



# KEFRI *Newsletter*

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KEFRI Director Dr. Joshua Cheboiwo and JICA Chief Rep. Mr. Hajime Iwama during ribbon cutting ceremony to mark the launch of Booklet 'Dryland Forestry Research and Development in Kenya'



KEFRI's Deputy Director Forest Research Support Service Dr. MTE Mbuvi, Director Dr. Joshua Cheboiwo, JICA Chief Representative in Kenya, Mr. Hajime Iwama, and Programme Formulation Officer - Forestry and Climate Change Mr. John Ngugi displaying the booklet during the TICAD - 8 side event

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**KEFRI and JICA launch booklet**

Japan International Cooperation Agency (JICA) Chief Representative in Kenya, Mr. Hajime Iwama and KEFRI Director Dr. Joshua Cheboiwo on August 24, 2022, jointly launched a booklet that highlights 37yrs of forestry collaborative projects for dryland landscapes in Kenya.

The booklet titled, ‘Dryland Forestry Research and Development in Kenya: Achievement and Lessons of 37 years of Kenya/Japan Cooperation in Forestry’, was launched at KEFRI headquarters during an online side event for the final Tokyo International Conference on African Development (TICAD 8), hosted by the Republic of Tunisia.

The Conference focused on experiences African Initiative for Combating Desertification (AI-CD) project that aims towards combating desertification and strengthening climate change to make a resilient, inclusive and prosperous Africa.

“The book also shares experiences, technologies/ techniques, good practices, case studies on dryland forestry, landscape restoration in the Horn of Africa and the Sahel for wide-scale adoption in Sub-Saharan Africa,” said Dr. Cheboiwo.

Mr. Hajime congratulated KEFRI for documenting the research and development activities in dryland forestry regions undertaken through KEFRI/JICA collaboration in Kenya noting that it's a model of sustained knowledge co-creation.

“The booklet comprise of forestry research experiences from the drylands in the Horn of Africa and marks a significant milestone in the long-standing cooperation and partnership between the two organizations,” said Mr. Hajime.

Mr. Kishida Fumio, Prime Minister of Japan, who participated online as a co-chair in the Opening Session announced a total of US\$ 30 billion as the sum of public and private financial contributions to Africa over the next three years.

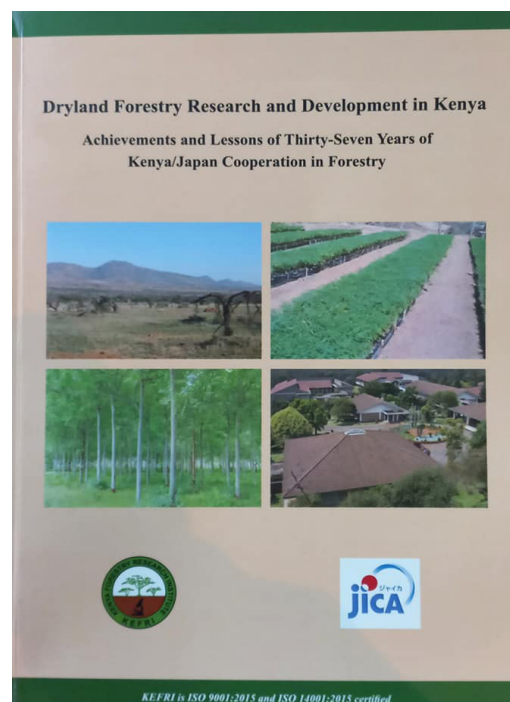
“As the environment surrounding us change rapidly, I would like to reiterate Japan's commitment to continuing to work with Africa as 'a partner growing together with Africa', building on the achievements of our past cooperation to achieve a resilient and sustainable world,” said Mr. Kishida.

Japan launched the 1<sup>st</sup> TICAD conference in 1993 co-hosted by United Nations, United Nations Development Program (UNDP), World Bank and African Union Commission (AUC) to focus on supporting societies in African to develop capacity in human security, economy, peace and stability.

Senior Vice President of JICA Mr. Seiichi Onodera made an opening remarks commending the AI-CD implementing countries, 7 in Sahel and 8 in Horn of Africa, for their tireless effort in sharing practices to combat desertification and make communities resilient to climate change.

Mr. Takuya Shiraishi (JICA), Mr. Alfred Gichu representing Permanent Secretary Ministry of Environment and Forestry in Kenya Dr. Chris Kiptoo, Colonel Dominique Manga - Senegal made key remarks in a panel discussion led by Mrs. Lucy Nganga (Kenya).

The Panelists; George Tadu (Southern Sudan), Ms Mabel Oringuo Emanuel and Dr. Kalil Sangare (Nigeria), Elvis Paul Tangem explored challenges and opportunities on integrated approach towards enhancing efforts to change; that include synergy in capacity buildings and awareness creation, review of concepts of ownership, design marketing systems, mobilise funding, and lastly knowledge sharing and partnership.



Research and development in ASALs is critical as drylands constitute over 80% of Kenya's land area and suffer environmental constraints due to woodland degradation. There is inadequate technical knowledge on tree establishment and management. The book (*above*) present a record of research and development (R &D) in dryland forestry in Kenya undertaken through KEFRI / JICA collaboration for more than 3 decades. It comprises technologies, techniques and case studies on dryland forestry for landscape restoration. It showcase a model for sustained collaboration on knowledge co-creation.

### What the Book highlights

The book highlights major achievements of research and development on: tree nursery establishment and management techniques; tree seed collection and handling, tree establishment and management, on-farm tree planting technologies Success case of indigenous tree species (*Melia volkensii* and *Acacia tortilis*) development and improvement and lastly successful knowledge sharing approaches that include; extension approaches for forestry promotion and adoption; capacity building for partners in Horn of Africa and other Sub-Sahara Africa countries through Third Country Training Programme (TTP) and various knowledge materials e.g. books, brochures, case studies/good practices.





NEMA Board Chairperson Mr. Eric Munga, Director General Mamo B. Mamo, Board members and Environment and Land Court judge Addraya Dena during the annual cleanup day held in Ukunda, Kwale County

## World Clean-up Day 2022,

As the world celebrated the 2022 World Clean-up Day, on 17th September 2022, the lead agency - National Environmental Management Authority (NEMA) engaged societies: - individuals, government's representatives, corporations and numerous organizations in planting trees, litter clean-up and launch of International Coastal Clean-up Day 2022 at Ukunda, Diani in Kwale County.

KEFRI through Coast Region Director Dr. Linus Wekesa, participated and donated 1000 seedlings including mangroves to rehabilitate Kibuyuni-Shimoni degraded site in Kwale County.

NEMA will collaborate with county government and other stakeholders to raise awareness of sustainable waste management for a clean and healthy environment," NEMA Board Chairman Eric Mungai said.

The Chairman urged citizens to change mind set and consumer habits by avoiding single use plastics, waste separation at source and promote recycling to keep the environment clean.

The Agency in collaboration with county government aim to conduct monthly cleanups Countrywide.

"Our environment is threatened by waste that is polluting the soil, water and air. The solid waste including plastics goes back to the ocean every year, leading to increase in cancer, mortality of both humans and animals. Let every day be a clean-up day. Do not dump waste somewhere and expect someone to collect it," he said.

"Our marine is being shocked by plastics, and we propose to conduct environmental clean-up and awareness creation every month in 47 counties to educate people on proper disposal and use of technology in the management of waste," said NEMA Chairperson.

The World Clean-up Day is an annual global social action program celebrated on the 3rd Saturday of September to combat the global solid waste problem, including marine debris.

On the eve of the event, Kwale High Court led other stakeholders in planting 3500 tree seedlings at Kwale Prisons. During the cleanup 1,200 kig of solid wate was collected. Some of the supporters of the 2-day event include NEMA, Kenya Forestry Research Institute, Kenya Wildlife Service, Base Titanium, and

## World Bamboo Day

Kenya marked the World Bamboo Day 2022 on 19th September 2022 at Rapogi, West Songhor in Kisumu County.

The International Bamboo and Rattan Organization (INBAR) in collaboration with Ministry of Environment and Forestry, KEFRI and Kisumu County spearheaded the celebration under the theme ‘Bamboo for Landscape Restoration and Protection’.

The celebration aimed to raise awareness, highlighting achievements realized in the bamboo development sector of the country, and examining existing gaps and challenges for sustainable growth

In his remarks, the Chief Guest, Mr. Jeckly Bitok, a representative from the Ministry of Environment and Forestry, recognized the role INBAR and partner institutions have played in the development of bamboo sector in Kenya.

“We recognise the tremendous developments INBAR has initiated in the bamboo sector together with other stakeholders across the country. However, a coordinated and extended national bamboo programme, focusing on public-private partnerships and grassroots models is needed to further enhance the development of Bamboo sector in the region,” Mr. Bitok further said.

According to Bamboo Association of Kenya Chairman, Mr. Victor Mwanga, the Association is negotiating with investors to establish a Bamboo belt across Western Kenya.

“Kenya is among several countries promoting Bamboo as a cash crop. Bamboo is a raw material for over 10,000 products, and plays an important role in economic transformation, conservation and restoration of riverine and riparian lands,” KEFRI National Products Development Programme Director Ms. Nellie Oduor said.

Ms. Oduor noted that bamboo farmers have called upon the government to assist them in setting up cottage industries, thus she urged the national as well as the county governments to increase funding to community based organizations (CBO's) and farmers who have adopted bamboo as a source of livelihood.

Bamboo provides food security, soil erosion control, and contributes to agricultural productivity, job opportunities in Micro, Small and Medium Enterprise (MSME) economy, housing, universal health, and creative economy. In 2020, Kenya classified bamboo as cash crop under the Crop Act (No.16 of 2013) to backstop the supply demand of wood and non-wood products, and to mitigate climate change,” Oduor said.

“Dutch-Sino-East Africa Bamboo Development Program supported 10 exhibitors who displayed bamboo furniture; woven products such as shopping baskets, waste paper baskets, and trays; handicrafts; engineered bamboo products such as frames and flooring boards; bamboo shoots; and bamboo propagation and utilization seedlings to around 200 visitors.



*assorted bamboo products*

At the same time, on 28<sup>th</sup> September 2022, KEFRI hosted Kenya Red Cross Busia Youth Craft at KEFRI to learn more about bamboo, its propagation and utilization.

The Busia Youth Craft enterprise is a bamboo youth innovations business run by Kenya Red Cross Society - Busia Branch as an income-generating activity. The business contracts farmers and trains them on sustainable use of bamboo in conservation, construction industry and furniture and other artistic household item making to earn a living.

Through the GrEYAP programme, (The AgriBiz programme supported by the Delegation of The European Union to Kenya and the Danish Ministry of Foreign Affairs) has empowered economically enabled youth and women in agriculture to ensure they are self reliant.

The enterprise received business advisory and technical support from KEFRI that will help take the business to the next level.



The Board of Directors, Management and staff of  
Kenya Forestry Research Institute (KEFRI)

— **Congratulates** —

**H.E. Dr. William Samoei Ruto, PhD, EGH,**  
5<sup>th</sup> President of the Republic of Kenya

*Honaera Rais*

### **President Ruto campaign to combat climate change**

His Excellency President William Ruto has averred that Kenya needs to increase its tree and forest cover to more than 30 per cent by 2032, as part of the national efforts to address the adverse effects of climate change.

During his inauguration as the 5<sup>th</sup> President of the Republic of Kenya, held at state house on 13<sup>th</sup> September 2022, President Ruto referred to climate change as one of the central concern of his government.

“In our country, women, men, young people, farmers workers and local communities suffer the consequences of climate change. It is not too late to respond. To tackle this threat, we must act urgently to keep global heating below 1.5<sup>o</sup> Centigrade, help those in need and end addiction to fossil fuels,” said President Ruto in his speech.

Previously President Ruto on June 30 when launching his five-point manifesto dubbed ‘The Plan’, said Kenya’s economic challenges require immediate attention and one of his priorities will be to revive the economy in a post-Covid era. It is well factored that forests globally provide people with an array of resources including fresh air, nutritious foods, and clean water among many other ecological services. They also play an invaluable role in combating climate change and contributing to the prosperity and wellbeing of current and future generations. However despite all these environmental, health and social benefits, forests across the world are being destroyed at an alarming rate and majorly through land-use change.

According to the UN Sustainable Development Goal 15.1: By 2020, was crafted to ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements. Recent data indicates Kenya tree cover is recorded at 12.13 per cent tree cover, (surpassing 10 per cent minimum target set for 2022) and 8.83 per cent forest cover, which is below 10% target set for 2022.

The Kenya Kwanza government will carry out bold economic reforms to accelerate job creation, increase forest cover to 30 percent by 2032 to mitigate climate change and transform socio-economic growth. Consequently, the country aims to achieve sustainable environment and natural resource management; energy security, water, healthcare, food and nutrition security, poverty alleviation.

This is an ambitious that that calls for multiple stakeholder involvement -social inclusion; funding; capacity building - training on attitude change and environmental conservation, adoption of research technologies and application of indigenous knowledge / practices on climate resilience.

President Ruto said he will also appoint the Climate Change Council tasked with steering Kenya’s climate action through stakeholder engagements coordinated in the presidency. The programme also responds to Kenya’s commitments to help reduce global greenhouse gas emissions articulated in various multilateral environmental agreements as our we focus on climate action deliberation at COP 27th of UN Climate Change Conference, at Sharm-el-Sheikh, Egypt in November 2022.

## KEFRI excel in Performance Contract

The Chairman KEFRI Board of Directors Dr. John Waithaka presided over the evaluation of the Institution's Performance Contract for 2021/2022 Financial Year.

This is an annual event conducted by the Public Service Performance Management Unit conducted on 8<sup>th</sup> September 2022

The Institute scored "Very Good" in its performance. This is one of the best performing institutions," Dr. Waithaka said."



The Chairman congratulated the entire KEFRI staff led by Director Dr. Joshua Cheboiwo for the performance and encouraged staff to do much more.

Kenya Government introduced Performance Contract in public sector in 2004, with the aim of ensuring that efficient and effective services are delivered to Kenyans in line with ethical practices in governance.

In the Kenyan context, a performance contract is a written agreement between government and department and cascated to departments and state agency (local authority, state corporation or central government ministry) delivering services to the public, wherein quantifiable targets are explicitly specified for a period of one financial year (July to June) and performance measured against agreed targets.

Performance contract aims at refocusing the public servants mind-set on result in service delivery to citizens.

The performance rating instrument is based on the following attributes and criteria: Performance Criteria Excellent; Achievement between 30 and 100% above target; Very Good Achievement of target; Good Achievement below target but above previous year; Fair Achievement equal to previous year; and Poor Achievement below previous year.

Previous, the Board of Directors together with senior managers inspected KEFRI seed centers at Rumuruti, Kakamega and Maseno. The main aim was to monitor the ongoing construction of seed production facilities.

The visit also served as an opportunity for the 'Board', Regional directors and senior managers to assess and address the gaps hampering mass production of tree seed in each region.

Dr. James Kimondo, a senior Principal Scientist and Deputy Director in charge of Forest Products Improvement at KEFRI, stated that the 3 seed centers are amongst 18 under constructing in a bid to increase production and supply of quality seeds in the country, create direct employment to the locals and entrepreneurship.

"KEFRI looks forward to working with groups of communities, farmers and other forest stakeholders to benefit from forest technologies and management approaches that will increase productivity of quality seeds, encourage establishment of tree nurseries, and on-farm forests," said Dr. Kimondo.

Dr. Kimondo, further pointed out that KEFRI has put in place measures such as proper maturity of seed prior to harvesting, moisture content, purity, proper storage and distribution to ensure viability of seeds.

"Seeds must be stored in appropriate condition as per the batch number, to enable tracking on viability and optimal germination when sown in the field," he said.



*Rumuruti seed production center under construction*

Rumuruti seed center under construction has a storage capacity of up to 2 tonnes.

KEFRI Rumuruti sub regional centre is situated, 6 KM from the township, which is a gateway to the Northern Kenya and currently undergoing renovation to host the headquarters for Laikipia County.

## Colloquium

KEFRI held its 1<sup>st</sup> public lecture on 15<sup>th</sup> September 2022, where Prof. Walter O. Oyawa, explored several issues in a topic entitled ‘Visibility and Impact of Research vis a vis Research Funding’.



Prof. Oyawa (*pictured*) is the Director General for the National Commission for Science & Technology (NACOSTI), and KEFRI Board of Director.

During the presentation Prof. Oyawa commended KEFRI scientists for publishing research findings in many journal papers, however he called upon the same scientists to be passionate and engage in research with impact - for the benefit of citizens.

He also hinted that funding from both the exchequer and donors is competitive and to some extent influenced by anticipated socio-political developments. Socio-political circumstances include; security, population health, poverty, national wealth, income inequality, social integration and political conflicts.

“Scientists and institutions must therefore adopt multi-sector approach in mainstreaming science technology and innovations whereby mobilization of research fund is prioritised, proposal anchored on current topical issues such as climate change, global agendas like Strategic Development Goals (SDGs) and publishing of research work, capacity building,” Prof. Oyawa further said.

Prof. Oyawa similarly urged scientists to align research into focal points and embrace advisory science that will impact or translate into health, socio-economic and national security among other sustainable development issues.

Let’s change our perception and embrace knowledge from other fields such as social sciences, skills such as Information Communication Technology (ICT), and traditional knowledge to advance science with impact.

The newly appointed KEFRI Board Chairman Dr. John Waithaka, while addressing the scientific staff noted that KEFRI is among the best state agencies highly credited in the just concluded Performance contract evaluation.

“I am delighted to note that KEFRI has scientists with capacity and capability to engage in research that contributes effectively to policy and sustainable development,” Dr. Waithaka said.

KEFRI Director Dr. Joshua Cheboiwo in his remarks lauded KEFRI scientific which he stated has increased from 7 in 1988 to 128 currently.

“KEFRI holds a monthly colloquium as one of ways to share scientific information, increase visibility, especially in Webometric and SCImago.” said Dr. Cheboiwo.

Webometrics is a methodology used by Cybermetrics Lab research group, of Spain’s largest public research institute, to rank universities using websites-based indicators such as visibility impact, transparency openness and excellence scholar. The Web covers formal (e-journals, repositories) and informal scholarly communication. The Ranking is published twice a year based on website-based research conducted on more than 31,000 Higher Education Institutions in more than 200 countries worldwide. .

The Research Institutes Ranking is an initiative launched by SCImago Lab, the world's leading editor of academic rankings, in partnership with Elsevier, the world's largest provider of scientific information.

SCImago Lab institutional ranking (index) specifically for universities and research institutions examines 16 indicators from 3 dimensions: Research, Innovation and society. It requires aggressive publishing in high ranking journals, innovations, products and uploading inaugural speeches and related scientific outputs,".

This ranking aims at highlighting the under exposed and key role research centers play in advancing research for the benefit of societies. For instance, research activities related to the UN Sustainable Development Goals (SDGs).



## Dr. James Kimondo

KEFRI 4<sup>th</sup> Scientific Colloquium was held on 14<sup>th</sup> July 2022, with Dr. James Kimondo presenting a research topic entitled 'Increase forest cover for wealth creation: a need to re-evaluate the forest management systems'.



In the presentation held at KEFRI Headquarters, Dr. Kimondo, who is senior principal scientists and deputy director in charge of forest products improvement, highlighted Kenya's historic achievements in forest plantations.

Dr. Kimondo revealed forest plantations are key to production of fuelwood, pulp wood, timber and many ecological service like pasture, food, water, cleaner air etc.

“The main species identified at the time of study included Cypress (*Cupressus lusitanica*), *C. macrocarpa*, *Pinus patula*, *P. radiata* and *Grevillea robusta* among others,” said Dr. Kimondo.

Currently, the silvicultural management system that has been applied in the country was adopted from South Africa - which included high density at establishment (dense planting to encourage growth of straight bole) with few persistent branches to allow for selection (thinning) of the final crop from a big population

The scientist noted that the blanket ban of shamba system in 1987 and retrenchment of forest workers in 1994 reduced labour that greatly affected the implementation of the silvicultural operations and eventually plantations productivity.

“Continue use of old systems or practice and low funding to manage plantations forests in Kenya is hindering maximum return,” states Dr. Kimondo.

This challenge will only be interevned through embracing improved mechanized operations to prepare land for plantations, improved germplasm, spacing regime of (3.5x3.5 m) on plantations and (5.8x2.1m) on farm with minimal pruning, and commercial thinning.

## KEFRI Scientists attain PhD

A Ph.D., or Doctor of Philosophy, is a high level academic or professional degree earned after a period of three or more years of graduate-level study, culminating in the creation, submission, presentation and defense of a research dissertation/thesis. The PhD degree signifies mastery of a broad discipline of learning together with demonstrated competence in a special field within that discipline. Traditionally the term 'philosophy' does not refer to the subject but its original Greek meaning which roughly translates to 'lover of wisdom'.

In that regards, KEFRI fraternity congratulates Victor Ochieng Jaoko, Michael Mairura Okeyo and Leila Ndalilo for attaining doctoral degree in Philosophy (PhD).



Dr. Michael Okeyo (centre) with Supervisors; Dr. Jane Njuguna and Prof. Gilbert Obwoyere

Michael Mairura Okeyo graduated from Egerton University during 45<sup>th</sup> ceremony having satisfied the examiners and defending his thesis that investigated insect pest infestations and the stage at which they infested flowers and fruits, fungal diseases, distribution and effects of female and male flowers on seed quality and the relationships between seed quality and infestation on the Red pod terminalia (*Terminalia brownii* Fresen (1837)).

*Terminalia brownii* is an important multipurpose tree in Arid and Semi-arid lands (ASALs) of Eastern Africa. Despite its wide utility in construction, wood carving, medicine and in the cottage industry, its seedlings and products such as timber and posts are unavaible in the required quantities. Scarcity of its seedlings has affected afforestation and conservation activities in ASALs. The study was carried out at Nduumoni, Kimose and Kendu Bay in Kitui, Baringo, and Homa Bay counties respectively.

## Victor Ochieng Jaoko

On 7<sup>th</sup> July 2022, Victor Jaoko successfully defended a Thesis on and became the 1<sup>st</sup> Ph.D under a funding program of the VLIR (the Flemish Interuniversity Council) funded by the Belgian Overseas Aid, in collaboration with four partners: University of Ghent (Belgium), University of Nairobi, KEFRI, and Better Globe Forestry Ltd.



The research focused on activity of *Melia volkensii* extracts against insect pests of economic value. Melia is an indigenous hardwood tree with large impact on rural development in Kenyan semi-arid regions.

## Leila Akinyi Ndalilo

Attained a PhD in Natural Resources Management at Egerton University. Her study assessed the effects of land use and land cover change on forest structure, tree species diversity and household livelihoods in River Lumi riparian ecosystem in Taita Taveta County, Kenya, against a back drop of increasing degradation of the riparian ecosystem due to land use changes.



Results of the study indicated that agricultural expansion has contributed to loss of riparian forest area resulting to changes in forest structure and reduction in tree species diversity.

The study provide evidence for developing effective legal, policy and institutional frameworks needed to regulate land-use and promote community led conservation initiatives in the riparian ecosystem while improving agricultural productivity for food security.

Congratulation to all staff who have worked hard, balancing family, work, management and study to achieve post graduate degree, bachelor degree, diploma or certificate.

## KEFRI host oversea student on attachment

KEFRI hosted Ms. Bonnie Marie Carroll, a 3<sup>rd</sup> year student from Reading University (United Kingdom), during her 2-month attachment at headquarters.

Her laboratory and field works, entailed soil sampling and analysis to determine the density, water, nutrient content, carbon, composition and other characteristics such as soil texture, salinity, acidity and PH levels.



Dr. M.T.E. Mbuvi with Bonnie Carrol and Riziki Mwararu

“The attachment has exposed me to Kenyan soils which is quite different from the soil in London. Kenyan soils majorly comprise of Andosols (young volcanic soils), Nitisols, Acrisols, Alisols, Lixisols and Luvisols, Ferralsols, Planosols and Vertisols, whereas in London, the soils can be very broadly divided into either limestone scarps, chalky or clay based,” Bonnie said.

Bonnie who side hassle at Dorset Echo, a daily newspaper in England, stated she is grateful to receive this once in lifetime opportunity that has enabled her to expand worldview and raised her perceptions to a higher level.

“I am now a better person having learnt more skills and exposed to biodiversity in different environments and sincerely thank Dr. MTE Mbuvi who is the link between the University and KEFRI for his immense support. Likewise, Riziki Mwaralu for mentorship and entire staff who I interacted with and made my stay in Kenya comfortable,”she said

Kenya is a great country, people are hospitable and knowledgeable, and I will not hesitate to recommend other students to take the opportunity.

“I look forward to visiting the beaches and wildlife as well as other memorable sites in Kenya if I get a chance,” said Bonnie

## Monitoring forestry adoption in drylands

KEFRI researchers together with JICA expert Ms Honjo Yuki on 22<sup>nd</sup> July 2022, evaluated adoption of farm forestry by contact farmers, initially supported by Social Forestry Training Programme - KEFRI/JICA Project initiative in the 90<sup>s</sup> in Kitui county.

KEFRI Deputy Director in Charge of Forest Research Support Service, Dr. Tito Mbuvi led the team in visit to Messrs Gideon Kinyamasyo in Mbitini, Joseph Mutua Kivelenge, in Makolongo, Kitema Mbole in Mosa, Kisasi and Gabriel Musango Ndeti in Ikanga Mutomo sub-county.



*Dr. Michael Mukolwe demonstrating best potting methods for production of tree seedlings the drylands*

KEFRI/JICA project has worked with farmers in Kenya, where about 80% of the land mass is arid to semiarid, promoting the growing of valuable trees and crops, using various techniques.

“We have been supporting farmers with tree planting and farming technologies, using different treatments. Those who planted mangoes and Mukau are already enjoying the harvests,” says Dr. Michael Mukolwe, a research scientist and trainer at KEFRI.

Mutua Kivelenge is one of the farmers whose farm has variety of trees and annual crops, including mangoes (*Mangifera indica*), Citrus, *Melia volkensii* (Mukau), *Dalbergia melanoxylon*, *Senna siamea*, neem (*Azadirachta indica*), *Terminalia brownii*, tamarind among others

The sampled farmers, some of whom have inherited the practice from their deceased parents, proved they have sustainably managed woodlot and integrated food crops with trees, which is a successful case study worth sharing with other farmers, researchers and policy makers in Kenya and Sub-Saharan Africa.

## Central Kenya, Nyeri show

KEFRI exhibiting its products and services at the ongoing Central region National Agricultural show - Kabiruini, Nyeri County, 7<sup>th</sup> to 11<sup>th</sup> September 2022. Certified tree seeds, quality seedlings as well as forestry technologies and innovations supporting agriculture and trade.



*Assistant Regional Director and Deputy Regional Director for KEFRI Central Highlands Research programme Mr. Stephen Ndungu and Stephen Omondi respectively after receiving trophies at Nyeri ASK show*

At the Central Kenya National Agricultural Society of Kenya show, Kabiru-ini grounds in Nyeri County, held between 7<sup>th</sup> and 11<sup>th</sup> September 2022, KEFRI was awarded trophies for the Best stand demonstrating Research and Development as well as best Non Agricultural statutory Board stand.

KEFRI Deputy Regional Director for Central Highlands Dr. Stephen Omondi commended the staff as well as the collaborators for showcasing forestry innovations and technologies in line with show theme to improve agriculture and trade.

The Chief Guest the Governor for Nyandarua County Dr. Moses Kiarie Badilisha speaking during the opening ceremony together with Nyeri County Governor Mutahi Kahiga pledged to increase budgetary allocations to revive the agriculture sector in their respective counties.

“The show presents is an ideal opportunity to farmers, youth and agribusiness from Nyeri and the larger Central Kenya region to benchmark on methods that can help improve their farming production and make agriculture a lucrative sector,” Governor Kahiga said.

The show brought together a total of 110 exhibitors from the government and private sector who showcased various innovative systems and technologies to boost agricultural productivity, farmers' income and create employment.



*PS, Dr. Chris Kiptoo donating seedlings to Kerio Valley Development Authority staff*

### **Dispatch of 1.2. tonnes of tree seed**

KEFRI dispatched 1.2. tonnes of tree seed to Kerio Valley Development Authority during the 6th Edition of Kaptagat Annual Tree Planting event held at Kaptagat Forest Station in Uasin Gishu County, on 15<sup>th</sup> July 2022.

The PS, Ministry of Environment and Forestry Dr. Chris Kiptoo accompanied by his counterpart PS, State Department for Regional and Northern Corridor Development Dr. Bellio Kipsang presided over the distribution of seeds worth 19 million to 6 Regional Development Authorities stations stretching countrywide.

KEFRI Director Dr. Joshua Cheboiwo and managing Director Sammy Naporos signed an agreement between for provision of certified tree seeds.

“The certified tree seed will enable KVDA produce up to 20 million tree seedlings from the current 2 million annually, which is impetus to achieving the 30% forest cover,” Naporos said.

During the event KEFRI in collaboration with Aviation Kenya and Kenya Water Towers Agency demonstrated aerial seeding using drones as viable technology to reseed degraded landscapes.

“The tree cover and forest cover now stands at 12.3% and 8.8% respectively. Both public and private partners will sustainably finance and raise 2 billion seedlings required to increase forest cover to 30% by 2030,” said Dr. Kiptoo.

The PS also commissioned the fencing and reforestation of the degraded 50.8 hectares of Kaptagat forest that World Marathon Champion Mr. Eliud Kipchoge adopted.

KEFRI scientist, aka the national coordinator of seed production at KEFRI, Dr. Robert Nyambati, led staff and other stakeholders in planting 1000 bamboo and 200 ceremonial seedlings as well as created awareness on restoration and conservation of 1,173 ha of rehabilitated forest.



## Rotary Club mark Wangari Maathai, 11<sup>th</sup> anniversary

The Lavington Rotary Eco Club hosted the annual Rotary charity run in memory of Kenyan conservationist, the late Prof. Wangari Maathai in Muguga Forest Estate, Kiambu county.

The Rotary Eco Club in partnership with KEFRI, Kenya Forest Service, I&M Bank, and Muguga Ecosystem Research Community Forest Association (MERCFA) organized the event.

The annual charity run marked the 11<sup>th</sup> commemoration of Prof. Wangari Maathai, a Lauret who is celebrated due to her outstanding achievements to empower communities, reduce poverty and conserve the environment through planting trees.

All participants joined in 5KM family run, 16KM run and planting 71 trees in a push to educate the public on the importance of sustainable forests and environments.



*Florence Cherono (right); forester incharge of Muguga estate planting Juniperus tree*

Wangari Maathai is a benchmark for environmental responsibility as she set an example of what it means to care for the environment, the future of the planet and our community.

Speaking during the event, the President of Lavington Rotary Eco Club, Ms. Wambui Mbarire stated that, “The annual charity run helps create awareness in our quest for environmental protection and preservation. We want to partner with people with similar interest who can benefit from each other’s knowledge experience and perspectives on environmental issues.”

Chief guest, former Kenyan long-distance runner the first ever Kenya to win a gold medal in the marathon at the 1987 World Championships in Athletics in Rome, Mr. Douglas Wakiihuri, graced the event and spearheaded the 16Km run.

“Sustaining our natural environment is a responsibility for each of us and a cause that I am proud to be a part of. More than ever before, it is important that we take appropriate actions necessary to address the issues of our surroundings the spirit and zeal of the late Prof. Wangari Maathai,” said, Wakiihuri.

KEFRI Deputy Director in charge of research in Central Highlands (CHERP) Dr. Eston Mutitu thanked the partners for joining hand with KEFRI in during the 11<sup>th</sup> commemorative day of Wangari Mathai.

“KEFRI is open to other partnerships as the country continue to plant trees to attain the 30% tree and forest cover by 2030,” said Dr. Mutitu.

The Lavington Eco Rotary Club is a single focused cause-based club initiated in 2019 as a subsidiary of the Rotary Club of Lavington, and its community in dialogue, networking, and hands on service projects around environmentally sustainable causes.

**CELEBRATING WANGARI MAATHAI**

Rotary Club of Lavington Eco | IMAGINE ROTARY

**WITH DOUGLAS WAKIIHURI**

Join us in celebrating the 11th memorial of Kenya's heroine Prof. Wangari Maathai with fun games and nature!

**5km Run (Family).  
16Km run.  
Tree Planting.  
Food & Games.**

Water will be provided  
Tshirts for registered members will be issued between 630 and 7am.  
Lunch will be provided at 550/= by KEFRI Canteen.

**Date: 24th September 2022  
Venue: Muguga Forest  
Time: 7:00 AM**

**Charges:**  
Below 10 years: Free  
10-15 Years: KSH 500  
15 Years & Above: KSH 1000

**M-PESA**  
PayBill: 7251043  
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**CONTACT US:**  
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Run and Plant a Tree. (No Prize Money)

FCRC | Lavington Rotary | KEFRI | M-PESA | TUPA

## Distribution of seeds to community groups

Muguga Ecosystem Research Community Forest Association (MERCFA) is among 15 community groups that have benefited from tree planting materials (planting bags and tree seeds) that KEFRI offered to community groups at a ceremony held on 3<sup>rd</sup> August 2022. at Kenya Forestry Seed Centre - Muguga.



*Dr. Eston Mutitu (5<sup>th</sup> from left ) donating seeds and potting bags to members of MERCFA among other group*

KEFRI Central Highlands Eco-regional Research Programme Director Director Dr. Eston Mutitu together with the County Forest Conservator (CFC) - Kenya Forest Service, Kiambu office Mr Thomas Kiptoo presided over the ceremony.

The beneficiary groups were MERCFA, MYOLD Welfare Nderi group, Dedan Kimathi Foundation, St. Emanuel ACK Church Kikuyu, Penguma Tree Nursery, Kamiti Water Resource User Association (WRUA), Kihuru Nurseries among others.

The groups received between 40,000-100,000 tubes (size 4 by 6 inches), commonly used in potting seedlings.

In addition, each groups benefited from tree seeds, both indigenous and exotic species, to raise seedlings according to their areas of operation, and support the Governments agenda of raising and growing 2 billion trees.

In his remarks, Dr. Mutitu appreciated the group's efforts which he termed has led to the achievement of over 12% national tree cover, adding that it has made the country surpass the target of 10% by 2022.

“Donation of seed and potting bags therefore is courtesy of Economic Stimulus Programme, government initiative to boost economic growth from the economic effect of COVID-19 pandemic, whilst furthering tree planting as key environmental objective,” Dr. Mutitu said .

The research expert promised the groups that he shall forward their technical support request to the KEFRI directorate for consideration.

“KEFRI has embraced public and private partnership framework and all along share research technologies for environmental conservation and livelihood improvement,” said Dr. Mutitu.

The CFC stated that KFS whose key mandate is forest conservation and management, has established E-Nursery registration system for public and private nurseries.

Mr. Kiptoo urged the groups to register their nurseries to enhance networking, production and marketing of tree seedlings to diverse customers.

“We have entrusted KEFRI to identify, verify and register such nurseries for consideration as source of quality tree planting materials,” said Kiptoo.

MERCFA Chairman Mr. Simon Kamonde on behalf of the groups thanked KEFRI and KFS for the offer. However, he requested technical support in training on tree seed and seedling production and link to market.

“We produce tree seedlings which at times overgrows at the nursery due to lack of market. to create ties between institutions and communities groups in order to link market We request Institution to connect us with other organization that will purchase the seedlings,” said Mr. Kamonde.

Most often community groups perceive and realize benefits in exchange for cooperation in resource protection and conservation and such benefit stream has flowed from outside sources, primarily conservation or developmental agencies MERCFA is a community group adjacent Muguga forest and registered in pursuit of the Forest Conservation and Management Act (FCMA) 2016 .

## Somalia Environment Minister visit KEFRI



*Dr. Mohamed (left-centre) visiting KEFRI's seed germination greenhouse where temperatures and humidity are controlled*

Somalia being an ASAL country, has found it necessary to partner with Kenya for technical expertise and experience in management of dryland forests.

The Deputy Minister of Environment and Climate Change, Federal Republic of Somalia, Dr. Said Mohamed Ali said during a courtesy call to KEFRI headquarters on 8<sup>th</sup> September 2022

“Somalia government through the ministry is focused to discuss partnership opportunities and more so programme on rehabilitating degraded lands, afforestation, reforestation and tackling climate change,” Dr. Ali said.

According to World Data Atlas, in 2020 forests cover in Somalia was estimated at 59,800 sq. km approx. 9.5% of land area, with only 4% of the land having dense tree stands.

Somalia lost about 686,000 hectares of forest between 2001 and 2017, an annual loss that equals at least 6% of all the trees lost in Africa, often from using land for livestock and charcoal production.

Dr. Cheboiwo affirmed that KEFRI is ready to offer its support in whichever way as mandated to build capacity of stakeholders within the region.

“KEFRI is ready to support the Republic of Somalia in building its forest assets. The Institute is well versed in dryland species and our teams are ready to offer training and any other technical support you may require,” he said.

The group also had an opportunity to tour KEFRI Seed center where they familiarised themselves with seed production, processing, packaging and distribution.

## Dr. Ahmad Wariq from Egypt visit KEFRI

The month of July 2022 ended with great events that enriched KEFRI in research and development goals.

On Wednesday 27<sup>th</sup>, 2022, KEFRI Director hosted Dr. Ahmad Wariq from Egypt at KEFRI Headquarters. Dr. Ahmad Wariq was in the country for a mid-term review of the Dutch-Sino Bamboo Programme running from 2020 to 2023.

The phase 2 project aims to enhance climate change, mitigation and adaptation by developing inclusive and sustainable industrial and small medium sized enterprises for food security, and environmental management in East Africa, the project Regional Manager, Dr. Selim Reza, said.

On Thursday 28<sup>th</sup>, KEFRI also hosted Mr. Yaniv Gelnik from Cloudline Dynamics Ltd where he held a discussion with KEFRI executive on the possibilities of using unmanned air vehicle (UAV) platforms such as drones, airships for precision in forestry research and development.

Cloudline promotes carbon free airships to variety of public sector stakeholders including the government of several African nations, UAE, Israel and the Indian subcontinent.

“The company can use carbon emission free, lighter than air airships technologies to improve forest resource assessments, modern data collection from permanent forestry sample plots, surveillance, data transmission, which is cost effective,” said Gelnik.

## Komaza opens sawmill in Nyandarua County

Tree farmers in Kenya's central region and adjacent Counties stand to benefit economically following the commissioning of Komaza sawmill in Ol Kalou, Nyandarua County.

The sawmill is one of the most advanced wood processing facilities in East Africa, manufacturing export-grade sustainable sawn timber products - an important milestone for the African wood industry, according to Komaza's Vice President - Corporate Finance and Strategy, Mr. Tomo Kumahira.

“The sawmill that specialize in sawing and processing Eucalyptus wood, will be a game changer in commercial forestry in Kenya,” Dr. Jane Njuguna, who led other KEFRI staff in the ceremony said.



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