



# KEFRI *Newsletter*

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**KEFRI dispatch quality tree seeds**

## KEFRI hold 5th Scientific Conference



The acting Chairman of KEFRI Board Mr. Robinson Ng'ethe and Environment CS Keriako Tobiko consulting during the Conference opening session

The 5th KEFRI Scientific Conference under the theme “Forestry contribution to sustainable development” has resolved to diversify sources of funding, create synergies by engaging multi-disciplinary and multi-institutional approach to enhance forestry research and development.

The 3-day forum, attended by professionals from the Forest Sector within East Africa region, national authorities, institutions of higher learning,

and representatives of multilateral organizations, exchanged scientific knowledge relevant to forestry and allied natural resources.

The Cabinet Secretary for Environment and Forestry, Keriako Tobiko, accompanied by the Chief Administrative Secretary Mr. Mohammed Elmi, opened the conference which was supported by his Ministry and the National Research Fund (NRF).

“Citizens are depending on scientists to provide technologies and information for achieving at least 10 percent forest cover of total land area by year 2022 and other targets of Kenya Vision 2030. Currently the government is implementing the big 4 agenda namely; food security, universal health care, manufacturing and affordable housing,” said Tobiko.

He termed the retirement of scientists in public service between 55 to 60 years of age as ‘premature and brain drain’.

“Once these distinguished scientists retire from our organizations, other countries quickly engage them because they are still energetic, vigorous and with vast knowledge,” said Tobiko

The CS called upon formation of panel to unify distinguished scientist both at local and international levels for consultancy. The taskforce to be formed at the ministry together with stakeholders should also review the retirement age of scientists, establish personnel succession plan and management strategies that will minimize the huge gap that is likely to arise due to retirement of such staff.

### COVER PHOTO:

**CAS Mohammed Elmi flags off KEFRI vehicles dispatching quality tree seeds to clients countrywide**

**Contributors:** Ali Dzitu, Gitonga Stephen, John Otwoma, Risper Mokaya, Samson Mogire, Peter Musa, Margaret Njenga, Reuben Shanda, Albert Luvanda, E. Mutitu, Joram Kagombe, C. Mwangi, P. Gachie, D. Munyao and L. Mutonya

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Dr. Odera recommended KEFRI to adopt multidisciplinary or interdisciplinary research approach and jointly work together with other partners to enhance forestry's performance in national development.

“Researchers should conduct tracer studies on technology adoption to oversight performance that impacts on livelihood, forest development, and environmental services,” said Odera.

Further Dr. Odera urged scientists to follow well designed protocols, modern tools and equipments in conducting studies and analyzing data on technology adoption and performance, revisit the production and dissemination of forest technical and management orders replicate and upscale success stories in demonstration and trial sites accessible by wide users.

KEFRI Board Chairman Mr. Robinson Ng'ethe said the Conference will eventually increase awareness of research findings and opportunities in forestry development as well as strengthen linkages among all actors in forestry and related sectors.

A total of 76 papers were presented during the conference covering forest conservation and productivity improvement, biodiversity and environment management, value chains, policy and Governance, information sharing and knowledge management. Majority of presenters reiterated the critical role forests and related natural resources play in environmental conservation, improvement of livelihoods and investment, meeting climate goals and sustainable social and economic development targets.

The Forest Sector contributes between 33 to 39 percent of the country's Gross Domestic Product (GDP) and employs approximately 1M people directly in saw mills, fuel wood and non-timber forest products which form substantial inputs to rural life and small-scale enterprises. The sector support many other sectors including agriculture, fisheries, livestock, energy, wildlife, water, tourism, trade and industry.

“KEFRI and collaborators have effectively shared information and technology transfer on afforestation and reforestation which have significantly contributed to increasing the country forest cover

to 7.4 percent of the Kenya's total land mass from 2.9 percent a decade ago. This is in addition to providing valuable information that has informed policies, programmes, strategic action and decision in forestry sector development,” said Dr. Njuguna.

Dr. Pacifica Ogola, Director Climate Change Programmes Coordination stated that the Government in the Third Medium Term Plan MTP3 as per the Vision 2030 has given preference to the implementation of the national climate change framework policy so as to enhance and mainstream adaptive climate change response into relevant sectors.



CS Tobiko planting a commemorative tree prior to opening the conference where the participants also planted over 300 tree seedlings after the closing ceremony

“Following the Forests Act (2005), the Government through Transition Implementation Plans (TIPs) has devolved forest functions to the county government to operationalize forest sector reforms.

The Kenya Forest Service will regulate towards using Participatory Forest Management (PFM) approach and engaging Community Forest Association (CFAs) and other stakeholders,” said Gathaara.

At the same event, the Chief Administrative Secretary for Environment and Forestry Mr. Mohamed Elmi toured KEFRI Seed Laboratories and flagged off vehicles dispatching quality tree seeds countrywide. The seeds were distributed to KEFRI regional centres and partner institutions for raising seedlings.

## President Uhuru calls for coordinated tree-planting exercise



The acting Director KEFRI Dr. Jane Njuguna (left) expounding on KEFRI displays to President Kenyatta and his Deputy William Ruto

On 12<sup>th</sup> May 2018, KEFRI exhibited its products and services at Moi Forces Academy in Nairobi County where H.E. President Uhuru Kenyatta officially launched the National tree planting campaign. President Uhuru Kenyatta called upon KEFRI and allied institutions to revive the Chief Tree Nurseries immediately.

“The exercise is to be carried out by the Kenya Forest Service, the Ministry of Agriculture, the Kenya Forestry Research Institute, and community organizations due to their skills and experiences over the years,” he said.

The President led the function where over 26,000 indigenous tree seedlings were planted at the school’s compound.

“The tree planting campaign is in line with the Government agenda of achieving a 10% forest cover by 2022. This is set to be achieved through intensified tree planting and protection. The campaign aims at planting 1.8 billion trees in Kenya within 5 years to mitigate the negative impacts brought about by climate change effects,” said the President.

The President was accompanied by First Lady Margaret Kenyatta, the Deputy President Hon. William Ruto, Cabinet Secretary for Environment and Forestry, Mr. Keriako Tobiko and Nairobi County Governor Hon. Mike Mbuvi.

The tree planting exercise was conducted concurrently in 47 Counties spearheaded by the Ministry of Environment and Forestry, and County governments.

“The national Government has offered a framework for engagement with communities, stakeholders and private partners through the Forest Conservation and Management Act 2016, and the National Forest Programme. The national Government representatives in the counties should work closely together with the counties to develop transitional implementation plans (TIPs) for the devolved forestry functions,” said the President.

To complete the nationalization of the tree planting effort, the Ministry of Environment and Forestry and the Ministry of Education was tasked to teach every child in school to adopt and nurture a tree.

KEFRI participated in the event and displayed technologies on tree seed production, tree improvement and value addition.

### Tree planting in Nakuru County

KEFRI Rift Valley Eco-region Research Programme (RVERC) in collaboration with Kenya Forest Service (KFS) and communities adjacent to Mau forest complex, planted over 2,000 assorted indigenous tree seedlings to rehabilitate a 3 ha of land at Logoman, Nakuru County.

The Regional Director Dr. Robert Nyambati urged the community to plant trees during this rainy season to halt degradation of forests and other natural resources adding that it’s one of effective ways of building resilience to climate change.

“Rift valley region has experienced adverse effects of climate change that include siltation of lakes forcing flamingoes to migrate, flooding and changing rainfall patterns in various parts of the region among other calamities which are attributed to degradation and low forest cover,” he said.

“Deforestation of Mau ecosystem and degradation of many other forests in the region has also affected the soil fertility, water quality and quantity which has greatly narrowed biodiversity and other connected ecosystems,” he added.

The member of County Assembly for Njoro ward Mr. Jeremiah Kapiro stated that forest cover has great economic advantages to both the people and the nation. He urged community to amicably sort out boundary issues and to stop erecting structures on lands whose boundaries are unclear. He reminded CFAs to support KFS to manage and conserve forests through reporting illegal forest activities.

## DERP marks World Environment Day



County Deputy Governor Dr. Gideon Nzau addressing the gathering at Musila Gardens in Mwingi, Kitui County

Kitui County Government jointly with KEFRI and other partners, National Environment Management Authority (NEMA), Kenya Forest Service (KFS), Development Relief Agency (ADRA), United States Agency for International Development (USAID) among others marked the World Environmental Day at Mwingi in Kitui County on Tuesday 5<sup>th</sup> June 2018.

The day Themed ‘Beat Plastic Pollution’ aimed at sensitizing the community on the importance of environmental conservation, and the theme was in line with the national government ban of plastic bags in Kenya, an initiative towards attaining a clean and healthy environment.

Kitui County Government has been advocating for use of alternatives other than plastic bags for the betterment of the environment.

The County Deputy Governor Dr. Gideon Wathe Nzau stated that plastics have a lot of negative effects that pose as human health hazards and environmental destruction.

“The government’s ban on plastic bags in the country is productive as improvement in sanitation has been witnessed since the ban was imposed,” said Nzau. “The ban should not therefore be viewed as a punishment but a better way of conserving the environment,” he added.

In his speech, the CEC for Environment and Natural Resources Hon. John Makau said that over reliance on the single-use or disposable plastic bags has led

to severe environmental pollution.

“Plastics menace is one of the major environmental challenges of our time, if not mitigated will see more plastics in the world’s oceans than fish by 2050,” he added.

Plastic bags and bottles are made of Polyethylene terephthalate, commonly abbreviated PET, PETE, or the obsolete PETP or PET-P. It is the most common thermoplastic polymer resin of the polyester family and is blow-molded into disposable beverage container for liquids and foods, among many other uses.

The bottles and packaging bags are suspected to contain a chemical that has been associated with certain types of cancer, neurological problems and defects in new-born babies, among others.

The government in August 2017 issued a ban on manufacturing, distribution and use of plastic bags in the Country due to its devastating effects on the environment. By so doing Kenya joined the ranks of growing number of countries that have banned importation and manufacturing plastic carrier bags.

The solution to manage plastic menace and the future action is to embrace the five fabulous ideas: refuse, reduce, reuse, repurpose. One advantage of PET is its ability to be recycled.

Plastics have serious impacts on human health as well as maritime and land life. “Plastics contain many chemicals which are toxic and can also serve as an attraction to other pollutants including dioxins, metals and pesticides,” said Makau.

Makau commended KEFRI and Caritas for sensitizing communities to embrace alternative packaging materials, among them Khaki bags and milk packets in potting tree seedlings.

The ADRA Eastern Programme Coordinator, Lydia N. Muithya, in her speech said that the organization is running a climate change project in Kitui County will benefit the environment. “Kenya loses many livestock as a result of consuming plastic bags while grazing,” she added.

NEMA Kitui County Director Mr. Fredrick Nambisia warned the community against engaging in uncontrolled sand harvesting in riverine and streams stating its catastrophic.

## World Day to Combat Desertification (WDCD)

The World Day to Combat Desertification (WDCD) United Nations was established by the (UN) General Assembly 23 years ago to raise awareness on the global and national actions that address desertification, land degradation and drought, with a focus on sustainable land management as a way to regenerate economies, create jobs and revitalize communities.

In Kitui County, the 16th World Day to Combat Desertification themed “Land has true value, invest in it” was celebrated at Timboni CBM Secondary School in Ikutha Sub-county on 17th June, 2018.

The event was jointly organized by the County Ministry of Environment and Natural Resources, in partnership with the Anglican Development Services Eastern (ADSE), KEFRI and Caritas Kitui Office.

The Chief Guest, Kitui County Environment and Natural Resources Minister Hon. John Muneeni Makau graced the occasion. Makau was accompanied by the County Chief Officer Mr. Benjamin Kiilu Kioko, County Environment Director Mr. Benjamin Musili Mukulo, County Energy Assistant Director Ms. Rachel K. Mwangangi, County Principal Geologist Mr. Bernard Limo and Water and Livestock Development Minister, Hon. Emmanuel Kisangau.

Hon Makau urged farmers to tap into the knowledge and expertise upheld by the qualified county officers.

He also commended the bumper harvest of green grams alluding it to the good distribution of rainfall experienced in many regions within the country.

Makau reported that the wanton destruction of forests in the County necessitated Kitui County Governor H.E Charity Karuki Ngilu to slap on a ban of illegal charcoal trade on 16th January, 2018 which has since been gazetted.

“The Governor did so to protect our environment,” the Minister said.

Hon Makau also stated that his Ministry had come up with a proposal on climate change management plan which had been forwarded to the Assembly Clerk for funding.

On the other hand, he condemned sand harvesting in the region due to its immense contribution to land degradation.

KEFRI scientist Mr. Bernard Kigwa on behalf of the Regional Director, Dr. James Ndufa called upon the community to plant trees for the benefit of the environment, establish tree nurseries for production of tree seedlings and other planting materials.

“We expect a changed environment following the ban and increased tree cover,” Kigwa said.

## Commemoration of The International Day of Biodiversity



CS Charles Sunkuli (right) visiting KEFRI stand where value addition to indigenous fruits, aloe and bamboo products were displayed

The National Forest Products Research Programme (NFPRP) participated at the International Day of Biodiversity which was held on 22nd May, 2018 at Kenya Forest Service grounds (KFS) Karura.

The function was officiated by the Principal Secretary for Environment and Forestry Charles Sunkuli. KEFRI displayed value added wood and non wood forest products.

“*Mondia whytei*, Osmam and silk worm are some of the genetic resources that should be conserved through value addition,” said Sunkuli.

Other exhibits included bamboo products, aloe products, briquettes and indigenous fruits products. Relevant publications and posters were displayed and distributed to visitor.

Other Institutions who displayed their products included KFS, NEMA, Water Towers and KWS.

## ASK shows

### Kakamega Show

One of KEFRI's mandate is to disseminate information and transfer developed forestry research technologies to the public. In line with this mandate, staff at KEFRI Kakamega sub-region programme, Migori sub-centre and Maseno regional centre exhibited its products and services at the Western Kenya Agriculture Society of Kenya show held from 14th to 16th June, 2018 at Moi showgrounds, Kakamega County.

The staff interacted with various stakeholders and showcased various technologies, products and services in line with the theme 'Enhancing Innovation and Technology in Agriculture and Trade'.

The Kakamega County Governor Mr. Wycliffe Oparanya officially opened the show which attracted visitors from Busia, Vihiga, Bungoma as well as East African Countries sharing Lake Victoria.

KEFRI exhibitions encompassed research activities and technologies suitable for the Lake Victoria Basin Eco-region Programme (LVBERP). The Display included illustration of tree nursery setup and agroforestry practices, rehabilitation and conservation of forests such as Kakamega, Cherangany and Mt. Elgon seed production and marketing, tree productivity and improvement, domestication and management of wild fruit trees, integrated pest management, energy saving techniques value addition to wood and non-wood forest products.

Bamboo propagation, management on-farm and utilization was highlighted due to its preference by the government as a flagship entity to increase forest cover. Bamboo products on display were furniture and fancy items. Proper interpretation of posters, charts and other exhibits was done in reference to the show theme. A herbalist displayed various herbs and their medicinal value.

KEFRI has subscribed to ISO 1400:2008 EMS to ensure that it minimizes environmental pollution in its operations. Thus segregation and appropriate disposal of waste such as plastics, printing papers/books, organic waste, glasses and metal wares was demonstrated. 'Reduce, reuse and recycle is the

Motto in environment management. Occupational safety measures undertaken in case of accidents were also explained together with the quality policy Conservation and sustainable use of medicinal plants in Western Kenya was prioritized. Some of the species threatened with extinction include *Prunus africana*, *Zanthoxylum gillettii*, *Warburgia ugandensis*, *Olea capensis*, *Mondia whytei*, in addition, to medicinal plants of Kakamega forest.

The show was attended by over 10,000 people, of whom 600 visited the stand. Some of the visitors recommended KEFRI to package tree seeds in quantities that are affordable to common person, incorporate more information on climate change mitigation strategies, pathogenic soil tests services, avail bamboo products for sale, and increase seedlings variety for sale at the show.

After the show judgment, KEFRI was awarded trophy for best stand demonstrating the application of environmental quality standards, and certificates for being second best in research and development; interpretation of show theme; non-agricultural based statutory board; and innovation and invention stand.

### Machakos Show

Dryland Eco-Region Research Programme participated in the ASK show held from 26th to 30th June, 2018 in Machakos County.

The show attracted 7000 patrons including schools, organized groups and farmers. KEFRI staff disseminated information earmarked to create conservation awareness of existing natural resources within the County.

The eco-region entered into five judgment categories scooping a trophy in Research and Development and Theme Interpretation. The stand was also ranked second position for demonstrating the application of Environmental Quality Standards.

Technologies such as tree seeds management, soil sampling, propagation of *Osyris lanceolata*, bamboo propagation, and improved charcoal production techniques, were explained or demonstrated.

A number of publication on topical issues as; growing of *Melia volkensii*, guidelines for growing aloes, KEFRI reports, booklets, guidelines and brochures were used free to specific customers.

## Forest products Open day



Mr. David Munene, Machine Operator demonstrating how the newly installed woodmizer sawing machine operates.

The National Forest Products Research Program (NFPRP) jointly with Central Highlands Eco-Region Research Program (CHERP) held their open day on 27<sup>th</sup> April, 2018 at KEFRI- Karura grounds.

The objective of the day was to display and disseminate technologies to the end users. The event attracted 224 farmers.

CHERP and NFPRP displayed and demonstrated technologies ranging from; bamboo propagation and past harvesting handling methods, timber drying and engineering, timber sawing machines (On farm sawing, Band saw and Wood Mizer), assorted indigenous and exotic seed species, testing, seed storage and germination using affordable containers, nursery practices, charcoal and briquette production on timber products such as; aloe products (shampoo, cream, lotion and detergent), *Syzygium* (juice and jam) and amarula juice together with tree diseases management techniques was displayed. Bamboo workshop displayed assorted bamboo furniture and handcraft.

Kenya Forest Service (KFS) and Tree Biotechnology Project (TBP) were among the collaborators who exhibited and demonstrated the following technologies; useful trees for making herbal medicine, assorted baobab products, assorted tree species raised in the nursery, and various services they offer.

Various handouts, booklets, reprints, and other publications on different technologies were given to the visitors free.

## Farmers Field Days in the Drylands Eco-region

The Dryland Eco-region Research Programme held farmers field days at Gakunguru Tharaka Nthi County on 24<sup>th</sup> April 2018, Kathambya in Miambani, Kitui County on 2<sup>nd</sup> May 2018, and Mwanzo in Gachoka, Embu County on 27<sup>th</sup> April, 2018.

The objective was to disseminate information and train stakeholders on propagation, establishment and management of improved Mukau (*Melia volkensii*). The farmers seminar were set for members of farmers' forestry field schools (FFFS) and other stakeholders to interact with the experts to discuss opportunities and challenges facing Mukau farming in the drylands.

The Forest Farmers Field School (FFFS) groups were initiated in 2016 in Counties of Kitui, Embu and Tharaka Nthi with support of Japan International Cooperation Agency (JICA), KEFRI and KFS Group members graduated in November, 2017 having gained knowledge on propagation, establishment and management of the improved *Melia volkensii*. They were required to apply the acquired skills/knowledge on their farms as well as cascade to other farmers.

However, it was notable that more capacity enhancement was required for these farmers to effectively carry out the exercise prompting the field seminars.

Mr. Albert Luvanda, the Deputy Director KEFRI Kitui, informed participants that growing improved *Melia* is a profitable investment. Potential areas worth investing in are tree nursery, seed sales and timber production. Moreover, he added that the technology highly contribute to the government big four agenda of the country therefore *Melia* development should be adopted and implemented.

However, Mr. Luvanda cautioned farmers on pest and diseases that might cause death to the seedlings; over watering and dumping off. Importantly, he pointed out that the planted trees should be protected from livestock browsing.

Improved *Melia* trees has a great potential for farmers in the drylands due to its fast growth and drought tolerance valuable timber and termite resistant characteristic. In its natural range, some



Demonstration of Melia seed cracking by use of improvised nut cracker

farmers grow the tree for fodder, bee forage, green mulch and fuel wood. Melia has been over exploited more so because of its high value timber and scientists now advice there to promotion of the species on-farm.

“KEFRI in conjunction with the community, the County Governments, KFS and other stakeholders suggest promotion of improved Melia through demonstration plots, and capacity building,” said Luvanda.

During the farmers seminar, the stakeholder were taken through the various stages involved in propagation of Improved Melia as illustrated in the Melia guideline. The stages are are follows:

**Fruit collection:** Fruits are collected from mature trees preferably yellowish and spotted fruits. Fruits should be picked from the tree: not from the ground to ensure health and quality.

**Seed extraction:** involves de-pulping (removal of the outer fleshy skin using a hard object such as stones). The de-pulped nuts are cleaned and dried for three days. Furthermore, the dried nuts are cracked on a piece of timber using a knife in order remove the seeds.

**Pre-treatment:** Involves nipping at the head of the seed to allow water to penetrate during soaking, done for 12 hours. After soaking, slitting is done using a sharp blade.

**Seed bed preparation:** Is done by digging beds on the ground or using basins. Sandy soil is spread on the bed where the seeds are sown and covered by light sand. Some water is sprinkled and the sown bed covered with a polythene sheet till seeds germinate, after five days.

**Pricking out:** is transferring the sprouts from the seedbed to potting tubes, after the seed has germinated.

#### Management at the nursery

By observing good nursery practices such as watering mildly, weeding, root pruning and hardening up when ready for planting. However, the farmers were cautioned of dumping off, infestation by pest and diseases that might attack the seedlings.

#### Management on farm

Farmers learnt that tree management on farm starts right after planting where the saplings should be protected from livestock browsing, weeding and de-budding. Equally, pruning is done using secateurs or pruning saw. The wounds inflicted should be treated and tools cleaned with methylated spirit after use to avoid contamination.



Demonstration of Melia pruning using a Secateurs and pruning saw

Kathambya field day attracted 79 farmers drawn from Maiyani, Malombo, Kyayongo, Kyumbuni, Milaani, Ndithini and Kwa Ngunu areas. Majority of the attendants were male (51%) and females (49%). Stakeholders who obtained information about the field day via text messages represented (15%) and personal visits (85%). Farmers were the majority (89%) and the rest (11%) were officers from KFS, Ministry of Agriculture and Local administration.

At Mwanzo, the field day attracted 33 stakeholders, Majority of the stakeholders from Kiritiri, Mwanzo, Gachoka, Kangungi and Siakago areas.

At Gakurungu, around 60 persons from Kagambi A, Tunyai, Gakurungu and Marimanti areas. Attended the field day representing 97% while 7% were KFS staff and local administration. Majority were females (67%) and males (33 %). Those who

received information about the field day through text messages (47%), personal visits (47%) and invitation letters (6%).

In conclusion, majority of the farmers indicated acquiring new skills on planting improved Melia (50%), improved Melia planting management practices (10%), seed extraction (12%), seed collection (8%), nursery establishment (10%), Melia production technology (5%), tree planting (3%) and types of seedbed (2%).

They rated the explanation/discussion of Melia technology very high (98%) that made them to understand well. Only (2%) indicated to be fair. All the stakeholders reported that the field day addressed their expectations.

Equally, the stakeholders stated that in future they would like to learn; Melia grafting technology, Melia management practices, Seed collection procedures and Marketing of Melia products.

Sixty five percent of the stakeholders reported to planted Melia in their farms and the rest to establish individual Melia nurseries as an enterprise and a source of seedlings for own planting. Majority of the stakeholder reported to expect challenges during implementation of the learnt lessons such as source of more information on Melia and planting materials.

## KEFRI signs MOUs

The Centre for Ecology and Hydrology (CEH) of United Kingdom has signed an agreement with KEFRI on 24<sup>th</sup> April, 2018 at the headquarters, Muguga.

The Memorandum was signed between KEFRI acting Director Dr. Jane Njuguna and CHE Director Dr. Mark Balloy. Officials present from CHE were Awan Jemons, Adan Varnsergen, Ben Woodcoco and Jan Manglon, whereas KEFRI officials were Dr. David Odee, Dr. Stephen Omondi, Mr. Meshack Muga, Ms. Betty Prissy Njoki and Mr. John Ochieng.

The 5-year pact entails collaborative research in respective programmes such as forestry, human resources and enrichment of academic and cultural capacities.



Dr. Balloy (centre) and his team from CEH received by Dr. S. Omondi (second right) while on visit to KEFRI molecular laboratory

The two institutions will focus on sustainable development and management of land and fresh water ecosystems and their interaction with the atmosphere.

Dr. Balloy stated that research and transfer of technologies play an important role in both developed and developing countries, appreciating the importance of sustainable forest and natural resource management in development. The two parties to be cognizant of the role played by information dissemination in forestry, natural resource management and technology development in any economic set up; being conscious of the rapid changes taking place in global forestry and environment scenario and the technologies thereof; together with the various needs, requirements, constraints and challenges and the need to keep abreast with the changing environment; appreciate the need to keep abreast with the changes in the technology aforesaid; realizing the essence of collaboration between the two parties and their complementary roles in natural resource management and environmental conservation in harmony with the needs and aspirations of the people of Kenya.

The primary objectives of the memorandum is to establish; a framework for co-operation and linkage between the two institutions in research and development through mutually agreed research projects, establish long-term research collaboration in accordance with the respective institution's mission statements; cooperate in carrying out mutually agreed upon research and development activities within the mandates of the two institutions; capacity building and sharing of relevant information and resources.

Dr. Jane Njuguna, Director KEFRI, appreciated the existing good working relationships with CHE and looked forward to collaborate in more activities in future and equally thanked him for offering skills to some KEFRI staff in his organization.

### Nyandarua County MOU

Nyandarua County Government has signed a Memorandum of Understanding with KEFRI providing a framework for cooperation in forestry and environmental developments.

The agreement was signed by Governor Francis Kimemia and Dr. Joshua Cheboiwo on behalf of Nyandarua County and KEFRI respectively.

The MoU also provides links in natural resources management and conservation, specifically scaling up key technologies and innovations on tree seedling production bamboo propagation, management and utilization of tree onfarm, and value addition to wood and non wood products.

“The agreement will help the County overcome some of the challenges it is currently facing due to deforestation and land degradation,” said the Governor.

“KEFRI is widening its corporate presence to the Counties in a bid to facilitate service delivery.

In the agreement, the institute will be keen to provide technical support, high quality tree seeds for establishing tree nurseries and capacity building to selected county officers to help the county plant two million trees yearly,” said Dr. Cheboiwo.



Nyandarua County Governor Francis Kimemia (left) and Dr. Joshua Cheboiwo exchanging copies of the MoU during the launch at Nyakanja community forest site

During the event, held on 30th May 2018 the governor and KEFRI team led the community in planting over 1,000 indigenous seedlings at Nyakanja Community forest in Gatimu ward, Nyandarua County to increase tree cover within the county.

The Governor was accompanied by his County Executive Committee member for Water Environment and Natural Resources Mr. Simon Ng’ang’a, while Dr. Eston Mutitu and the Deputy Regional Director Mr. Joram Kagombe represented KEFRI.

### KEFRI Participates at the Land Policy Launch



Deputy President William Ruto accompanied by the CS Farida Karonei (centre) holding a flower vase made from bamboo

The Deputy President His Excellency William Ruto accompanied by the Cabinet Secretary of Lands and Physical Planning Faridah Karonei, the Cabinet Secretary of Public Service, Youth and Gender Margaret Kobia visited KEFRI stand during the launch of Land use Policy on 12<sup>th</sup> June, 2018 at Kenyatta International Convention Center (KICC) Nairobi.

The National Forest Products Research Programme (NFPRP) and the Seed Programme exhibited various value added bamboo products and quality tree seeds respectively. The Deputy President commended KEFRI for efforts towards restoration and rehabilitation of the Mau forest. He advised KEFRI to nature partnership with other institutions so as to meet the government target of planting 35 million seedlings per year.

## Initiative to restore Undiri swamp launched

The Chairperson of Habitat Restoration Initiative (HARI) Committees of Nature Kenya Dr Joyce Jefwa on 27<sup>th</sup> April, 2018 launched an initiative to restore Undiri swamp near Kikuyu in Kiambu County.

Undiri which is a corrupted name by the locals from Old Lake is an important water source that supplies water for domestic and farming to communities in Kiambu and Nairobi Counties.

“The swamp being the second deepest quaking bog in African after Douala in Cameroon needs to be safeguarded from further degradation caused by pollution and encroachment,” said Dr Jefwa.



Dr. Jefwa planting bamboo at Undiri riparian land near Kikuyu township, Kiambu County to conserve the swamp

Representatives from KEFRI, KFS, Nature Kenya, Muguga Ecosystem Research Community Forest Association (MERCFA), Ondiri, Nyongara, Kabuthi and Rungiri rivers- Water Resource User Association (ONKARU-WRUA), Kerwa Child and Family Helper project (KCFHP) attended the event and planted various indigenous trees.

“For any restoration activity to succeed Nature needs a helping hand,” Dr Jefwa said.

She implored the community to engage in mushroom production, bee keeping and butterfly rearing among other nature based income generating activities to improve livelihood and support the conservation process.

Mr. William Wambugu, a habitat scientist and a team leader of Undiri restoration programme said the swamp is an important ecosystem and a habitat for both fauna and floral species.

“In the past three decades the swamp used to host

various types of birds including migratory ones that used to breed in this ecosystem. Its restoration is a potential to eco-tourism site,” said Wambugu.

At the same time MERCFA Chairman Simon Kamonde and Elizabeth Wambui represented the CFA at an international workshop on Sustainable Rural Bio-energy Solutions held at the International Center for Research in Agro-forestry (ICRAF) Nairobi, Kenya on 19<sup>th</sup> January 2018.

The event was organized by the International Renewable Energy Agency (IRENA), Japan International Research Center for Agricultural Sciences (JIRCAS) with financial contribution from the Ministry of Foreign Affairs, Ministry of Agriculture, Forestry and Fisheries of Japan and Technical Cooperation by GIZ.

The forum was attended by over 50 participants from various countries among them Japan, Kenya, Tanzania, Uganda, Ghana, Nigeria and Mozambique. The participants presented their county experiences, challenges and opportunities on sustainable bioenergy innovations, tools and means of sustainable rural biomass supply, and other ways of scaling-up the initiatives.

Muguga CFA showcased energy saving portable stove locally known as Kuni mbili jiko as an initiative to energy conservation. The two in one stove uses firewood as well as charcoal.

The clay lining enables the stove to retain heat for a longer time compared to ordinary stove.

Assessment conducted on 60 group members who adopted the stove, has shown reduction by half the amount of firewood used in the traditional three stone stove.

This stove therefore contributes to forest conservation and is useful towards mitigation and adaptation to the already witnessed effects of climate change.

IRENA Deputy Director General Dr. Sakari Oksanen said the workshop was an opportunity for policy makers and development practitioners, including private sector actors, non-governmental organizations and researchers to share experiences and come up with recommendations of scaling up the innovations for rural areas in the Sub Saharan Africa.

## Dr. Chikamai Retires as the Director KEFRI



KEFRI Board of Directors announces the retirement of Dr. Ben Chikamai (Pictured) as the Director KEFRI, and the appointment of Dr. Jane Wangu Njuguna in an acting capacity.

We appreciate Dr. Chikamai's leadership and wisdom which led the institute to be recognized as one of the leading forest research body globally.

Dr. Chikamai has a PhD. from the University of Wales, a Master of Science in Forestry from University of Toronto and a Bachelor degree in Forestry from the University of Nairobi.

Dr. Chikamai, who served as the third KEFRI Director since its inception in 1986, was appointed the CEO for KEFRI in 2009 and Secretary to the Board of Directors. He will be remembered for several achievements among them spearheading research in the region and improving staff welfare. His leadership style of open door policy availed staff an opportunity to discuss matters openly and candidly in an environment of trust. He created a strong governance structure which attracted talent both at the operation and managerial level.

In 2012 Dr. Chikamai steered development of the 5th KEFRI Strategic Plan (2013-2018) being the first in the institute to the Balanced Score Card as a performance management tool. The Institute has since focused on developing demand driven technologies and innovations, sharing information to leverage forest development and livelihood improvement.

The 6th Strategic Plan enhanced devolvement of KEFRI services to counties by launching of the eco-regional research programmes and farmers' resource centres in Marigat, Turkana, Lamu and Wundanyi in Taita Taveta.

His engagement, dedication and passion towards transforming the forests and livelihoods increased KEFRI collaboration with development partners; development of wide range of forest technologies and utilization of forest products, incubation of

innovations as well as value addition to a wide range of non-wood forest products, capacity building, dissemination of research findings and establishment of linkages with various stakeholders. In his 9 years of outstanding service as the KEFRI CEO, Dr. Chikamai led the institute through dynamic times in the forestry industry. As the Executive Secretary for the Network for Natural Gums and Resins in Africa (NGARA) Dr. Chikamai has been focal in coordinating 15 NGARA member countries in Africa to improve the capacity of gums and resins production through strengthening of national and



Dr. Chikamai (left) receiving certificate of appreciation from Ms Keiko Sano for recognition by JICA President

regional networking. His massive contribution to the development of gum Arabica and plant resins sub-sector in Kenya earned him a State Commendation Award in 1996.

Under his leadership, the Institute made major leaps of growth, development and visibility. For instance in 2015, KEFRI hosted the Global IUFRO 51st Conference, and a preparatory meeting for TICAD VI summit in August 2017, both events held for the first time in the African continent.

Dr. Chikamai retires at a time when KEFRI has a position in forest research networks - regionally and internationally, and having set a trend of winning national, regional and global awards and accolades. In 2013, the United Nation feted KEFRI for special contribution to the Global South- South and Triangular Cooperation during a global development expo held at Nairobi. In 2017, Japan International Cooperation Agency (JICA) feted KEFRI with 13th JICA President Award for exemplarily contribution to JICA's activities, specifically training of participants in 19 sub Saharan countries in Central region, East, Southern and Horn of Africa.

In the Agricultural Society of Kenya annual shows held countrywide, KEFRI has occasionally emerged the best Institution demonstrating research and development, best agricultural based statutory board, best medium government stand, best stand displaying tree seed production and marketing technologies, and in application of environmental standards.

Under his leadership, the Institute made major leaps of growth and development. In 2013, the Institute established enterprise and resource mobilization units to market and mobilize resources respectively. Between 2008 and 2017, the Institute embraced international quality standards ISO 14001:2015 and 9001:2015 to improve operations and service delivery.

Dr. Chikamai exits KEFRI having seen it grow to be ranked one of the excellent performing state agencies in the country as per the Performance Contracting evaluation for the fiscal year 2014/2015.

### **KENASA CONFERENCE**



KEFRI staff who attended the KENASA Conference

KEFRI staff who are members of the Kenya National Secretaries Association (KENASA) attended the Annual General Conference themed ‘From Executive Assistant to Exceptional Assistant’ from 12<sup>th</sup> to 13<sup>th</sup> April 2018, in Nakuru.

The Chief Guest, Governor Bomet County Dr. Joyce Laboso opened the Conference which also marked the International Secretary’s Week-Office Administrators celebration across the world.

The KEFRI’s Office Administrators/secretarial staff who attended the forum were; Margaret Njenga, Augusta Kabunyi, Elizabeth Waiganjo,

Ann Indimuli, Lucy Mhora, Veronica Ratemo, Alice Muroki, Vincent Agui, Lucy Waratho, Lucy Mutiria, Mary Mudaki, Damaris Kang’ethe and Hellen Nyarido.

The AGC was attended by other Office Administrators from state departments and institutions in Kenya as well as representatives from Uganda (ASAPU) and Tanzania (TAPSEA).

The AGC covered the following topics;

- i) Cyber space/cyber crime/cyber security
- ii) Stress management
- iii) Economic Empowerment
- iv) Moving from good to great

### **KEFRI Choir Performs at Madaraka Celebrations**



KEFRI choir entertaining guests during Madaraka celebrations at Kagio Stadium, Ndia - Kirinyaga County

The Parastatals Ministries and County Choirs Organization (PAMICCO) Committee allocated KEFRI Choir to perform at Kirinyaga County during this year’s Madaraka Day celebrations.

The Committee offers the Choirs which are members of PAMICCO to market their brands and promote National Peace and Integration cohesion.

On 31<sup>st</sup> May 2018, KEFRI Choir travelled to Kirinyaga County in Ndia Constituency and were warmly received by Mr. Moses Mutunga Ivuto who is the Deputy County Commissioner.

The Choir performed 3 songs on stage namely; ‘Panda Miti Penda Kenya, Leo Twasherehekea Madaraka and Chombo cha Amani,’ directed by the Choirmaster Mr. Charles Mwangi. The Chief Guest and the audience portrayed their heartfelt gratitude expressing that, it was their first time for such a choir, sent from the national level, to perform at their county function.

The Choir members wish to thank the KEFRI Management and Kirinyaga County Government for facilitating them to participate in the event successfully.

## Pension News

### KEFRI Staff Retirement Benefits Scheme Closure and Distribution of Surplus.



KEFRI Pension Chairman Mr. Paul Tuwei handing over a Cheque to Dr. Paul Konuche, former KEFRI Director in presence of trustees Mr. Francis Ochung, Sarah Mogaka and Dr. George Muthike

The Board of Trustees for KEFRI pension has started the process of the closure of the Defined Benefit (DB) scheme as required by the Retirement Benefits Act. This is as a culmination of the payment of the last member of KEFRI SRBS in June 2016.

The Board of trustees conducted an evaluation from June 30<sup>th</sup> 2016 in determination of the financial position of the Scheme before winding up. The value was estimated at 56.6M.

The Defined Contribution (DC) scheme was given 22.5 M an amount owed by the DB to the scheme. The amount was shared at a rate of 2.5% of the transfer values for all DC Scheme members as at 30<sup>th</sup> June 2011. The balance of Kshs. 34.1 M was declared as Surplus and shared on a 50/50 basis between the members and Sponsor in accordance with the law.

The Members' share of the surplus was distributed to all DB and DC Scheme members at a rate of 1.8% of the transfer values as at 30<sup>th</sup> June 2011. The Occupational Retirement Benefits scheme has set out regulations that guide its members stating that: a member of the scheme shall not be permitted to withdraw from membership whilst he remains an employee of the sponsor unless;

- He becomes a member of another scheme established for the benefit of employees of that sponsor, or
- (b) He attains the retirement age provided for in the scheme rules.

The above Regulation is covered under Rule 19 of the Scheme Trust Deed and Rules.

The stated DC benefits constitute retirement benefits and as such those that relate to members have been paid as cash to those in retirement. Those in service shall form part of their statement for the year ending 30<sup>th</sup> June 2018.

### Defined Benefit Plans

Employers guarantee a specific retirement benefit amount for each participant of a defined benefit plan, which can be based on the employee's salary, years of service or a number of other factors. Employees have little control over the funds until they are received in retirement. The employer bears the investment risk of ensuring the defined benefit amount is able to be paid to the retired employee.

Due to this risk, defined benefit plans require complex actuarial projections and insurance for guarantees, making the costs of administration very high. This has made defined benefit plans all but obsolete.

All members who retired during the implementation of the indicated pension programme have received their dues. Those who are in-service will receive their benefits once they retire.

### Demise



The late  
John Epodo

KEFRI Management consoles with the family of the late Mr. John Epodo Lokale, who until his death on 12<sup>th</sup> June, 2018 worked at KEFRI, Turkana Sub-Centre.

Burial was held on Wednesday the 20<sup>th</sup> June, 2018 at his home, Nabulon village, Kanamkemer location, Lodwar town, Turkana County.

*May his Soul Rest in Eternal Peace.*



**KEFRI acting Director Dr. Njuguna bidding farewell to Dr. Hillary Agaba from NAFORRI Uganda after the conference. Looking on is Dr. Mutitu and the Conference coordinator Dr. Ebby Chagala Odera**



**KENYA FORESTRY RESEARCH INSTITUTE (KEFRI)**

Headquarters Muguga, off Nairobi - Nakuru Highway

P. O. Box 20412 - 00200 Nairobi Tel: +254 722 157 414, 724 259 781/2,

Email: [director@kefri.org](mailto:director@kefri.org) Website: [www.kefri.org](http://www.kefri.org)

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