe for no story is worth our lives. Through various webinars and science cafes, we at MESHA have implored all journalists to not just see their role as conveyor belts but also be an example of applying the guidelines issued by health ministries on how to keep the virus at bay. Our safety is key and it comes first. The story should come second as we all want to live past the COVID-19 pandemic to tell the story.

The reality that the pandemic has brought ashore is the fact that this is one of the rare moments in our lives when science stories can be published in place of politics. The onus of taking advantage of this situation to live to tell post COVID-19 stories lies with each and every science journalist. It must not be lost to us that the way we report pandemics influences the way the masses respond to the safety measures prescribed by various authorities. In many ways, COVID-19 presents a make or break for health journalism. Let us all take this into consideration as we continually report on this pandemic.

Joseph Othieno

Special Gratitude to the Media Council of Kenya

This bumper edition of Sayansi has been published courtesy of financial support from the Media Council of Kenya under their funding to journalists on COVID-19. We thank the council for going out of their way to support our association and the writers in ensuring that science journalism, notwithstanding the impact of the coronavirus pandemic thrived. We hope that the council shall remain a partner for a long time to come. Once again, we appreciate the thought and support we received from the Media Council of Kenya.

Kera Farm Fresh Produce



Broiler Chicken



Kienyeji Chicken



Avocado



Arrow Roots



Eggs

Why COVID-19 related deadly infections might be here to stay

By Leopold Obi | leopoldk40@yahoo.com

Every day, hundreds of acres of land are turned into food production farms or housing plots.

But as more acres are hived off for human activities, the impact severely hits wild animals which, due to homelessness and loss of natural habitat, become stressed and die in extreme cases.

Researchers estimate that 75 percent of all plants, amphibians, reptiles, birds and mammal species that have gone extinct since 1500 AD were harmed by over-exploitation, agricultural activity or both.

While most wild animals die from pressures triggered by habitat destruction or loss of habitat, others shed harmful viruses that pose severe public health threats to humans.

Maarten Hoek, a senior public health manager at Madaktari Africa, a non-profit organisation training healthcare workers in sub-Saharan Africa, says animals can shed loads of viruses when highly stressed.

In a recent webinar, Dr Hoek said wildlife trade, consumption of bush meat and disruption of ecosystems have increased the spread of epidemics such as COVID-19 and other deadly zoonotic diseases.

The World Health Organization (WHO) cautions that wild animals could be the source of at least 70 percent of all emerging zoonotic infectious diseases.



Experts say that there is need to handle animals carefully as some pass harmful viruses to humans.

Zoonotic diseases or zoonoses are ailments that are transferable from animals to humans.

The diseases can be caused by viruses, bacteria, parasites or fungi and are transmitted through contact with fluids such as blood, saliva and urine or through food, or the bite of an infected vector such as ticks or mosquitoes, according to the Nairobi-based International Centre of Insect Physiology and Ecology (*icipe*).

COVID-19, an illness caused by coronavirus, is thought to have originated from bats.

The first outbreak of the disease is associated with an animal market in Wuhan, China, where it is believed that bats carrying the virus infected live animals in the market.

Steve Mclvor, World Animal Protection chief executive, says the coronavirus pandemic will not be the last unless all commercial trade of wild animals is urgently banned across the world.

"If we don't purchase exotic pets or traditional medicine that contains wild animal products, and don't visit venues with performing animals, we will send a clear message that wildlife cruelty is no longer tolerable – for the animals, our health and the planet," says Mr Mclvor.

Scientists say emergence of new zoonotic diseases, and re-emergence of old ones have risen in recent decades due to intensified agriculture, ease of movement of people and changing climatic patterns.

A study by scientists from the University of Saskatchewan (USA) published late last year in the Nature Scientific report found that wild animals such as bats have a "really benign relationship" with their viruses. However, when they are stressed through secondary infections or other stressors they can massively produce and shed the viruses.

Scientists say emergence of new zoonotic diseases, and re-emergence of old ones have risen in recent decades due to intensified agriculture, ease of movement of people and changing climatic patterns.

"Natural hosts do not suffer from these diseases in most instances, but we get infected and become sick when we come into contact with them," explained Dr Hoek.

Naomi Kemunto, a global animal health researcher, says besides the novel coronavirus, there are about 36 zoonotic diseases, including Ebola, Rift Valley Fever and Marburg, which are common in East Africa.

In 2018, Ms Kemunto and co-authors wrote in Zoonotic Research in East Africa a research paper that reviewed scientific studies going back to 1920. They found out that East Africa is endemic with (and one of the hotspots for) many infectious zoonotic diseases, with reported multiple outbreaks of epidemics such as Ebola, Marburg, Anthrax and Rift Valley Fever.

Felicia Keesing, an ecologist who has written extensively on biodiversity and infectious diseases, says species that thrive when biodiversity declines are those that are best at transmitting diseases.

"Larger animals, especially predators, need bigger ranges to survive, so when their habitat shrinks or fragments or disappears altogether, they die off. These animals typically have fewer offspring and live relatively long lives. But 'weedy' species, like rats and bats, breed rapidly," Keesing told Climate Insight, a US-based science publication platform.



4th African Conference of Science Journalists

16 - 19 Nov, 2020, Venue: Kisumu, Kenya

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Nearly 200,000 could die of COVID-19 in Africa, WHO warns

By Mike Mwaniki | mikemwaniki2016@gmail.com

The World Health Organisation has warned that the novel coronavirus could wipe up to 190,000 lives in Africa, if not controlled.

Global health body, in a new study by the regional office, further paints a grim picture of 29 million to 44 million infections in the first year of the pandemic if containment measures fail.

The research, which is based on prediction modelling, looks at 47 countries in the WHO African Region with a total population of one billion.

The estimates comes at a time when several countries are looking for exit strategies to ease the ongoing curfews and lockdowns meant to flatten the virus's curve in the continent.

The new estimates are based on modifying the risk of transmission and disease severity by variables specific to each country in order to adjust for the unique nature of the region. The model predicts the observed slower rate of transmission, lower age of people with severe disease and lower mortality rates compared to what is seen in the most affected countries in the rest of the world.

This is largely driven by social and environmental factors slowing the transmission, and a younger population that has benefitted from the control of communicable diseases such as HIV and tuberculosis to reduce possible vulnerabilities.

The lower rate of transmission, however, suggests a more prolonged outbreak over a few years, according to the study which also revealed that smaller African countries alongside Algeria, South Africa and Cameroon were at a high risk if containment measures are not prioritized.



Marketplace in Africa: WHO says that nearly 200,000 may die in Africa unless a proactive approach is adopted by authorities.

"While COVID-19 likely won't spread as exponentially in Africa as it has elsewhere in the world, it likely will smoulder in transmission hotspots," said Dr Matshidiso Moeti, the WHO Regional Director for Africa during the WHO Africa Media Leader virtual press conference recently.

"COVID-19 could become a fixture in our lives for the next several years unless a proactive approach is taken by many governments in the region. We need to test, trace, isolate and treat." The predicted number of cases that would require hospitalization would overwhelm the available medical capacity in much of Africa.

There would be an estimated 3.6 million–5.5 million COVID-19 hospitalizations, of which 82 000–167 000 would be severe cases requiring oxygen, and 52 000–107 000 would be critical cases requiring breathing support.

Photo Credit: Charles Mghenyi



COVID-19 disrupted people's livelihoods, Mombasa County government decided to distribute food to various households.

Such a huge number of patients in hospitals would severely strain the health capacities of countries.

A survey of health services in the African region undertaken in March 2020 based on self-reports by 47 countries to WHO revealed that there were on average nine intensive care unit beds.

These would be woefully inadequate. Additionally, the physical access to these services to the general population is very low, suggesting many people would not even have the chance to get to the needed care. Diseases that could be managed could easily become more complicated as a result.

The study recommends that countries across Africa need to expand the capacity particularly of primary hospitals and ensure that basic emergency care is included in primary health systems.

"The importance of promoting effective containment measures is ever more crucial, as sustained and widespread transmission of the virus could severely overwhelm our health systems," said Dr Moeti while announcing the new projections. He added that curbing a largescale outbreak is far costlier than the ongoing preventive measures governments are undertaking to contain the spread of the virus.

Containment measures, specifically physical distancing and hygiene improvement, aim to slow down the transmission of the virus so its effects happen at a rate manageable by the health system.

All countries in the WHO African Region are using these results through the WHO country offices to inform their containment actions.

The detailed methods and results are currently in press at the British Medical Journal-Global Health after extensive peer review and validation.

The other speakers during the virtual press conference which was held with the support of the World Economic Forum were Dr Amit Thakker, Executive Chairman of Africa Health Business and President of the Africa Healthcare Federation and Stephen Karingi, Director of Regional Trade and Integration, Economic Commission for Africa.

Relief fund to cushion enterprises against effects of the virus

By Mike Mwaniki | mikemwaniki2016@gmail.com

A leading pharmaceutical company has set up a global support programme to increase financial relief, protective materials as well as medicine donations to healthcare institutions and communities as the war on COVID-19 pandemic is stepped-up.

Many of our employees want to participate in the programme: we offer support through donations and paid leave volunteering, engage in significant scientific projects and bring relief to communities in developing regions in Kenya and India, with whom we have a decade-long relationship."

The fund will help social enterprises and their activities to sustain a longer period of low economic activity and will invest in social entrepreneurial ideas that can help reduce the risk of the Corona virus spreading.

Says a member of the board of managing directors and one of the founders of the MMH movement Jean Schefftsik de Szolnok: "Especially in times like these social entrepreneurs around the world are well placed to leverage their proximity to those in need. MMH communities such as self-help groups in India or people suffering from albinism in Kenya, have started to produce soap and at the same time education programmes on hygiene awareness in their neighbourhoods."

Currently, more than 750 students at the MMH school and some 1,000 families in farmer cooperatives have been trained in hygiene and soap production in Kenya and India.

At the same time, Boehringer Ingelheim is committed to the global community and to the well-being of people and animals.

As a research-driven company, it started its support activities in January and will continue to do what it can to deliver a meaningful contribution in the fight against COVID-19. The company continues to support healthcare systems by reliably supplying drugs and research.

In January, Boehringer Ingelheim initially started a euro 1 million donation programme in affected regions in China.



A vegetable seller: Funds have been set aside to support small and medium enterprises.

Boehringer Ingelheim says local social enterprises in Kenya are expected to receive part of the euro 580,000 in support of their programmes in the country.

The company's Board of managing directors chairman Hubertus von Baumbach says: "As a pharmaceutical company, we feel a strong commitment to offer our help to patients, and to those who help them.

Mr Baumbach adds: "All this, plus the drive that I see with colleagues to ensure continued production of medicines, is dedicated to the many, many people who suffer from COVID-19. Our thoughts are with them and their loved ones."

The euro 580,000 relief fund has been launched to support the global Making More Health (MMH) network of social entrepreneurs in Kenya and India, as well as the communities in which they live and work.

With the Corona virus spreading to become a global pandemic, efforts to provide relief and scientific support has continued to grow resulting in a global support programme with four focus areas: Donations, Research for COVID-19.

Health Relief Fund

The pharmaceutical company has made available euro 5.8 million for financial and in-kind donations for local emergency aid across its markets. This includes, protective masks, disinfectants, inhalers and medicines.

The company is also working with local organisations that use financial and medicine donations to organise help for patients in their communities."

According to a press release, since January, a growing team of more than 100 Boehringer Ingelheim scientists from all areas of research and development (R&D) have contributed to projects aimed at finding potential treatment solutions for COVID-19.

The company's Executive director (Research) Dr Cyrille Kuhn—who is leading COVID-19 efforts since January says: All of us are thinking about how we can find new ways to tackle this virus. This has led to a broad programme pursuing many approaches in parallel."

At the same time, an increasing number of collaboration partners and service providers are bolstering the team's efforts.

Most of the projects are part of larger collaborative efforts with academia, biotech and other pharma companies. Among them is a call by the Innovative Medicines Initiative of the EU (IMI), to which Boehringer Ingelheim is planning to commit in excess of 11,000 work hours in R&D. The company also joined the Bill & Melinda Gates Foundation COVID-19.

Therapeutic Accelerator

In March 10 2020, the Bill and Melinda Gates Foundation, Wellcome and Mastercard committed up to \$125 million in seed funding to speed-up the response to the COVID-19 pandemic by identifying, assessing, developing and scaling-up treatments.

The partners are committed to equitable access, including making products available and affordable in low resource settings.

The Accelerator will have an end-to-end focus, from drug pipeline development through manufacturing and scale-up.

According to experts, by sharing research, coordinating investments, and pooling resources, these efforts can help to accelerate research. This kind of collaboration was a key lesson from the 2014 Ebola outbreak.



An entrepreneur at work: A pharmaceutical firm has announced funding to support this lot.

The COVID-19 Therapeutics Accelerator will play a catalytic role by accelerating and evaluating new and repurposed drugs and biologics to treat patients with COVID-19 in the immediate term, and other viral pathogens in the longer-term.

According to experts, currently there are no broad-spectrum antivirals or immunotherapies available for the fight against emerging pathogens, and none approved for use on COVID-19.

The COVID-19 Therapeutics Accelerator will work with the World Health Organisation, government and private sector funders and organisations, as well as the global regulatory and policy-setting institutions.

Experts say by providing fast and flexible funding at key stages of the development process, the Accelerator will de-risk the pathway for new drugs and biologics for COVID-19 and future epidemic threats, ensuring access in lower-resource countries.

In addition, Boehringer Ingelheim supports scientists worldwide with its open innovation portal opnMe.com, which offers six anti-viral compounds out of 43 high quality pharmacological tool compounds at no cost for testing of research hypotheses.

What pandemic teaches us about 'One Health' concept

Even if we gave it the benefit of the doubt, it is still a fact that approximately 75 percent of all the emerging and re-emerging diseases have their origin in animals.



Marketplace: Human beings must ensure the environment in which they operate is clean.



Dr. Othieno Joseph.

By Dr. Othieno Joseph
jothieno43@yahoo.com

When the dust settles a lot will be said and written about COVID-19. I can bet that there will be many conferences on the disease. Postmortem dissection of the outbreak; what was done well, missed opportunities and what went wrong.

Individual country approaches will be weighed on a scale and verdicts given. Epidemiologists, pathologists, sociologists, journalists, health communicators, among others, will jostle for space to air their experiences and maybe the end result will be a novel view of pandemics.

We, journalists, will wish to extract all the lessons on reporting on pandemics and this will be achieved through our own postmortem analysis. Not to forget the continuous professional developments we have had throughout the COVID-19 pandemic, versatility in our strength, which remains evident in our daily works.

When all is said and done, the globe will have to come back to roost on the One Health concept.

This young concept will get an appreciation from all and sundry that a holistic view of any disease is important in its prevention and control. Why do I say this? It is still a speculation that COVID-19 might have its origin in animals. Coronaviruses are many in the animal kingdom where they cause mild infections and this speculation may not be far-fetched.

Even if we gave it the benefit of the doubt, it is still a fact that approximately 75 percent of all the emerging and re-emerging diseases have their origin in animals.

Photo Credit: Charles Mghenyi



Temperature check at a roadblock: The pandemic teaches us to rethink the place of one health agenda.

Due to some complex mix of processes these diseases cross from animals into humans either in their original or mutated (changed) form and cause havoc.

If we must apply "at-source control", we must renew our interest in the health of animals and that of the environment, which the animals share with humanity. Our environment must be healthy. Left on its own the environment has a self-cleaning mechanism. Unfortunately, man interferes with this mechanism and pollutes the environment through his activities. This makes the environment sick, and a sick environment cannot be home to healthy animals and humanity. But such a holistic view is easily blurred when we choose to work in silos. One Health concept strives to expand our myopic view.

Within the One Health concept, all professionals must heed the call of collective responsibility in disease prevention and control. An environmentalist may not be alive to the fact that his actions of providing clean water and proper sewerage system are directly related to the

control of E. coli, for example, which can affect both man and animals. Such is the time not only to meditate upon these tenets of health but to apply them.

Take the example of veterinary medicine whose main goal is to safeguard the public health – your health and mine. Although this is the mantra – would-be beneficiaries of it all are oblivious of the centrality of animal health in their health.

The weakest link maybe the production system that is intensive and predisposes the animals to diseases. It maybe the markets for foods of animal origin that do not prioritise sanitation. The result is that we may end up with adulterated milk, drug residues in foods and myriad diseases in our populations.

During the COVID-19 pandemic, vets have played a role in the prevention and control of diseases. Countries like Nigeria actually had veterinary epidemiologists among the frontline health staff. While this is commendable, the world should look into how to proactively integrate animal health as a critical component

in human health and this is the very definition of One Health concept. Human health and animal health are joined at the hip and require journalists, health anthropologists, counsellors, policy experts, to mention but a few, to safeguard. It should never be seen as a medics' problem because it is not.

You have all seen the overt involvement of virtually all ministries in countries because the disease has affected sports, transport, education, hospitality sectors, among others. It has affected families and societies; our religious and cultural practices have suffered and as such all must be involved in the solution through One Health concept.

The weakest link maybe the production system that is intensive and predisposes the animals to diseases.

Why journalists must rethink coverage of science

By **Kiundu Waweru** | wkiundu@gmail.com

In early January 2020, I left Nairobi for Laikipia County with an exhilarating expectation. Laikipia, particularly Nanyuki, has always been a wonderful place, ideal for both business and as a getaway. The experience begins as you leave Nyeri driving along an uncongested, well paved road. The view a green and plain stretch on both sides of the road as far as the eye can see, the air crisp and clean.

On this mission, I went past Nanyuki town, past the British Army Training Unit (BATUK) and soon even the tarmac ended abruptly. I hit a well-maintained dirt road, flanked on both sides by rolling plains. It had rained recently, and the grass was tall, the thickets and indigenous trees, mostly acacia, thick and green.

I was in the wild proper, and there were no houses for a couple of miles. Occasionally, I would meet a car, mostly SUVs and four-wheel drive, racing past. At some point, an open army Land Rover reared from behind in breakneck speed at the wheel and on the passenger seat two well-built, young British soldiers, Johnnies, as they are popularly referred to in Nanyuki.

In a drive of less than one hour, I came upon giraffes gracefully browsing on the trees, a herd of shy zebras that ran off on seeing the vehicle and later was fascinated to spot the rare, endangered Grevy's zebra.



Mr. Kiundu Waweru.

Then I saw it, in the middle of the road, a turtle waltzing slowly in the morning sun. I suddenly stopped to allow it pass, but it instead retreated into its shell.

Soon I was at the Mpala Research Centre, described as the living lab in the wild. Here, you will meet students and researchers from around the world, studying nature and its relationship to people and the planet. It is here, surrounded by nature, wildlife and scientists, that my project at the Earth Journalism Network, which supports environmental reporters around the globe, was planning to train a group of 12 journalists in late March from Uganda, Tanzania, Rwanda, South Sudan and Kenya.

They were raring to have a great week of learning about wildlife and conservation, where they would have classes with the scientists and researchers, before going to the field to actualise what they had learned.

But it was not to be

By the time I was visiting Laikipia in late January, the coronavirus had sneaked from Wuhan City in China to Thailand. It would be a matter of days before the World Health Organization (WHO) declared it a Public Health Emergency of International Concern. But it was still a foreign occurrence by then, and somehow, we on these sides thought we might be immune to it. But at the research centre, the scientists I met insisted that it probably was a matter of time. I learned that for many years, Laikipia has been a hub of study of the relationship between wildlife, livestock and humans, with a keen interest in zoonotic diseases that can spread between the said parties.

I was particularly fascinated by the Samburu-Laikipia wild dog project. According to Mpala, wild dogs are one of the world's most endangered mammals, with less than 5,000 individuals remaining. According to researcher Dedan Ngatia, the wild dogs had nearly disappeared from Laikipia County in the 1990s mainly due to infectious diseases like rabies and conflict with pastoralists.

Later, in 2017, with the area experiencing a biting drought, pastoralists, with their domestic dogs in tow, descended on Laikipia from the north, leading to an outbreak of the canine distemper disease that almost wiped out the wild dog population.

This is fascinating because it is a basic example of how loss of habitat, increased human population, domestic animals interaction with wildlife, all issues we are experiencing today, can have devastating effects. For instance, rabies, according to the WHO, is a vaccine-preventable disease whose main reservoir is domestic dogs. It kills 2,000 people annually in Kenya, and easily spreads from domestic to wild dogs and even to lions and cheetahs. This means an outbreak can wipe out both humans and animals in places like Laikipia. Unfortunately, rabies is one of the most neglected diseases, but now with the current pandemic, this can change, and the media can be the vehicle for the change.

The coronavirus, though still not confirmed, is believed to have originated from a wild animal, fuelled by illegal wildlife trade. Scientists are suggesting that if we have to prevent future pandemics, which can only get worse with time, we have to change the way we relate with wild animals, and the environment.

As Maarten Hoek, a senior public health manager and non-Executive Director of Madaktari Africa, told us in one of our webinars, "This is an unprecedented event that will have a profound impact on how we interact with the environment and the world. Hopefully, it will make us think

about our ecological footprints and how we treat and live with animals and also with each other in society. We need to reflect on how we deal with the planet and with each other."

Most importantly, let us promote researchers and scientists in our media platforms and challenge the government to put more funds on research.



Dedan Ngatia, who oversaw the Laikipia Rabies Vaccination Campaign that resulted in over 5,000 dogs being vaccinated against rabies in Laikipia, saving not only humans, but pets and wild animals alike.

Indeed, this should be the rallying call to all science and health journalists in Kenya to make the best out of this pandemic, and make it their mission to find, investigate and write stories on One Health – human health, animal health and the environment.

If we fail to do so, the future of species, humans and the planet will only get worse than the current pandemic.

Kiundu Waweru is the Project Manager for the Internews Earth Journalism Network's East African Media Coverage of Conservation and Wildlife



Pupils at Rongo Nyagowa Primary School in Homa Bay County, western Kenya. Many pupils stay in remote places with no access to e-learning opportunities.

Digital cracks that learners have to slide through in online studies

By Clifford Akumu | akumu.clifford@gmail.com

The closure of schools due to the coronavirus pandemic signalled a new dawn for candidates preparing for national exams.

Albert Momanyi, 18, a KCSE candidate at Kakamega High School, could not hide his agony.

"I did not know it was going to take this long. Kakamega is not just a school for me, it's like my home because they are sponsoring my education," Momanyi says.

Two days after schools were shut in mid-March, the government scaled up online and electronic delivery of lessons.

In addition to the Kenya Institute of Curriculum Development's (KICD) expanded broadcast for schools programme, several other players jumped in to offer services.

Teachers and lecturers were urged to complete their syllabuses and administer tests remotely.

The KICD is providing the content free-of-charge through local TV channels, but questions remain as to how effective e-learning is and whether learners are able to access it.

And just how is Momanyi, talented footballer, coping with the situation? "I wake up at 4am and study for about one hour then pick up my training boots and head to the nearby field for routine practice."

It is now a lonely affair, he says. "I used to play with a football team in the neighbourhood before the coronavirus pandemic. Because of social distancing, I have to do my routine exercise alone," says Momanyi, a resident of Umoja 2 Estate, Nairobi.

After his routine field training, the first born in a family of three siblings helps with household chores before embarking on online studies. Momanyi's parents do not own a TV set and he has had to seek help from neighbours.

"I have made friends with a neighbour and we use their TV. We follow lessons on Edu TV and Elimu channel, but sometimes it is hectic as they wake up late," says Momanyi.



Experts believe the government's digital learning programme was a good idea whose execution was not well thought out as it has excluded some pupils.

Unlike the government's e-learning programmes, other platforms offer content at a fee that most students cannot afford.

Momanyi is among the 18 million learners who were suddenly taken out of the comfort of their classrooms to an uncertain future as the authorities struggle to contain the spread of the deadly virus.

According to a report released in January by technology think tank, Research ICT Africa, East Africa's Internet data charges are among the lowest in the continent. The report, **1GB Basket Statistics**, compares different prices for 1GB of daily mobile Internet data.

Tanzania leads in low cost, at Sh4,950.52 (U\$49.5) followed by Rwanda (Sh4995.94 (U\$50) Kenya Sh5540.95 (U\$55) Uganda Sh6199.50 (U\$61) and Burundi Sh6858.06 (U\$69) as of September 2019.

The countries rank fourth, fifth, seventh, ninth and eleventh respectively in Africa with Egypt, which charges Sh2747.76 (U\$28), leading the park.

Jonathan Wesaya, an education and public engagement expert believes the government's digital learning programme "was a good idea whose execution was not well thought out." He says the authorities failed to take advice from experts.

Wesaya says younger children need tech-related play and socialisation to easily transition into digital programmes. Compulsory computer studies and provision of laptops to learners in higher institutions is vital for a smooth digital learning programme, he says.

In Momanyi's school, teachers have formed a WhatsApp group and Facebook accounts for study purposes. Through these platforms, the learners get past papers and short notes on different subjects, which they use for revision.

But for Faith Ndunge, a candidate at Ngoleni Secondary School, Machakos County, the situation is worse. First, she has become a tutor for her two siblings.

"I wake up at 7am. After doing my household chores and taking breakfast, I help my siblings in revision before embarking on my studies," says Ndunge, 19.

Her school does not provide any revision materials. She relies mostly on past papers and content from online platforms.

And Ndunge has to endure the interference of noise from her neighbours. She says studying alone makes it difficult for her to grasp certain concepts because there are no discussions she is accustomed to as in a classroom setting.

"When my parents try to reach the teachers, some of them have travelled to their villages," Ndunge says.

How e-learning in remote areas is held back by power shortage



Dr Linda Misiko, Child Health Technical Advisor at Save the Children International.



Mr Jonathan Wesaya, Education expert.

By **Clifford Akumu** | akumu.clifford@gmail.com

Since the abrupt closure of schools and colleges to prevent the spread of COVID-19, students have resorted to e-learning to fill the gap.

But a significant number of students who lives in remote areas have no internet access. One such student is Linda Osere from Kajoro village, Busia County, and a Kenya Certificate of Secondary Education (KCSE) candidate at Chebukaka Secondary School.

For her parents who spend less than Sh100 (USD 1) a day, internet data is not a priority. Ms Osere also has no access to a television set. To play catch-up, she has teamed up with two students from a neighbouring school. Now she is able to solve math equations, one of her greatest problems. "I have learnt a lot from the group," says Osere, who has to help his parents in the farm before settling down in the afternoon to study.

E-learning is now becoming the new norm. The question is; how do you power it? Experts believe e-learning devices need power and connectivity more than anything. Online learning was expected to pick up following an agreement between Telkom Kenya and Google to offer internet to rural parts of the country.

But it is not clear whether the balloons are already connecting learners like Osere with high speed 4G internet services. Telkom Kenya did not respond to our questions on the status of the balloons.

Jonathan Wesaya, an education and public engagement expert, says the e-learning strategy failed to answer some critical questions, including mental health of teachers and learners, lack of tools to promote remote learning programmes, adoption of low-tech and re-tooling of the teachers to tackle learning in emergencies.

"If it is internet, we could have thought of a low-tech like partnering with a bulk SMS provider if they had socialised the learners. The question is, how many areas access broadband?" says Wesaya, who is a trained teacher.

Another challenge of e-learning programme, says Wesaya, is shifting the burden of learning to parents who rarely understand some of the concepts. "Many parents only concentrate on subjects that they grasp and give little attention to the rest," says the expert.

Learners enrolled on free feeding programmes are also missing out during the pandemic period, affecting their vital nutrition needs.

Dr Linda Misiko, child health technical advisor at Save the Children International, says learners in informal settlements, and camps with limited infrastructure and no access to the internet are particularly impacted.

"COVID-19 pandemic has made it difficult to serve children with special needs with e-learning programmes," said Misiko in a webinar.

She says children's reliance on online platforms for distance learning has also increased their risk of exposure to inappropriate content and online predators.

Meanwhile, in international schools, virtual learning kicked off immediately they were closed. With IT action plans in place, these institutions only needed to activate it and go live. But for learners like Osere, who have lost seven calendar weeks of classroom learning, her prayer is an end to the pandemic.

NASCOP at the epicenter of COVID-19 fight

Photo Credit: NASCOP



Dr. Catherine Ngugi overseeing operations at the 719 COVID-19 response centre.

By **Violet Otindo** | votindo@gmail.com

The number of positive confirmations of COVID-19 cases globally continues to soar daily. In a race to flatten the curve, the Kenyan Government has taken high measures to slow down disease progression to a manageable level. The Government has turned to digital platforms to support the public with information and to empower health care workers around the country with vital information needed to respond appropriately to this disease.

In a country with a widespread use of digital and social media platforms, the Government was able to gain immediate access to citizens to dispense up-to-date information to promote response guidelines such as 'social distancing'. Through these digital communication channels, the Government continues to share messages encouraging its citizens to stay at home and use their communication devices to receive information instead of going outside to search for it.

The Ministry of Health adopted the toll-free line (0800724848) in collaboration with Safaricom's Hotline (719) for all citizens and healthcare workers to call for assistance or seek updated information on the coronavirus infection.

There was also need to expand the working hours from the weekly hours of 8 am to 5 pm, to a 24 hour cycle, seven days a week, to continuously respond to the escalating healthcare needs in the country.

This move led to the recruitment of a team of clinical experts to provide a well-coordinated telemedicine response to an increasingly escalating health disaster.

"NASCOP was selected to take charge of the COVID-19 call centre as we have experience in providing clinical support for HIV related queries," said Wanjiku Ndegwa, section head at the NASCOP Clinical Support Centre. She also expressed that the transition to take on this new challenge was exciting as it revealed additional skills and expertise that the organization can provide.

Dr. Catherine Ngugi, the head of NASCOP, reiterated the same, saying, "The COVID-19 fight has opened our eyes as a program and as healthcare workers that it is time for us to embrace telemedicine as a form of clinical consultation, especially when it needs minimal interaction. It may become one of the innovations we need to decongest our healthcare facilities."

NASCOP established virtual training through its ECHO platform, used for telemedicine. On average, each virtual session had about 200-250 participants and included County Health Management teams, implementing partners at the national and grass-root level, and county health care workers.

"Each day we run two sessions, from 11 am-12 pm and 2-3 pm," said Winnie Owiti, the coordinator of the virtual training sessions.

In the beginning, the training sessions addressed the issue of how to manage anticipation, preparedness, and early detection phase of the pandemic. However, as the country moved to a containment and mitigation phase, the sessions were re-designed to respond to the specific needs of participants from all levels.

"For example when we began, the course outline addressed COVID-19 surveillance, case management, screening, contact tracing, referral, infection prevention, and control, cleaning and disinfection, sample collection, health waste management, case investigation of a positive case, risk communication and occupational health safety," said Ms. Owiti.

These training sessions aim to build the capacity of county health care teams to respond to the COVID-19 pandemic adequately.

"The trainings have really empowered us because we learn from experts, and as it is a new disease, we have also learned how to prepare our facilities if we receive cases," said Dr. Mike Ekisa, Chair of County AIDS and STIs Coordinators and CASCO Kakamega.

The training sessions have also evolved to address the management of the virus for patients with special needs such as diabetes, HIV, cardiovascular diseases, cancer, pregnancy, renal disorders, respiratory infections, nutrition, and mental health among others.

Women with disability decry exclusion in sexual health issues

Photo Credit: Joyce Chimbi



Veronica Njuhi speaks out on challenges affecting women with disability.

By Joyce Chimbi | j.chimbi@gmail.com

One in every five women in Kenya has a disability. However, despite having the same needs and interests as people without disability, their access to sexual and reproductive health services is significantly limited.

These statistics put into perspective the situation of women living with disability, especially as the virulent COVID-19 takes centre stage, and other equally important health priorities are sidelined.

Not only has this pandemic put a strain on health systems in the country, it has also placed barriers and limitations on how people access and receive services. This is the case for women with disability in need of various sexual and reproductive health services.

"We are perceived to be asexual and therefore offering us reproductive health information is considered wasteful," says Josephat Mukobe, the Principal Secretary in the Ministry of Culture and Sports.

Women living with disability decry a lack of access to facilities because many are not designed to cater for people with limited mobility, poor attitudes towards their sexual and reproductive health needs and a lack of services tailored to their needs.

Mukobe says motherhood for them is taboo and a pregnant woman with disability is a phenomenon to be pitied and even ridiculed by society.

"We cannot enjoy a pregnancy because people look at us and wonder what beast did this to a poor woman with disability? They are shocked that you even have sexual organs," she says. "We desire love, an active and healthy sexual life and to raise a family."

Under international law and multiple agreements, governments must ensure equal respect, protection, and access to sexual and reproductive health and rights for people with disabilities. But it is a long way from policy to practice.

Veronica Njuhi, Chairperson of Women Challenged to Challenge, a movement that improves women with disability's capacity to overcome barriers and discrimination, speaks of how she was continuously excluded from training on HIV/Aids.

"My employer never included me in any training on HIV/Aids even though it was offered to all employees. When I confronted him, he was very shocked because he did not think I needed training on HIV/Aids," she says.

According to the Population Reference Bureau (PRB), people with disability account for one in seven people globally. Critically, 80 percent of them are living in developing countries where sexual and reproductive health and rights interventions are not only limited, but are most wanted.

Raising awareness and strengthening protection for the rights of the one billion people with disability around the world has never been more urgent.

Girls and women are particularly vulnerable and are more likely to experience violence. Young people with disabilities, under the age of 18, are especially at risk as they are nearly four times more likely than youth without disabilities to be abused.

"When people with disability overcome barriers, it is a representation of what is possible. The world is about all of us, no one should be left behind," says Jeffrey Jordan, PRB president.

Jordan says universal access to sexual and reproductive health and rights cannot be achieved when one in seven people in the world are left out of deliberations.

"As we strengthen sexual and reproductive health and rights globally, it is crucial that we reach our most vulnerable communities," he says.

Being that they are the least likely to be educated about their sexual and reproductive health and rights, people with disability are predisposed to greater risk of exploitation, unplanned pregnancy and sexually transmitted infections.

"Sex is a private issue which we would also like to explore in private. This is not always possible because if we do not speak out, we will continue to be ignored," Mukobe says.

She says interventions must be tailored to their special needs and they need to be informed on what does not work for them.

"A female condom cannot be used among those of us whose legs are crooked. A blind person cannot read using braille and figure out if a male condom has expired because expiry dates are not written on the condoms," she adds.

For women with hearing impairment the scenario is dire. When seeking health services, they often need to be accompanied by a person who understands sign language.

Njuhi says this person is not always available: "We are pushing for change and now public hospitals in Kenya have at least one person who can understand sign language."

"A person who is not deaf can easily be treated for a sexually transmitted infection in private. But those who are deaf are humiliated and shamed because they need someone who understands sign language," Mukobe explains.

Njuhi reveals that because of existing communication barrier, women with hearing impairment have for a long time received the injectable even when it was not their primary contraceptive option.

"The health providers who do not want to struggle explaining various methods, their benefits and side effects have found the injectable easy to administer. A woman will just be told to return after three months for their follow up dose," Njuhi says.

She notes that the attitude of most health providers towards pregnant women with disability has contributed to many of them delivering at home without a skilled attendant.

"Just because a woman with disability is pregnant, it does not mean she was raped. She deserves all the services that will help her travel the safe motherhood route without judgement," Njuhi advises.

Mukobe decries the state of many health facilities, particularly public hospitals, for being extremely unfriendly to those with disability. She says beds are often not adjustable, adding on to the list of the many barriers they have to overcome.

Against this backdrop and as COVID-19 rages on, women with disability urge stakeholders to be mindful of their health needs.

ANNOUNCEMENT



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The invisible people

By Ellen Msungu | info@meshascience.org



Mr Tom Ndede.

The nightmare that is COVID-19 has undoubtedly shaken the world. But, for persons with disability, they have remained invisible.

Ms Angeline Akai, echoes these sentiments. She is a visually impaired person who, until the pandemic showed up, was working as a consultant sensitizing people on the plight of persons with disabilities.

Today, she sits at home with his nephew, jobless. According to the government, she is not an essential service provider and therefore has to work from home, but, no client comes to her at home. Everyone is skeptical, and, like the Ministry of Health advised, "you should treat everyone as a suspect of COVID-19, hence the need for social distancing."

For more than three months now, she has not been receiving clients. Her income is no more and her savings are depleting as time goes by.

"I do not like asking for help from friends, but I am afraid I'm now relying on friends, which, I feel is a threat to my dignity," says Ms Akai.

The government released funds to help the vulnerable but speaking to some of the people with disabilities, they said that they are yet to receive any assistance.

"I have asked my area chief if he has heard of any registration that is ongoing for people like us, but he told me he is not aware of any of such," says Ms Akai.

If she were to go out as usual, she will need an aid to walk her through the streets of Nairobi, and, her nephew is not one of the options because he is still young. Her vulnerability to unknowingly coming into contact with persons with the coronavirus is high. Ms Akai is not alone.

Catherine Syokau is a Communication Officer, with a physical disability. Her story is quite different. Unlike Ms Akai, she still goes to work, but only thrice or twice in a week. That means that her productivity, like most Kenyans, has reduced.

"Working from home is a challenge for me, I do not have internet connection so there are some duties that I cannot perform from home," says Syokau.

Her routine when going to work is still the same, only that this time, she has to have a hand sanitiser all the time just to be safe.

At the bus station though, like it has always been for her, she is helped to board the bus to and from work. She, therefore, is at risk of getting too close to people whose viral status, she may not know. She is forced to sanitise her wheelchair so many times as recommended by public health officials.

The Nairobi Metropolis put up water points for people to wash their hands while in town as one of the ways of containing the virus. But, one thing that unfortunately did not cross their minds, is that people like Ms Syokau are not privileged to use taps that high. "I cannot wash my hands in town, I only sanitise. What about my fellow vulnerable people who cannot afford sanitisers?" she asks.

Tom Ndede, who works with persons with disability, feels that the "hearing impaired are the most neglected people during the ongoing relief items distributions compared to other persons with disabilities."

Delving deep into the issue, you will understand why that is his intuition and he says the main barrier is communication. Whilst the Ministry of Health briefing could have a sign language interpreter, not everyone has the luxury to watch that, and on radio, communicating to a person with hearing impairment is impossible. They are left out when crucial decisions regarding the pandemic like the curfew are made.

"Sometime back, a young man who is deaf in Kakamega who had not heard about the curfew was beaten up by police because they did not understand his situation," says Mr Ndede. That did not sit well with the members of the deaf community.

Their appeal to the chair of National COVID-19 response team therefore, is to highlight some of the challenges facing persons with disabilities during the pandemic.

COVID-19 significantly impacts health services for non-communicable diseases

By Mike Mwaniki | mikemwaniki2016@gmail.com

Prevention and treatment services for non-communicable diseases (NCDs) have been severely disrupted since the COVID-19 pandemic began, according to a recent World Health Organisation survey.

In May 2020, the World Health Organisation conducted a rapid global survey to assess the extent of disruption of NCDs services during the pandemic. The results were very troubling.

At least half of all the 155 countries surveyed, reported that NCDs services such as treatment for cancer, hypertension and diabetes have been partially or totally disrupted. And to make matters worse, people with some underlying NCDs conditions such as diabetes and asthma are at increased risk of dying from COVID-19.

This situation is of significant concern because people living with NCDs are at higher risk of severe COVID-19-related illness and death experts say.

The WHO Director-General Dr Tedros Ghebreyesus notes: "The results of this survey confirm what we have been hearing from countries for a number of weeks now.

"Many people who need treatment for diseases like cancer, cardiovascular disease and diabetes have not been receiving the health services and medicines they need since the COVID-19 pandemic began. It's vital that countries find innovative ways to ensure that essential services for NCDs continue, even as they fight COVID-19."



Dr Sam Oti: An expert on NCDs.

According to the survey, a majority (94 per cent) of countries responding, ministry of health staff working in the area of NCDs were partially or fully reassigned to support COVID-19.

The postponement of public screening programmes (for example for breast and cervical cancer) was also widespread, reported by more than 50 per cent of countries. This was consistent with initial WHO recommendations to minimise non-urgent facility-based care whilst tackling the pandemic.

The main finding is that health services have been partially or completely disrupted in many countries.

More than half (53 per cent) of the countries surveyed have partially or completely disrupted services for hypertension treatment; 49 per cent for treatment for diabetes and diabetes-related complications; 42 per cent for cancer treatment, and 31 per cent for cardiovascular emergencies.

Rehabilitation services have been disrupted in almost two-thirds (63 per cent) of countries, even though rehabilitation is key to a healthy recovery following severe illness from COVID-19.

According to WHO, NCDs kill 41 million people each year, equivalent to 71 per cent of all deaths globally. Each year, 15 million people die from an NCDs between the ages of 30 and 69 years; more than 85 per cent of these "premature" deaths occur in low- and middle-income countries.

Dr Sam Oti, IDRC head of NCDs, says those handling NCDs can take solace in the fact that most governments have shown that when they are serious about handling a disease, they can act quite decisively.

Historically, NCDs have been underfunded across the world and particularly in low and middle-income countries. Dr Oti explained, adding that the world is unlikely to meet SDG target 3.4 which aims to reduce premature mortality from NCDs by one-third by the year 2030.

Speaking on June 14 2020 while giving the daily update on the COVID-19 situation in Kenya, Health Cabinet Secretary Mutahi Kagwe said persons living with NCDs, such as high blood pressure, diabetes and cancer, are more at risk of becoming severely ill with coronavirus.

Experts say CKD is more likely to develop in women compared to men with an average 14 per cent prevalence in women and 12 per cent in men.

At the same time, some kidney diseases such as **Lupus Nephropathy** or kidney infection are common in women. Women who have CKD during pregnancy are at increased risk for negative outcomes for the mother and baby. Pregnancies in women with advanced CKD are most challenging.

Dr Were described high blood pressure and diabetes as the “biggest drivers” which were fuelling the increased cases of kidney diseases in the country. Other high-risk factors include having a family history of kidney disease, being overweight, smoking and those aged 50 years and above.

Experts say kidney diseases can affect people of all ages and races and one in every five men and one in four women between the ages of 65 and 74 have CKD. Early CKD often has no sign or symptoms.

Experts say a person can lose up to 90 per cent of their kidney function before experiencing any signs.

At the same time, the Kenya Network of Cancer Organisations (KENCO) has urged the government to support cancer patients, their caregivers and survivors by providing them with social protection as the fight against the spread of COVID-19 is stepped-up.



Health Cabinet Secretary, Mutahi Kagwe gives an update on COVID-19 in Nairobi recently.

“According to the WHO survey, almost two-thirds of the surveyed countries have included the continuity of NCDs services in national COVID19 response plans. This is encouraging but a lot means to be done,” he says.

In Kenya, for example, the Kenya STEPwise survey for NCDs risk factors (2015) report says NCDs account for more than 50 per cent of total hospital admissions and over 55 per cent of hospital deaths in the country.

The major NCDs are cardiovascular conditions, cancers, diabetes and chronic obstructive pulmonary diseases with their sequelae and their shared risk factors. Equally contributing to the huge burden are violence and injuries, **haemoglobinopathies**, mental disorders, oral, eye and dental diseases.

A leading kidney specialist, Dr Antony Were says chronic kidney disease (CKD) is the eighth leading cause of death in women causing more than 160,000 female deaths a year. Currently, 195 million women worldwide are affected by CKD.

In a statement, KENCO Executive Director, Ms Christine Sitati said: “COVID-19 has caused other challenges such as high cost of transport and in some cases loss of livelihoods (among cancer patients and survivors) thus adversely affecting their access to treatment and nutritious immunity-boosting diets.”

“As we celebrate life for survivors (on June 7)—and give hope to newly diagnosed patients and their care-givers—we urge the government to support cancer patients, their caregivers and survivors at such (trying) times,” she added.

The national umbrella body of over 35 cancer civil society organisations also challenged the government and all other stakeholders to consider undertaking concerted efforts on cancer control similar to the ongoing efforts against COVID-19.

“We need the urgency, great political will and effective policy changes to ensure we deal with the cancer epidemic in Kenya, right from prevention to survivorship,” Ms Sitati added.

Kenya commemorated the National Cancer Survivors Day on June 7 whose theme was “A better quality life for cancer survivors is possible.”

The WHO has documented that people with pre-existing conditions such as cancer are among those most-at-risk among COVID-19 mortalities due to a weakened immune system.



The Kenya Network of Cancer Organisations (KENCO) Executive Director, Ms Christine Sitati.

Globally, two-thirds of countries reported that they had included NCDs services in their national COVID-19 preparedness and response plans; 72 per cent of high-income countries reported inclusion compared to 42 per cent of low-income countries.

Seventeen per cent of countries reporting, the survey shows, have started to allocate additional funding from the government budget to include the provision of NCDs services in their national COVID-19 plan.

Encouraging findings of the survey were that alternative strategies have been established in most countries to support the people at highest risk to continue receiving treatment for NCDs.

Telemedicine is now really beginning to take off. This is particularly important to help reduce congestion in hospitals during the pandemic but also to reduce to risk of hospital transmission of the virus.

The WHO has documented that people with pre-existing conditions such as cancer are among those most-at-risk among COVID-19 mortalities due to a weakened immune system.

In response to the pandemic, health providers across many countries have adapted their NCDs services in various commendable ways. For example, in Italy some hospitals ensured that they were able to continue treating both COVID19 and non-COVID19 patients by dividing their emergency department into two separate areas.

“Some governments have released practical guidelines for managing NCDs during the pandemic. For example, Kenya’s National Cancer Control Program swiftly released cancer management guidelines in the face of COVID19 back in April 2020,” says Dr Oti.

Given that people with NCDs are at increased risk of dying from COVID-19 then it is imperative to ensure that public education campaigns about COVID-19 are accompanied by NCDs awareness messages, he added.

Survey: Kenya records huge drop in new HIV infections

Photos Credit: NASCOP

Dr. Rashid Aman, CAS, Ministry of Health, said that drastic reduction in the number of new infections offers a glimmer of hope in the control of the epidemic.



By Mike Mwaniki | mikemwaniki2016@gmail.com

Kenya's HIV prevalence rate now stands at 4.9 per cent of the population, which translates to an estimated 1.3 million adults living with Aids, a new survey shows.

Additionally, approximately 139,000 children are HIV positive, according to the study. The Kenya Population-based HIV Impact Assessment (KENPHIA) preliminary report, however, says the HIV prevalence rates varied across the country.

"The top five HIV high-prevalence rate counties were Homa Bay (19.6 per cent); Kisumu (17.5 per cent); Siaya (15.3 per cent); Migori (13.0 per cent) and Busia (9.9 per cent).

"At the same, HIV/Aids prevalence was lowest (less than 2.0 per cent) in nine counties: Samburu, Tana River, Garissa, Wajir, Mandera, Marsabit, Kiambu, West Pokot and Baringo," says the report.

Speaking while launching the report in Nairobi recently, Health Chief Administrative Secretary (CAS) Dr Rashid Aman said the current strategic plans and efforts in HIV prevention are focusing on the top five high-prevalence counties.



Dr. Patrick Amoth, Ag Director General, Ministry of Health makes his remarks.

Photo Credit: NASCOP

US Ambassador to Kenya Kyle McCarter at the launch. He said that experts and data help make the best possible decisions about policies and programmes for the benefit of the citizens.



"At the same time, more attention needs to be paid to the counties that have an emerging epidemic as evidenced by the consistent rise in their HIV burden. These counties include Turkana at 6.8 per cent and Kisii at 6.1 per cent prevalence," said Dr Aman.

According to the report, the rate of new HIV/Aids infections in Kenya has dropped to less than 36,000 in 2018 from 106,000 in 2012.

"The drastic reduction in the number of new infections offers a glimmer of hope in the control of the epidemic," Dr Aman said.

However, the data shows that the prevalence of HIV in women is at 6.6 per cent, twice that in men at 3.1 per cent.

"This gender disparity in the burden of HIV is even greater than three times in between the ages of 20-34 years," reads the report.

This data, Dr Aman noted, shows the ever-widening gap from the 2007 to 2012 Kenya Aids Indicator Surveys (KAIS) that are now showing a significantly higher burden of the disease in women compared to men.

The same worrying trend is also emerging in the sub-Saharan region as evidenced by other regional PHIA surveys.

"There is need therefore, to urgently address the underlying unequal cultural, social and economic status affecting women in our societies that allow HIV to so disproportionately affect our mothers, sisters and daughters," said Dr Aman.

Approximately 91 per cent of those diagnosed with HIV—and were on antiretroviral treatment—had achieved viral load suppression, and thus had a very low risk of transmitting the virus.

According to experts, over 1.1 million people are currently enrolled on antiretroviral treatment in Kenya.

The KENPHIA survey, which was conducted between June 2018 and February 2019, is a national, household-based HIV survey.

It is part of the multi-country Population-based HIV Impact Assessment (PHIA) project conducted in the most affected countries in sub-Saharan.

Africa and the Caribbean. The survey's objective includes to estimate the national rate of new HIV infections (HIV incidence); determine the level of viral load suppression among people living with HIV; and assess the number of people living with HIV nationally and by county (HIV prevalence).

The final KENPHIA report is expected to be released in mid-2020 and will offer a more in-depth analysis of the status of HIV in Kenya.

US Ambassador to Kenya Kyle McCarter said the 2018 KENPHIA was funded by the United States government through the US President's Emergency Plan for Aids Relief (PEPFAR).

"In the world of health, we rely on scientific experts and data to help us make the best possible decisions about policies and programmes to improve the lives of our fellow citizens," Mr McCarter said.

Since 2004, the USA government through PEPFAR, Mr McCarter added, has invested nearly Sh700 billion (USD 7B) into the HIV response.

Germany pledges Sh2b more for the fight against HIV/Aids

By Ellen Msungu | info@meshascience.org

Germany has pledged to contribute additional Sh2.6 billion (20 million Euros) this year to UNAIDS for the fight against HIV/Aids globally.

This will be an increase from the country's annual contribution of Sh650 million (5 million Euros).

This will be a major boost for countries with heavy HIV burden like Kenya, which said it has included the HIV/Aids mitigation in the national COVID -19 pandemic response by involving communities that could help in sound decision making.

"If efforts are not made to mitigate and overcome interruptions in health services

Photo Credit: NASCOP



Dr. Catherine Ngugi, Head NASCOP/part of the Kenyan delegation at the meeting.

and supplies during the pandemic, there could be more than 500,000 additional deaths from Aids-related illnesses, including tuberculosis, in sub-Saharan Africa in 2021-2022," said Kenya's Health Principal Secretary, Susan Mochache.

The revelations emerged during the 46th Joint United Nations Program on HIV/AIDS Coordinating Board (PCB) meeting held from June 23-25. The country's delegation to the virtual meeting, which was conducted from Geneva, Switzerland, comprised Ms Mochache, Head of National AIDS and STIs Control Program (NASCOP), Dr Catherine Ngugi and Dr Pacifica Onyancha, the acting Director, Directorate of Preventive and Promotive Health.

Kenya was appointed to the 22 member board in March for the first time.

UNAIDS Executive Director, Dr Winnie Byanyima, from Uganda, reminded the members that HIV/Aids is still, "urgent and has unfinished business."

"Even before COVID-19, we were not on track to meet our targets for 2020. Now, the COVID-19 crisis risks blowing us way off course. We must address the deeper challenges to recover from this crisis to beat both the pandemic and foster safe, equitable and resilient societies," said Dr Byanyima.



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How maternal health project are changing lives in western Kenya



Nelly Achakulwa, resident, Kakamega County.

By Lilian Kaivilu | lkaivilu@gmail.com

To many mothers, giving birth is a nightmare. The entire pregnancy journey is not any better. With limited access to resources, health facilities and basic education regarding reproductive health, most of these mothers opt to give birth at home, thus increasing their chances of maternity related complications.

Nelly Achakulwa, a resident of Elwesero in Kakamega County knows this too well. The mother of five says she delivered her first four children at home. "I gave birth to my four children at home. The pregnancies were easy hence I did not see any alarm. That is why I opted to give birth at home," says Achakulwa. According to the mother of five,

she opted to go to the hospital due to the difficult times she experienced during pregnancy. "I had very bad backpains. I could neither bend nor stand. Because of fear of further complications, I opted to come to the hospital," she added. Achakulwa who works as a farmer says she experiences sharp backpains since giving birth to her last born on March 19, 2019.

Priscilla Oparanya, Kakamega First Lady attributes home deliveries to fear among most mothers.

"Previously, most women did not give birth at health facilities for fear of insults from nurses. As a result, they preferred the help of traditional birth attendants (TBAs) while giving birth," said Mrs Oparanya. But with TBAs now serving as birth companions to pregnant mothers, the First Lady says cases of home deliveries have reduced significantly. She hopes to be remembered for changing the lives of mothers in the county by ensuring that all women give birth in a health facility, with the help of a skilled birth attendant.

Oparanyacare, a programme introduced by Kakamega Governor Wycliffe Oparanya seeks to encourage mothers to deliver in health facilities. Through cash incentives, the mothers in Kakamega county earn Sh2,000 (USD20) when they give birth in the hospital and a similar amount every time they attend post natal visits to health facilities.



Priscilla Oparanya, Kakamega First Lady.
 PHOTO:IMPACTHUB MEDIA.



Jessica Koli, the reproductive health coordinator in Kakamega.
PHOTO: IMPACTHUB MEDIA.

Jessica Koli, the reproductive health coordinator in Kakamega says the county now records 66% skilled deliveries, a move she attributes to efforts by community health workers CHWs). According to her, the Oparanyacare programme is operational in 25 health facilities across the county and targets needy mothers by encouraging them to give birth in a health facility. She says the women are paid Sh2,000 for the fourth antenatal clinic, Sh2,000 (USD20) after a skilled delivery, Sh2,000 (USD20) after taking their child for immunization at six weeks, Sh2,000 (USD20) upon post natal clinic visit at six weeks and another Sh2,000 (USD20) for clinic visit at 18 months.

So far, 30,107 mothers in Kakamega county have benefited from Oparanyacare programme with a total enrollment of 45,325 mothers across the county. Koli, however, calls for more partnerships, especially in skills training for community health workers.

Magdalene Ingaji is a 22-year-old mother of one. She delivered her baby at Elwesero health centre in Kakamega county after two days of labour. "I was told I had long distress. After the two days,



Magdalene Ingaji, a beneficiary of OparanyaCare programme.

I was transferred to Kakamega Teaching and Referral Hospital. Just before getting to the theatre, I was given a form to sign. I did not know what it was," says Ingaji.

Although the entire procedure was paid for under Oparanyacare, the mother of one says she would prefer to be informed of any procedures being performed.

Ingaji is just one of the many mothers who lack basic information on medication and medical procedures that they undergo while pregnant or during delivery.

While mothers across the country are now able to get better reproductive health services, information sharing to mothers

during pregnancy, labour and after delivery is key. Veronica Musieka, the reproductive health coordinator in Vihiga county says healthcare workers must ensure that they inform mothers of every single step of the treatment. "If you are giving a mother a certain drug, injection or a procedure, make sure you inform her. Also, get her consent before the procedure, after a proper explanation," she advises.

Even when administering contraceptives, Musieka insists on proper education beforehand.

According to her, contraceptives uptake is estimated at 58 percent in Vihiga County. "We always have counseling before we give the contraceptives", she adds.

"But the uptake of the commodities remains voluntary. We what we do best is to ensure that we provide the key messages on presentation of pregnancy and family planning." she said.

Musieka, however, cites a challenge by some men who still want their wives to have as many children as possible. According to her, the implant is the most used family planning commodity among women in Vihiga county. The implant has less side effects compared to other methods.

A report by Access to Medicines Platform done in 2018 showed a drop in access to sexual reproductive health commodities in Kenya; from 46 percent to 36 percent in the previous year. In order to address the challenges of commodities stockouts, inadequate community education and inaccessibility to youth friendly services, the report recommends adoption of a multisectoral approach in the provision of health services and commodities, especially in the hard to reach areas.

Sexual and Reproductive Health Commodities: *Availability, Affordability and Stockouts (Kenya 2018)* report further recommends improved supply chain, accurate and timely quantification client education and outreach as well as increased budget allocation for the purchase of sexual reproductive health commodities.



Veronica Musieka, reproductive health coordinator in Vihiga county.
PHOTO: IMPACTHUB MEDIA.

In Vihiga County, more mothers are now giving birth in hospitals, thanks to Ottichilocare, a maternal health programme that encourages women to attend all antenatal and post natal hospital visits as well as have skilled deliveries.

The Ottichilocare programme is now operational in 21 health facilities in Vihiga County and has so far registered over 2,000 women. In order to improve service delivery under this initiative, the county has trained 180 healthcare providers on emergency obstetric and neonatal care. According to Musieka, the county has seen about 800 mothers attend their 4th antenatal visit while 150 mothers have given birth under this programme. For first antenatal visit, the county has paid about 900 mothers, 780 mothers for fourth visit and is now preparing another first visit payment and again another payment for those who have had skilled deliveries.

Bernice Isangari, 31, is one such beneficiary. The mother of four delivered the first two children at home. "But for the third one,



Vihiga Governor Dr Wilber Ottichilo. PHOTO: IMPACTHUB MEDIA.

the pain was too much. As a result of fear, I opted to give birth at a health facility," says Isangari.

Isangari who is expecting her fifth child now joined the Ottichilocare programme late last year. "I now understand the dangers of giving birth at home. I will give birth in the hospital." Through the programme, she receives Sh1,000 (USD10) whenever she attends ante natal clinics. "I have so far received Sh1,000 (USD10) for each ante natal clinic visit. This money has helped me pay for transport to the clinic as well as buy fruits."

Vihiga County governor Dr Wilber Ottichilo is optimistic that the maternal and child health programme will ensure a healthier and more informed population. "Through the Ottichilocare, I believe we will have mothers who are more informed about their health. The programmes has also a component on family planning. Mothers have to understand the essence of family planning and the need for them to recover fully after child birth. One of the goals of Ottichilocare programme is to encourage people to have small families that they are able to manage," said the governor.

The author is the founder and editor. Impacthub Media. The article was originally published in Impacthub Media. www.impacthubmedia.com

Journalists urged to dispel myths on vaccine trials in Africa

By Mike Mwaniki | mikemwaniki2016@gmail.com

A leading HIV investigator in Kenya has urged journalists to be at the forefront in dispelling the existing myths and misconceptions on vaccine trials among people living in African countries.

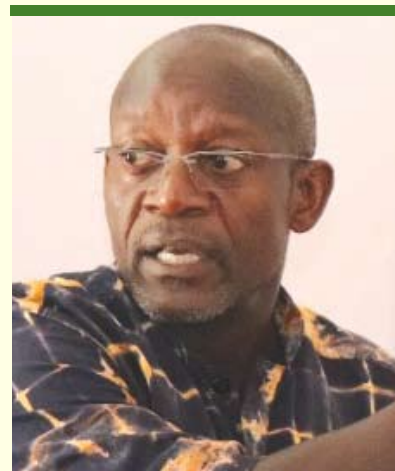
Prof Omu Anzala described as a “fallacy” allegations by some unscrupulous people — especially on social media — who are peddling claims that Africans are being targeted as “guinea pigs” by the West during such trials.

The virologist-cum-immunologist was speaking during a webinar held in May titled “Understanding the Role of Africa in COVID-19 Vaccine Research.”

The virtual meeting, which was co-organised by IAVI; Media for Environment, Science, Health and Agriculture (MESHA) and Internews attracted African-based journalists and scientists and was moderated by MESHA’s secretary Aghan Daniel.

“As a professional, I feel sad when people make such wild, unsubstantiated claims and allegations when diseases such as cervical cancer, malaria and Ebola continue killing a majority of our people in the continent,” Prof Anzala observed.

“I have been conducting HIV clinical trials for over 20 years and I reassure you that vaccines are highly regulated and cannot therefore cause major adverse effects (to recipients). As Africans, we should steer away from such negativity,” he noted.



Prof Omu Anzala.

Prof Anzala is one of the founders of the Kenya Aids Vaccine Initiative (KAVI)—Institute of Clinical Research (KAVI-ICR) which was established in 2001 where he serves as the current director.

He was Co-Principal Investigator (PI) of the first HIV vaccine trial in Kenya—the second in Africa—using a DNA plasmid.

According to the virologist, a recent study shows that 90 per cent of health workers in Kenya are ready to be enrolled in testing for a COVID-19 vaccine safety if such a request was made to them.

The Bill and Melinda Gates Foundation— which is the biggest funder of vaccines in the world—says that by April 9, 2020, 115 different COVID-19 vaccine candidates were in the development pipeline “with eight to 10 of those looking particularly promising.”

Prof Anzala says as the COVID-19 virus continues to mutate, African scientists also have a role to play in searching for solutions against the global pandemic which by July 6, 2020 had infected 11.6m people, killed nearly 537,000 with 6.27m others recovering.

“The current precautionary measures to avoid COVID-19 infection through washing hands, social distancing and wearing masks in public places is just a stop-gap measure,” he warned. “The only viable solution for the control of the virus is a vaccine as we are all susceptible to COVID-19,” added the Professor.

Vaccines offer protection from disease or infection by eliciting a long-lasting immune response.

Fielding questions from journalists, Prof Anzala urged African countries to combat Coronavirus by establishing mechanisms and actions that will respond to the outbreak; establishing teams that will monitor the outbreak and fund research to understand COVID-19/SARS-COV2 evolution (by using locally gathered data to inform response to the outbreak).

Prof Anzala observed: “We are all learning as we go along. There are no experts (on the pandemic) as its only five months old”. At the same time, the virologist announced that Kenya will be among the 70 countries which will participate in the World Health Organisation’s (WHO) Solidarity clinical trial for COVID-19 treatments.

Solidarity Trial is an international clinical trial to help find an effective treatment for COVID-19, launched by WHO and partners. It will compare for treatment options against standard of care, to assess their relative effectiveness against COVID-19.

Quarantining also means caring for our great ape relatives

Gorillas and other great apes are particularly susceptible to pathogens from humans, and the coronavirus responsible for COVID-19 poses a very serious risk to their survival. Protecting our closest wild relatives and closing wildlife markets for human consumption are both critical steps towards ensuring healthy futures for all, writes Elizabeth L. Bennett, Vice President for Species Conservation, Wildlife Conservation Society.



Orangutan mother and infant.

By Elizabeth L. Bennett

I first visited mountain gorillas in the wild in 1986, in what was then eastern Zaire (now Democratic Republic of Congo). Even then, on arrival, we were asked by local gorilla experts if anyone had a cold or felt sick, and if so, please don’t visit the gorillas since the infection could potentially be passed to them. If they had no resistance, that could wipe out the entire critically endangered subspecies.

We have known for a long time that gorillas and other great apes are susceptible to pathogens from humans.

We have known for a long time that gorillas and other great apes are susceptible to pathogens from humans.

Fast forward 20 years and those of us going into the forest to visit wild lowland gorillas in the Republic of Congo had to wear face masks and stay at least 25 feet away from them, again to ensure that we didn’t transmit any illness. So we have known for a long time that gorillas and other great apes are susceptible to pathogens from humans.



A ranger wears a face mask to help keep the gorillas healthy.

The current pandemic has made us acutely aware that so-called zoonotic diseases can pass between wild species and humans. This is especially true when we bring wild animals into markets in areas of high human density, as was probably the case with COVID-19. The exact route of transmission has not yet been confirmed, but one likely route was from bats to pangolins to humans. These species are not closely related to each other or to us, yet it is at least theoretically possible that the virus could transfer between them.

So what about when we humans go into places where significant populations of our closest wild relatives, great apes, occur? It would be extremely surprising if a coronavirus was not transmissible between ourselves and any of the seven species of great apes.

Of those seven species, two are Endangered and five Critically Endangered. Habitat loss and hunting have been the primary cause of their declines, and infusion of a potentially lethal disease could be the final straw for these amazing species. Forests where gorillas, chimpanzees, bonobos or orangutans live are visited by humans for a variety of reasons – including local communities hunting and gathering forest products for their own subsistence.

That does not necessarily bring humans into close proximity to the apes, and restricting them from entering forests outside protected areas would be both ethically and practically challenging.

Enforcement patrols to protect the great apes and other threatened species in the protected areas against encroachment and poaching also bring people into the forest, and are essential to their survival.



Silverback Mountain Gorilla.

While the risks of disease transmission are clearly there, these patrols do not generally come into close proximity to the apes.

African apes are capable of extraordinary behaviours, but these do not include social distancing.

But there are two circumstances in which people deliberately do approach much closer to apes: (1) to conduct research into the lives of these animals and how best to conserve them; and (2) via ecotourism, whereby tourists are led by guides to forest locations where they are likely to encounter great apes. This brings invaluable revenue and jobs to often very rural poor communities, as well as raising awareness and support for the species' conservation.

Silverback Mountain Gorilla

As a result of the coronavirus responsible for COVID-19, these activities now pose very serious risks to the survival of great apes. Gorillas are probably the most at risk; unlike the other great apes, they spend by far the majority of their time on the ground where we humans walk, making them the focus of the most developed tourist operations.



Chimp in the Republic of Congo.

But all of the great ape species do come to the ground on occasion, and all are visited by tourists, so they are all potentially at risk. Apart from the more solitary orangutans, all species of great apes are highly sociable, living in close-knit social groups with physical interactions between them such as grooming and play occurring throughout large parts of every day. Transmission of any disease would thus be rapid. African apes are capable of extraordinary behaviours, but these do not include social distancing.

Chimp in the Republic of Congo

On 15 March 2020, the world's leading relevant experts, the IUCN Species Survival Commission's Specialist Groups on Primates (Section on Great Apes) and on Wildlife Health, issued a statement highlighting the risk that the SARS-CoV-2 coronavirus – the virus that causes COVID-19 in humans – poses to great apes.

They call for any visits to great apes by humans to be reduced to the minimum needed to ensure the apes' safety and health monitoring. Even those essential staff should stay at least 30 feet away from the animals, and nobody who is ill, or has been in contact with anyone ill in the past 14 days, should be allowed to visit the areas.

Out of concern for the animals, western lowland gorilla sites were very quick to close tourism. The first was the Nouablé-Ndoki National Park in Congo, with Gabon, other Congo sites, and Central African Republic following rapidly behind. The larger great ape tourism operators in East Africa have subsequently also closed their operations.

The risk of disease transmission between ourselves and other species, in both directions, is ever increasing. COVID-19 is the latest and most devastating example of this.

Human activities have brought wild species into closer proximity to us through legal and illegal wildlife trade in towns and cities. At the same time, we have come into closer proximity to wild species through moving into the last great wild areas of the world. As a result, the risk of disease transmission between ourselves and other species, in both directions, is also ever increasing. COVID-19 is the latest, and most devastating, example of this.

We all need to change our entire outlook and behaviour moving forward. Closing wildlife markets for human consumption and protecting our closest wild relatives are critical steps towards ensuring healthy futures for all.

Dr. Elizabeth Bennett is Vice President for Species Conservation at WCS (Wildlife Conservation Society).

Tourism and conservation suffer as pandemic wreaks havoc

Photo Credit: Martin Mwangi



Tourists: Kenya Wildlife Service says that the sector has recorded a big drop in revenues since March when the first case of COVID-19 was reported in the country.

By Ruth Keah | rkeahkadide@gmail.com

For 21 years, Bamburi Nature Trail Hill, commonly known as Haller Park, has never closed its doors to visitors.

The sanctuary for lost and orphaned wildlife has been a haven for anyone who wanted to spend their day relaxing in a peaceful environment and getting acquainted with friendly animals.

But when I visited recently, seeking an interview, Karima Nyinge, who heads the department for visitors, shocked me with the news. "We have closed the park for now due to the COVID-19 disease," he said.

Haller Park was named so in honour of Dr. Rene Haller in recognition of his efforts, in conjunction with Bamburi Portland Cement Company, in transforming the abandoned quarry to a breathtaking ecological paradise.

The park is located south of the cement plant along the Mombasa-Malindi highway. It covers 75 hectares of land and houses a variety of animals, including hippos, buffalos, giraffes, water bucks and oryx.

The night walks in the park, conference services, among other activities, are now a thing of the past, thanks to the COVID-19 pandemic.

Mr Nyinge says the government regulations to prevent the spread of the coronavirus have made it difficult for the park to operate since they host large groups per day. "We have closed because some of the rules are hard to observe, especially because visitors like to converge around hippos and giraffes and feed them, which will see us break the rule on social distancing," he says.

Another hurdle is contact tracing in case one of the visitors tests positive for the disease.

Mr Nyinge says it would be difficult for them to trace all the contacts that might have come into contact with the person.

He says the park receives up to 160,000 tourists a year, but this year they are likely to fall way below the number.

But luckily, some of the workers were retained to continue feeding the animals and maintain their daily routine.

"The animals have been trained. For example, a hippo would come out when they are called. It's a routine for them and we don't want them to forget it," says Nyinge.

The situation is not different for Tsavo Heritage Foundation in Voi, Taita Taveta County, which champions the landscape restoration of the Tsavo Ecosystem and Dispersal Areas.

Jacob Kipongoso, the Foundation CEO and environment activist, says since the first case of COVID-19 was announced in Kenya they put on hold all their plans on conserving the environment.

According to Kipongoso, most of their work involves people, hence it is difficult to keeping the social distancing rule.

"For now all the plans we had to plant trees here at Voi were put on hold. We have nothing to do since all the work we were supposed to do involves people," he says.

"We were supposed to have a big meeting with environment activists in May and an international conference in December, but both were postponed."

Kipongoso says poachers have taken advantage of the situation to increase their poaching activities because they know there is not enough security at the sanctuary.

He urges the government to provide the activists with personal protective equipment so that they continue planting trees and attain the 10 per cent forest cover the State is advocating for.



Director General of Kenya Wildlife Service, Brigadier (Rtd) John Waweru.

Kenya Wildlife Service (KWS) Director General Brig (Rtd) John Waweru says the tourism sector has recorded a 92 per cent drop in revenues since March when the first case of COVID-19 was detected in the country.

The KWS boss was addressing a webinar organized by Internews in conjunction with East African Community and World Conservation Union (IUCN) last week.

Waweru says other threats include a drop in visitors' numbers by 76 per cent, increase in poaching of endangered species, increased transnational crime through porous borders, escalation in bush meat poaching and associated crime and increased human-wildlife conflicts due to influx of people in the rural areas.

He says they are now planning to use technology to improve security at the parks.

"We are planning to use drones for surveillance at the parks to stop poaching activities. We are also planning to train our rangers to be multi-skilled and offer different services at the park," says Waweru.

While addressing the same webinar, Christophe Bazivamo, the Deputy Secretary General for Productive and Social Sectors in the East African Community (EAC), said the region relies heavily on the abundance and diversity of wildlife to boost its economic growth, earn foreign exchange and creates jobs.

He suggests a number of interventions in the wake of the pandemic, including EAC member states providing stimulus packages for tourism small and medium enterprises (SMEs), community-based conservation initiatives, and promotion of regional and domestic tourism.

Other measures include diversifying conservation revenue streams, strengthening one health platform and developing protected areas management plans.

Protected areas need more and diversified funding, says study

Photos Credit: Courtesy



Andasibe Mantadia National Park, Madagascar- Gregoire Dubois.



Volcanoes National Park, Rwanda-Bastian Bertzky .

By Clifford Akumu | akumu.clifford@gmail.com



Kathleen H. Fitzgerald, Partner, Conservation Capital.

The study by International Union for Conservation of Nature and authored by Conservation Capital shows that most protected and conserved areas in Eastern and Southern Africa face a significant funding gap, with available funds only satisfying 10-20 percent of management needs.

It suggests a clear need to diversify and increase self-generated revenues and develop innovative financing mechanisms, even as the COVID-19 pandemic continues to worsen the underlying financing and resourcing challenges facing protected areas.

"The 2020 COVID-19 crisis is only exacerbating the gap in funding for protected areas and provides a harsh reminder of the need for revenue diversification," says Kathleen Fitzgerald of Conservation Capital, one of the lead authors of the study. The study titled, Closing the gap:

Financing and resourcing of protected and conserved areas in Eastern and Southern Africa" covered 24 countries in the two regions.

The vagaries of COVID-19 pandemic has resulted in the shutdown of the tourism industry, grinding to a halt conservation revenue for the protected areas.

Consequently, it has exposed the risks inherent in the current funding model for protected areas across the region. "This study highlights a number of creative mechanisms that are already in place in Africa that can be replicated and scaled up," says the report.

The study comes against the backdrop of the World Environment Day 2020 marked on June 5 under the theme, 'Time for Nature,' with a focus on its role in providing the essential infrastructure that supports life on earth and human development.

Protected and conserved areas need better and more diversified funding to create greater resilience in times of crisis and beyond, a new study suggests.



Eastern Arc Mountains, Kenya-Tanzania-Peter Howard.



Kenya Lake System in the Great Rift Valley, Kenya-Peter Howard.

The study says developing diversified and sustainable revenue streams is critical for the long-term maintenance of the protected areas and for protection of essential ecosystem services.

Traditional sources of funding for conservation of protected areas in Eastern and Southern Africa include government and donor support, as well as self-generated revenue, such as fees collected from nature-based tourism or sustainable utilisation of wildlife through hunting and wildlife ranching. These sources alone are inadequate to bridge the funding gap, says the study.

According to studies, only \$49 billion is currently spent on biodiversity protection worldwide, with only six percent in Africa.

Even if government and donor funding is doubled, this financing gap will not be filled without involving the private sector and moving beyond dependence on traditional funding sources.

This is especially true in developing regions, where conservation funding competes with other development objectives such as infrastructure, education and public health.

In the context of the COVID-19 crisis, the crucial functions that protected areas play in supporting human livelihoods and well-being by maintaining vital services for people are often overlooked.

The study is a reminder that protected area management needs sustained financial support to ensure the maintenance of these essential functions.

The proposed expansion of protected area coverage, as is envisaged in the post-2020 Global Biodiversity Framework, will also require more funding. This will place additional pressure on the already stretched budgets of those that traditionally fund conservation work such as governments, donor agencies and civil society organisations.

One of the key recommendations of the study is to understand and replicate the successful financing models that already exist in Africa.

Maximising revenues also increases tax returns to governments and can provide meaningful opportunities to poor and marginalised communities living in or adjacent to protected areas, creating socio-economic prospects, employment and skill sets that can be used in other sectors.

"This study is a useful resource for those working to address challenges in the financing of protected and conserved areas in Eastern and Southern Africa.

It provides concrete solutions for creating greater resilience for protected and conserved areas in times of crisis and beyond," concluded Leo Niskanen, Regional Technical Coordinator of IUCN's Conservation Areas and Species Programme in Eastern and Southern Africa.

Bush meat hunting on the rise as COVID-19 stifles tourism

Photos Credit: Mara Triangle Conservancy



Bush meat hunters arrested by wildlife rangers in the Mara Triangle conservancy in the Maasai Mara National Park, Kenya.

By Leopold Obi | leopoldk40@yahoo.com

Wildlife poaching is suddenly on the rise across Kenyan forests and conservation areas, some of which are home to the rarest wildlife species.

Yet, unlike in the past when mainly elephants and a handful other majestic mammals were primary targets, poachers now seem to have their eyes trained on bush meat for quick money and food.

And it is suspected that the government's recent decision to release over 4,800 inmates from local prisons is playing a part in fueling the resurgence. The prisoners who were serving for petty offences and less than six months jail terms were released in April to decongest prisons and avert possible COVID-19 outbreak in the correctional institutions.

"Most bush meat poaching offences in this country are categorised as petty offences and therefore it's not surprising that following the release of petty offenders

during the COVID-19 crisis, bush meat hunting is suddenly soaring," a wildlife conservation officer said.

Because hunters employ myriads of dirty tricks to kill and preserve their kill, beef consumers in the city are being advised to stay vigilant as the bush meat is finding its way into butcheries.

Many national parks and conservation areas are currently recording low tourism activities, as the pandemic has for the last three months heavily disrupted travels and social interaction. The decline in tourism activities has dipped revenues for these conservancies, forcing them to scale down daily park patrols.

In the Masai Mara's Mara Triangle, rangers estimate that 30 to 40 hippos have been killed by armed poachers in the past two months alone.

Mara Triangle Park Administrator David Aruasa says they recently nabbed five poachers of Tanzanian nationality ferrying dried hippo meat towards the border.

"On May 27 our anti-poaching unit found fresh poachers tracks along the Kenya-Tanzania border. Our Canine Unit immediately trailed the tracks for 5km and busted the criminals in their hiding area," Mr Aruasa said.

The poachers, he says, were caught carrying at least 50 kilos of dried meat worth Sh50,000 (USD500).

"Basically, the bush meat hunters are mainly doing it for commercial purposes. These poachers invade the parks and pitch makeshift camps where they chop and dry the meat after a hunting spree," he said to Mr Aruasa.

The senior ranger said the ongoing rainfall is resulting in vegetation outgrowth in the parks, which poachers turn into effective hideouts.

Similarly, as rivers become flooded by the heavy rains, hippos are moving to shallower swamps and pools, making them a target.

Animals such as hippos, giraffes, antelopes, zebra and wildebeests are top poachers' targets.

"We are currently using two anti-poaching patrol vehicles instead of four due to inadequate funds," says Aruasa, adding that they hand over arrested criminals to the Kenya Wildlife Service (KWS) for prosecution.

The situation is not any different in the Tsavo-Mkomazi ecosystem where, according to Maurice Nyaligu, the Tsavo-Mkomazi Landscape Manager at African Wildlife Foundation (AWF), there has been a resurgence of both trophy poaching and bush meat hunting within certain hotspots of the huge landscape, following the COVID-19 pandemic.

Mr Nyaligu warns that the spike in bush meat trade could stir a public health risk since poachers not only kill their prey using hazardous chemicals but some wild animals are also natural hosts for a number of zoonotic diseases that are deadly to humans.

"Animals such as buffaloes are natural hosts for anthrax. When people consume wild game from a buffalo carcass without knowing what it died of, then there is a real danger of infection to humans," the expert warned.

He said some poachers simply collect the carcasses in the wildlife before selling to unsuspecting consumers as beef.

He urged members of the public to learn the difference between bush meat and regular beef, pointing out that as a general rule, bush meat from savannah antelopes tends to be more lean and reddish.

According to the Director General of Kenya Wildlife Service, Brigadier (Rtd) John Waweru, the sector had suffered from drop in income to the tune of 92%. This, he attributed to increased threats of transnational crime through porous borders e) Escalation in Bush meat poaching and associated crime. While addressing a webinar organized by Internews and partners last week, he noted that between January and May 2020, Kenya had nabbed 2.8 tonnes of bush meat compared to 1.8 tonnes nabbed between January and May 2019. He said that they had arrested and taken suspects to court. He singled out Burma Market in Nairobi as being notorious for sale of bush meat.

Dubbed *The Impact of COVID-19 on Wildlife Conservation in the East African Community*, the webinar was also addressed by representatives of the East Africa Community, World Conservation Union, USAID and Uganda Wildlife Authority among others.

Meanwhile, wildlife conservationists in North Rift have also raised the alarm over the rising cases of game poaching in most government forests in the region.

The most affected is South Nandi Forest in Nandi County where locals hunt gazelles, antelopes, forest warthogs and black-and-white colobus monkeys for meat.

A recent monitoring exercise in the forest by Birdlife International in collaboration with Nature Kenya revealed a big threat to wildlife.



A man is setting on fire impounded bush meat recently.

The forest is rich with biodiversity and is also home to Turner's Eremomela (Eremomela turneri), a rare and critically endangered bird. For this reason, the forest is one of the most important sites in the world and was recently classified as one of the 66 Important Bird Areas (IBA) in Kenya.

Peter Kiptanui, the Projects Coordinator at South Nandi Biodiversity Conservation Group (SONABIC), attributed the rise in poaching to minimised patrols by the Kenya Forest Service (KFS) and Kenya Wildlife Service (KWS).

"Bush meat hunting has increased inside the forest and in the nearby Kibirong wetland. This has been due to minimal activity by Kenya Forest Service (KFS) and KWS wardens during this period of COVID-19 pandemic," said Mr Kiptanui. He warned that poaching could result in massive biodiversity losses if left unchecked.

Kiptanui said many locals still do not appreciate the value of forests and continue to indiscriminately destroy them. The conservationist also blamed slow implementation of policies and lack of capacity for conservation at national, county and local levels as a big challenge to conservation.

But while poaching is most likely on the rise, the Ministry of Tourism and Wildlife is reluctant to admit the claims.

Tourism Cabinet Secretary Najib Balala says "the incidences are so far not higher than what has been recorded the same time last year... however that is not to discount the possibility of an increase given the situation we face with the ongoing pandemic."

The CS said the government emergency budgetary support will provide funds to KWS and other wildlife conservancies in the interim to ensure there is no laxity in security for wildlife. He said a few donors have also pledged support to community conservancies during this period.

Organisations such as AWF and other like-minded entities within the region are already providing support to KWS and community conservancies to help suppress poaching and the spread of COVID-19 in the parks.

"KWS will remain vigilant and has not reduced patrols and surveillance around the country," Balala said, adding that in bush meat hunting cases in the Tsavo Conservation Area and Kilifi both suspects were arrested and prosecuted.

Survey: Outdated methods stifle farming in Kenya

The farmers indicated that hard economic times have forced them to use outdated irrigation methods such as watering cans, furrowing and sprinklers as opposed to the efficient drip irrigation



Farmers doing what they know best: A survey in Kenya found that hard times have forced farmers to use obsolete methods.

By **Aghan Daniel** | daghan@afsta.org and **Absalom Mulama** | mulama.berny@gmail.com

Outdated irrigation methods, limited access to accurate sources of information and product marketing continue to hamper farming in Kenya, a new survey has revealed.

Besides, says the study, farmers are concerned that farm labour and reducing farm space combine to lead to a lower production quality than expected.

According to the Executive Secretary of the Seed Trade Association of Kenya, Mr Duncan Onduu, the report presents the findings from a recent study, Survey Report of the 2019 STAK Congress, Expo and Mazao Forum, Farmers Session, No.2/2020. A total of 148 farmers participated in the survey from all over the country. Farmers from Embu, Machakos, Kiambu, Muranga and Taita Taveta counties participated in the study.

"This report is intended to guide seed companies and other seed stakeholders in strategizing their reach to farmers while addressing important concerns of farmers in Kenya," he said.

The farmers indicated that hard economic times have forced them to use outdated irrigation methods such as watering cans, furrowing and sprinklers as opposed to the efficient drip irrigation. With drip irrigation farmers can save water and reduce the need to physically walk around the farm with a watering can. This type of irrigation also solves two potential concerns for the senior farmers; it reduces the physical effort and saves water.

Given that smallholder farmers interviewed preferred interpersonal interaction from the seed suppliers

especially the stockists, they risked getting inaccurate and misleading information as they relied on a single source. This basically means that farmers still ignore other sources of information such as the internet and relevant mobile apps which understandably, the small holder farmers may have no access to.

On the reducing land space used for farming in the rural area, the farmers lay blame on the rising rate of rural to urban migration by the energetic youth, combined with the poor farm produce yields. This has forced land owners are increasingly deciding to convert their lands for other uses which might attract more profits. Land owners might decide to put up houses, for example, assuming that when built in a stacking order, houses may take up less space and produce more reliable income.

This is a confirmation that agricultural land in Kenya is shrinking as many landowners convert it for other non-agricultural use.

"In order for Kenya to achieve food security and nutrition goals, there is need to have conversations around this crucial matter. Subsequently, introduction of better innovations and technologies that use less land but provide for higher productivity per unit area should be top of mind among our creative innovators, researchers and development partners," says a section of the report.

Finding a stable market, according to the farmers is the solution to factors stifling marketing of their produce, preferably away from these five counties would motivate the farmers to put more effort into the farming practice. If the farmers can find alternative methods to market their product rather than using brokers only, then they could reach new markets.

In that case, agribusiness firms, seed companies and other farming stakeholders could be more actively involved in the end product marketing and distribution. By facilitating demand, these stakeholders would create a more busy market and make the farmers buy more seed, thus killing two birds with one stone. The more the concerns surrounding farming in these counties, the more unmotivated farmers become and convert their lands to other uses.

Once the market is established it will be easier to convince the farmers to invest their efforts in the rest of the concerns such as investing in better irrigation techniques, meet the cost of labour and tools to access information.



A seed merchant captured in a farm. Introduction of better innovations and technologies that use less land but provide for higher productivity per unit area should be prioritised.



A seed technician at work. Seed companies should support production and supply of food crops.

This may be the untapped opportunity for seed companies and agribusiness entrepreneurs, as they will also be contributing to the food security goal by supporting production and supply of food crops.

Older farmers interviewed (over 55 years) claim that the challenge with farm labour such as digging, irrigation, weeding and harvesting takes a toll on their bodies due to age related ailments. Yet the young people charge highly for their services, rates they cannot afford and still break even.

They said that a young labourer would require Ksh 300 (USD3) per day a cost they cannot afford sustainably.

The senior farmers are then forced to reduce their farmland to a manageable portion and put the rest of the land to a different use. In any case, the younger residents seem to be uninterested in farming, preferring to move to the urban areas, says the report released on May 13, 2020.

The survey ends by saying that, among other things, messaging of agricultural information ought to be very crisp and not verbose. It notes that use of radio is still preferred among farmers and the seed trade association vows to continue using radio to disseminate information on innovations, seed industry innovations and agricultural marketing.

Glimmer of hope as scientists race towards controlling lethal potato nematodes

By Christine Ochogo | christawine@gmail.com

Every season, Margaret Kenzi, a potato farmer in Kenya's Rift Valley, tirelessly works in her potato farm with hopes of a bumper harvest.

To her dismay, her efforts of three years have hardly yielded as she does not use certified potato seeds.

She attributes this sorry state to the high cost of certified seeds, which has driven her to using regenerated seeds every planting season that are prone to attacks by pests and diseases.

"I depend on recycled seeds because certified seeds cost Sh3,000 (US\$30) per bag of 50kg which I cannot afford due to the hard economy. And after harvesting we are forced to sell our produce at a throwaway price to middlemen and brokers who invade our farms with ready cash. A 50kg bag of potatoes goes for between Sh1,500 (US\$15) and Sh2,000 (US\$20) while a 2kg package sells at Sh100 (US\$1)," decries Kenzi.

Researchers put it that only maize is grown in more countries than potato, with Africa producing about seven percent of global potato output, mainly in Egypt and South Africa.

The crop is popular and valuable for both food security and income generation, competing well with maize in the subtropical climates at higher altitudes. Under these conditions, year-round production can be possible, often with at least two seasons per annum. In recent years, however, yields have shown notable declining trends,



Potato farmers: A nematode that threatens to wipe away the entire crop is causing sleepless nights to researchers.

mainly attributed to major disease outbreaks, inappropriate cropping practices by farmers, substandard seed quality and lack of organised market infrastructure for produce.

Emerging markets for processed potatoes (such as chips, crisps, starch) have increasingly focused attention on the crop, with rising demand from the fast food industry and processing for added economic value.

Processed potatoes, however, also demand high levels of quality, which can be difficult to sustain in the face of high pest and disease pressures.

In Kenya, according to *Farming Success with Potatoes in Kenya*, a publication by the International Centre of Potato (CIP), potato is the second most important staple food crop after maize and is valued at nearly \$500 million (Sh50 billion) annually.

About 800,000 Kenyans directly benefit from potato production, while across the whole value chain about 2.5 million people receive income from potato.

However, in Kenya, yields have declined and currently average 9-10 tonnes per hectare, much below the potential of 20-40 t/ha, and this is reflected across the region.

As if Mother Nature is adding insult to injury, farmers like Ms Kenzi's woes are not helped by the emergence of new pests and diseases, such as the recently detected potato cyst nematodes (PCNs), *Globodera rostochiensis* and *G. pallida*, a key threat to potato production in eastern Africa, according to an article published recently in the *Frontiers in Plant Science* journal by International Centre of Insect Physiology and Ecology (icipe); International Institute of Tropical Agriculture (IITA); North Carolina State University, USA; and Kenyatta University, Kenya.

Photo Credit: Francis Mureithi

The occurrence of PCN presents a key threat to potato production in Kenya, as well as to the entire East Africa region where potato features prominently as a food security or income generation crop for millions of smallholder farmers.

The good news, states the study in its conclusion, is that it may be possible to manage the nematodes by inducing 'suicidal hatching' of the pests using naturally occurring chemicals in crop roots.

Nematodes are tiny microscopic worms, with some soil dwelling species infecting and adversely affecting most, if not all, cultivated crops. Potato cyst nematodes (PCNs) are invasive nematode pests that were first reported in Kenya in 2015, and have since been confirmed from other countries in eastern Africa. Studies by icipe and partners have shown that these nematodes cause up to 80 per cent yield loss in potatoes.

"The management of the nematodes under study is particularly challenging due to the pest's ability to survive in the soil as tiny protective cysts. These cysts can contain up to 600 eggs, but are able to remain dormant in the absence of a host plant for up to 20 years. Once they infest a field, it is impossible to eradicate. Therefore, a possible effective approach is to avoid the build-up and spread of the pest," says Prof Baldwyn Torto, Head of Behavioural and Chemical Ecology Unit at icipe.

In over 100 countries, this has been achieved by strict quarantine regulations because they are globally considered as the most important pests threatening potato production but are all too often overlooked in less developed countries.

The recent studies by icipe and partners aimed to manage their spread by exploring several known facts about potato cyst nematodes. First, is the fact that potato cyst nematodes eggs hatch only in the presence of suitable host plants such as potato, tomato and African nightshade, which scientists refer to as the Solanaceae family.

Photo Credit: icipe



A scientist, Juliet Ochola, loads samples in a laboratory as part of the study at icipe.

Once hatched, the infective juvenile nematodes that emerge from the cyst seek host crop roots to invade and feed upon. The developing female nematodes swell and eventually become a new cyst full of eggs. These eggs hatch only once triggered by chemical signals produced by roots of the host plant.

The aim of the research was to identify these signals, and whether they can be exploited to induce hatch of the potato cyst nematodes juveniles in the absence of host crops and thus lead to their eventual death; or rather the 'suicidal hatch' of the nematodes.

"We noted that most juvenile PCN that hatched in response to some chemical signals, known as steroidal glycoalkaloids (SGAs) and steroidal alkaloids (SAs), remained encysted. In other words, they did not leave the cyst to invade crop roots but remained encapsulated in the cyst," noted a Kenyan scientist, Juliet Ochola, who was involved in the research as part of her MSc studies, based at icipe and registered at Kenyatta University.

Prof Danny Coyne, soil health scientist at IITA, explains that the SGAs and SAs could be used in synthetic forms to stimulate suicidal hatch of PCN in infested fields before farmers plant potatoes.

Alternatively, plants that produce the chemicals but are not usually infected by PCN could be incorporated in a crop rotation system to stimulate PCN hatch, thereby reducing populations of the pest.

"Blends of the compounds obtained from crude material of such plants may be used to treat potato fields as organic soil amendments. This approach would be environmentally attractive and better than using nematicides, which can be hazardous, and due to their dependence on single compounds, are prone to pest resistance," says Prof Coyne.

The study presents the results of a countrywide survey undertaken to determine the distribution of PCN and the potential damage it is causing in the major potato growing regions of Kenya.

Additionally, the study team examined farmers' potato production practices and how these will need to be taken into consideration for the implementation of future pest management strategies.

It is hoped that the information provided in the study will serve as a wakeup call that should further help policy makers and regional stakeholders to make informed decisions related to PCN containment and mitigation.



Photo of potato cyst nematode, Globodera rostochiensis as seen under a dissecting microscope

Farmers urged to sell products online



Victor Bwire, Deputy CEO, MCK urged journalists to ensure agriculture remained in the conversation even as the pandemic disrupts farming activities.

By Christine Ochogo
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Farmers need to adopt e-marketing as a tool to address food insecurity, an expert has said.

Dr Cromwel Busolo, a lecturer at the University of Nairobi's Department of Meteorology, said e-marketing was a sure path of helping the country to ensure sustainable transformation in agriculture and enable effective delivery of a food system.

"ICT is key and therefore it is necessary for farmers to adapt and understand the dynamics and potentials that e-marketing provides to be able to cope with challenges such as climate change and health challenges such a COVID-19," said Dr Busolo.

He was addressing a webinar for journalists organised by the Media Council of Kenya (MCK) on how to report agriculture during the pandemic.

The webinar sought to train journalists on the role of the media in agriculture, food systems and environment amidst COVID-19.

Dr Busolo said transformational agriculture will help in achieving the United Nations Sustainable Development Goals adopted in 2015 that aim at ending hunger, and improving food security and nutrition by 2030.

Deputy CEO and Programmes Manager at MCK, Victor Bwire, and Christine Nguku, Manager for Training and Development, reminded the trainees of the important role they play in contributing to transformational agriculture.

The duo said journalists should focus on telling stories of hope and offer solutions to various challenges faced by society. Such an approach, they said, could also influence policies.

Mr Bwire advised that this can be achieved by doing in-depth research on the stories they carry in their media outlets by engaging experts and referring to reliable sources.

Nguku echoed Bwire's sentiments, adding that journalists need to engage research institutions such as Kenya Agricultural and Livestock Research Organisation (KALRO) to get factual information on agricultural developments for the benefit of their audiences.

Photos Credit: Aghan Daniel



Vegetable farming: Journalists have been urged to keep their focus on promoting solution-based stories.

Varsity students develop app for social challenges

By Lisbeth Kageni | kageni@uonbi.ac.ke

University of Nairobi students have developed a mobile phone app through which they can access relevant information to address their challenges.

The app dubbed RADA was developed by 12 students with the help of the university's Centre for HIV Prevention and Research (CHIVPR), UNESCO and Sexual and Reproductive Health Alliance (SRHRA).

The app guarantees privacy, confidentiality and anonymity for the users and tackles issues such as mental health, sexual and gender-based violence (SGBV), unplanned pregnancies, unsafe abortion, substance and alcohol abuse, and sexually transmitted infections (STIs), including HIV and Aids.

The students noted that these issues have led to school dropouts and needed to be addressed urgently.

After designing and developing the app prototype, the students, who had little or no knowledge in IT, were trained to code by UNESCO.

Content was developed with the assistance of CHIVPR, UNESCO and SRHRA, and validated by relevant stakeholders, including the Ministry of Health through the Department of Reproductive Health, the National Authority for the Campaign Against Alcohol and Drug Abuse (NACADA), JHPIEGO and the National AIDS and STI Control Council (NASCO), among others.

During this process, it was apparent that the app needed to address other relevant issues beyond the health domain and therefore content on security, socio-economic matters, including job opportunities, were added.

Today, with the support of UNESCO, RADA has been disseminated to all University of Nairobi campuses and to four other universities, namely Kenyatta, South Eastern, Masinde Muliro and Pwani.

Currently counseling services are available to University students but this will change soon to accommodate all young people age appropriate.

Photo Credit: University of Nairobi, RADA Project



Students demonstrate how the Rada app works to the Deputy Vice Chancellor Academic Affairs, Prof Julius Ogeng'o.

The final android phone app was launched on June 13, 2019 during the Nairobi Innovation Week.

The app is available to everyone who is able to download it from playstore at no fee.

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