His Excellency President Dr. William Samoei Ruto planting a tree at Ngong Hills forest block in Kajiado County where he launched the national programme for accelerated forestry and rangelands restoration campaign

KEFRI Director Dr. Joshua Cheboiwo and KEFRI Board of Directors Dr. John Waithaka planting a tree at Ngong forest to mark the launch of the National Programme for accelerated forestry and rangelands restoration campaign

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Launch of 15billion tree growing campaign

His Excellency President Dr. William Ruto on 21st December 2022, launched the national programme for accelerated forestry and rangelands restoration campaign at Ngong Hills forest block in Kajiado County.

During the function, the President led the nation in planting 5,602 tree seedlings at Ngong Hills Forest to celebrate his 56th birthday, noting the event was also marked countrywide in the 47 counties.

In his key address, the President stated that the national tree growing and rangeland restoration, is a special programme that aims to plant 15billion trees and eventually increase the national tree cover to 30% by 2032.

The President, wants the trees planted in the country over the next decade as part of a program to mitigate negative impacts of climate change, that include recurrent drought.

" The programme will be implemented in 2 phases where 5Billion trees will be grown in between 2022-2027, and additional 10billion between 2027-2032. The first phase therefore is mainly preparatory and establishment of structures to deliver the target," said the President.

The President also recognised the role the private sector and development partners play in mobilizing resources for the program.

"My government's is committed to achieve a cleaner and safer environment through implementation of intentional environmental conservation policies and landscape restoration at the center of our socio-economic transformation agenda," President Ruto said.

He directed citizens to be planting trees in all official functions inorder to surpass the restoration target of 20.5 m ha by 2032.

"Kenya Forest Service (KFS), KEFRI, Kenya Wildlife Service (KWS), and Kenya Water Towers Agency will lead the program wheras the ministry of environment climate change and Forestry will cordinate the activities, that will also engage the 'Green Army' of women and the youth. Likewise, the Ministry of Interior and Cordination of County Government through the Provincial administration are expected to mobilize communities to grow the trees," the President stated.

KEFRI has responsibility to produce 1000 metric tonnes of seed across its 18 seed centres countrywide so as to facilitate production of 15 billion tree seedlings required to rehabilitate 10.6million ha of degraded forests and rangelands.

In addition to distributing tree seeds and potting bags to specific users in various zones coutrywide, KEFRI will be monitoring and verifying tree growing and survival through Jazamiti App.

Launch of Jazamiti App

H.E President William Ruto launched the Jazamiti App, a software that will guide and monitor tree growing in Kenya.

KEFRI together with other stakeholders developed the Application to help monitor tree growing activities country wide.

Overall, the Jazamiti is an innovative and user-friendly platform that provides valuable support to individuals and organizations interested in promoting sustainable forestry practices. By combining cutting-edge technology with advanced analytics, the App has the potential to significantly improve reforestation efforts and contribute to a healthier, more sustainable planet.

KEFRI staff with other team players who developed the Jazamiti App

The Jazamiti App also includes advanced analytics that allow users to track their progress towards the 15billion trees initiative. This feature provides real-time information about the number of trees planted, the types of trees planted, and the locations where they were planted.

The App also provides detailed information about the selected tree species, including an overview of its characteristics, potential uses, and silviculture.

We would like to monitor the growth of the trees in the journey to reach the 15billion target in 10 years. the ideal species to plant in a particular location.

"We are glad that forestry innovations will be a major component in this restoration programme. Each citizen is required to grow 300 tree seedlings per year for the country to achieve the set target.

"We appreciate KEFRI scientists and the ICT team behind the development of the mobile application and who will also provide technical backstopping and real time analytics on the progress," said Dr. Jane Njuguna, KEFRI's senior deputy director incharge of research and development.

"The best time to plant a tree was 20 years ago. The second best time is now." - *Chinese Proverb*.

This is the time to grow your tree now. Plant trees equivalent to your age every year, and together we shall achieve the target of 15billion trees by 2030.

Download the App from Google Play Store and record all the tree planting activities. Additionally, the Application will help users track and monitor the growth of the trees they have planted over time.

Nairobi host IUFRO inspection delegates

Kenya hosted the International Union Research Organization (IUFRO) delegates who were on a site visit to assess the proposed Nairobi venues for the Congress scheduled in the year 2029.

The IUFRO and Kenya inspection delegates at KICC Nairobi

The venues site are Kenya International Convention Centre (KICC) and University of Nairobi Towers.

KEFRI early this year put in a bid on behalf of the Kenya Government to host the 27th IUFRO World Forestry Congress in 2029. Kenya reached the Semi -finals with Canada.

IUFRO is a non-profit, non-governmental international network of forest scientists, which promotes global cooperation in forest-related research and enhances the understanding of the ecological, economic and social aspects of forests and trees.

The global network unites more than 15,000 scientists in around 650 Member Organizations in over 125 countries, and is a member of the International Science Council. Scientists cooperate in IUFRO on a voluntary basis.

IUFRO is conscious of the importance of connecting the young forest science community to address challenges facing forests and forestry.

On behalf of KEFRI we are so indebted to the individuals and institutions that believed and supported our bid in various ways for the sake of our great nation, said Dr. Joshua Cheboiwo, Director KEFRI .

Special appreciation to KICC, Wangari Maathai Institute of University of Nairobi (UoN), immense support from Ministry of Environment, Climate Change and Forestry, the CS Hon. Soipan Tuya and PS Mr. Ephantus Kimotho, former CS and PS Mr. Keriako Tobiko and Dr. Chris Kiptoorespectively.

The National Treasury, Ministry of Interior and cordination of National Government, Immigration and National Police service,

Energy, Kenya Forest Service, NEMA, NETFUND, KWTA, KTF, KTB, NCCG, UON, UNDP, ICRAF--CIFOR, AFF, JICA, USAID.

Local organizing and Planning Committee, our mentors; Brazil and Sweden and PCO, and the media and publicity team for continuously bringing up forestry and environmental matters to the Kenyan public and the world.

Tree planting activities

KEFRI jointly with other stakeholders and planted around 3,500 tree seedlings at the Kavonge Forest in Central District, Kitui County on 21st December 2022.

The community previously planted the tree seedlings and jointly with government and non-governmental officers during the function.

The chief guest, Dr. Jonathan Mwangangi Mueke who is also the County's minister for Sports and Arts, addressing the collaborators that included Ministry departments and Agencies (MDAs), said Kenya's government has launched tree growing campaign in a bid to restore 10.6 million hectares of degraded landscapes in the country and as part of targets to achieve 30 per cent tree cover by 2032.

Mr. Mueke planting a commemorative tree at Kavonge forest

KEFRI scientist based at Kitui centre, Mr. Bernard Kimani Kigwa, said KEFRI under the JICA support programme is conserving genetic pool of *Melia volkensii*, *Osyris lanceolata* (Sandalwood), *Vitex Keniensis (*Meru oak*),* Mahogany, *Dalbergia melanoxylon* and *Terminalia brownii,* among other endemic trees threatened by habitat loss in Kenyas ASALs.

Kigwa said KEFRI is mandated by the government to plant 2,000 *Osyris lanceolata* trees per year.

However, the expert raised concern over the rate at which the residents are exploiting sandalwood in Kitui County.

JICA to support tree growing in Kenya

KEFRI and Japan International Cooperation Agency (JICA) under the project for strengthening forestry sector development and community resilience to climate change through sustainable forest management and landscape restoration is supporting tree development in Kenya's arid and semi arid lands.

Mr. Katsuro Sato speaking during the workshop, said Japan through JICA /KEFRI technical cooperation has implemented several projects on capacity development for sustainable forest management in Kenya in the past 37 years.

KEFRI with support from JICA is selecting and breeding superior *Melia volkensii* and Acacia trees in the drylands of Kenya.

"Some of the key achievemnts are improved germplasm, capacity building as well establishmnt of improved melia woodlots trials with 47 farmers in Tharaka Nithi, Kitui, Embu, Makueni, Meru and Machakos.
However, majority of Melia woodlots are still juvenile and have no capacity to supply adequate timber to meet the ever increasing demand,"said Sato.

Sato further said the project target land owners in semi-arid areas to optimize land use by integrating the improved Melia on farm. Growing Melia is more profitable land use option to agriculture.

"Sandalwood is an threatened species and placed under the Presidential directive's protection in the country," Kigwa said. In 2018, the Convention on International Trade in Endangered Species of Wild Fauna and Flora listed the East African sandalwood as threatened species. Sandalwood is also also restricted under the International Union for Conservation of Nature's Red List of Threatened Species.

KEFRI scientist Mr. Bernard Kigwa informed the workshop that poachers having almost depleted *Dalbergia melanoxylon* trees in the Kenya's lower south eastern region (Kitui, Machakos and Makueni) have targeted *Terminalia brownii* as the next victim for wood carvings. "The Melia timber is not well known to buyers and consumers especially in the major timber markets such as Nairobi and Mombasa," the JICA official said.

"Profitability of agriculture in semi-arid areas is lower than in high potential areas," the expert said, adding that the Melia growing is less labour than agriculture.

Kitui County has been on the forefront to increase the forest cover which is approximated at 7%, Forest and Natural Resources Minister Mr. Meshak Kyalo Muthusi said during the opening of 1- day workshop to deliberate on forestry conservation and tree growing in the drylands.

Muthusi also thanked the Gatsby Africa, a commercial forestry programme, for convening and facilitating the commercial forestry workshop that brought together participants from Kitui, Nairobi, Kwale, Embu, Machakos and Makueni Counties.

"We are grateful to the Gatsby Africa for convening and facilitating this workshop noting that the county is promoting tree growing and forestry conservation through community groups," Mr. Muthusi said.

Muthusi announced that Kitui Government recently donated another over 10,000 acres of land to South Eastern Kenya University (SEKU) for the establishment of learning institution and promote research on dryland forestry and agriculture.

In his presentation, Charles Gitahi representing KOMAZA, a non-governmental organization said the NGO is growing an average 400,000 to 500,000 melia seeds every year jointly with farmers in Kenya.

The official said majority of the farmers lack the knowledge to propagate melia seedlings.

"In collaboration with KEFRI and KFS experts, KOMAZA is working on silvicultural practices to enhance tree performance of trees onfarm to achieve even-aged and higher yields," Gitahi said.

KFS Deputy Conservator Peter Nduati, the acting Kitui County Environment and Climate Change Director Dominic Mutisya Mumbu, Forests Senior Advisor Mike Howard and the Kwale County Environment, Natural Resources and Climate Change Director Joseph Indo also presented during the workshop among others.

Mr. Kigwa further said Kenya Forest Service and the Adminstration is on the lookout for traffickers destroying sandalwood in Kitui County.

Kenyans are now free to apply for permits to grow and harvest the endangered sandalwood. Kenya Forest Service (KFS), Kenya Forestry Research Institute (KEFRI) and the Kenya Wildlife Services issue guidelines which farmers must follow.

The Deputy Caritas Kitui Director Peter Saitoti who also addressed the event said that the negative effects of climate change is real and must be addressed in good time.
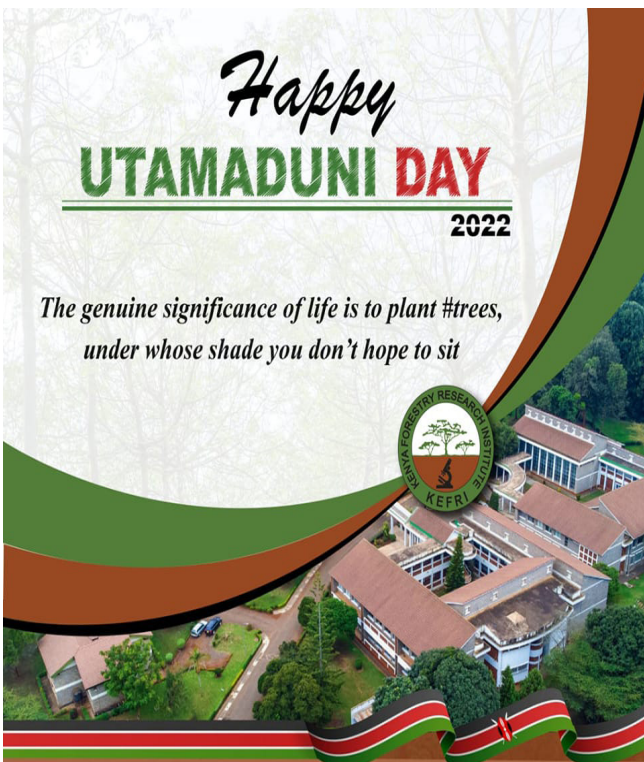
"Let us plant trees to safeguers the environment and let us have the current and the next generation enjoy the happy life through the good environment," he said.

The county have some policies to see that we will help this county in the environmental conservation, Saitoti said.

Saitoti requested the national government to support them in the initiative.

"Kenyan has pledged to plant 15billion trees in the country by 2030 if we support our president in his national tree growing and restoration programme," the non-governmental organisation official said.

The occasion was also addressed by the area (Kyangwithya East) Assembly Ward Member Boniface Maundu Katumbi among others.

Happy **UTAMADUNI DAY** 2022

The genuine significance of life is to plant #trees, under whose shade you don't hope to sit

Training on Bamboo craft

KEFRI - Central Highlands Eco-Region Research Programme (CHERP) on 11th December 2022, wrapped up a 5-day training workshop on bamboo utilization and value addition to products at Tigoni Technical Centre Limuru, Kiambu County.

Trainees displaying bamboo raw material and end product

KEFRI in partnership with International Bamboo and Rattan Organization (INBAR) offered hands-on training to 20 youth group from Muna village.

"The training seeks to empower the youth through tapping into the Bamboo industry, job creation and livelihood improvements. The workshop covered bamboo value addition, harvesting, preservation, scrapping, splitting, cross cutting for furniture and handicraft making, polishing and finishing of end products," said Ms. Nelly Oduor.

Ms. Oduor also issued certificates of participation and supporting tools to the group members, urged the youth to advance the skills acquired on bamboo to protect the environment and improve their livelihoods.

Ms. Nelly Oduor (right) issuing certificate and supporting tools to one of the group members

At the same time Busia Youth Craft Enterprise which is run by Kenya Red Cross Society - as an income-generating entity visited KEFRI Bamboo demonstration plot at Muguga to learn sustainable use of bamboo in environmental conservation and industrial use.

Exhibition

Nairobi International Trade Fair 2022 concluded at Jamhuri Park in Nairobi, having run from 26th September to 2nd October 2022.

The show, which resumed after two years of break due to COVID 19 pandemic, aimed to provide stakeholders in agriculture and related sectors a platform to share information and knowledge that address the changing agricultural needs.

Under the Trade Fair theme; 'Promoting Innovation and Technology in Agriculture and Trade, KEFRI exhibited forestry technologies and innovations that included quality tree seed and seedlings, wood and non-wood products and much needed information to empower farmers and agribusiness improve agricultural and forestry productivity.

KEFRI scoped trophy for the Best Stand Demonstrating the Application of Environmental Quality Standards, also ranked second position for Seed Production and Marketing, Interpreting Show Theme - Education and Research, and third position in Non Agricultural Statutory Board.

At the same period, KEFRI staff participated at the Garissa Inaugural County Resilience Knowledge Fair, held on 23rd November 2022.

The County Government of Garissa, USAID- The Resilience Learning Activity (RLA), and Garissa University and the County Government hosted the inaugural fair.

The RLA is a 5-year program funded by USAID Kenya and East Africa, USAID Somalia, and the Bureau for Humanitarian Assistance supporting entities to apply collaboration, learning, and adapting (CLA) principles to build their capacities to sustainability for resiliency actors.

KEFRI Seed Centre also participated at 3-day Indigenous Seeds and Food Culture Harvest held at the National Museums of Kenya, from 12th to 14th October, 2022) themed 'Investing in diverse indigenous seeds and foods for a healthier future', aimed to appreciate farmer managed seeds and their contribution to food and nutrition security in the country.

KEFRI participated at the 3-day Jamhuri Tech and Innovation summit - KICC 9th to 11th December 2022 exhibiting quality tree seed and services. under the theme Connect, Innovate and Inspire, through ICT.

Experts to propel commercial forestry

As Kenya experiences a wood deficit, commercial forestry is one approach that will bridge this gap. It will further lead to an increase in forest cover and reduce the pressure on the natural forests.

KEFRI and Gatsby Africa has led eleven members of commercial forestry steering committee drawn from key players in the forest sector on a journey to provide baseline information on tree seed science and technology, status of forest pests and diseases of commercial species and tree improvement as the foundation for commercial forestry.

During the 2-day meeting it emerged that Commercial Forestry in Kenya will rely heavily on quality tree germplasm for production of quality products that competes well at both local and international markets.

The team also developed the Kenya Commercial Tree Improvement Strategy to guide the production of quality tree germplasm in the country.

Mr. Jan Vandenabeele, a forest keeper and an agronomist by profession working with Better Globe Forestry (BGF) Limited, will lead the committee and guide the implementation of the strategy.

"Commercial forestry entails tree growing for the purpose of sale and wealth creation. Private lands, rangelands, and suitable grasslands are some of the potential areas for establishing commercial forestry in Kenya," said Jan who is also a Senior Director and board member at BGF.

We are confident that the team will lead a vibrant commercial forestry sector to generate more jobs, increase tree cover, conserve the environment, improve livelihoods and mitigate against negative impacts of climate change.

Kenya aims to establish 150,000 hectares of commercial private forests plantations as one of the Nationally Determined Contributions (NDCs) Adaptation Actions for the period 2020-2030.

ASALs which occupy 80% of the total land in Kenya are potential for commercial plantation either by the government or by private entities through concessions.

Colloquium

Dr. James Kamiri Ndufa, KEFRI's Deputy Director in charge of Forest Biodiversity and Management on 6th October, 2022 during a scientific colloquium presented a research finding entitled, 'Integration of trees in forest and land restoration initiatives: Lesson learnt and challenges from different landscapes in Kenya'.

"According to the study conducted in various ecological sites in Kenya, land degradation is caused by various factors including human activities, population increase, poverty as well as inadequate technologies to mitigate climate change impacts," Dr. Ndufa said.

Dr. Ndufa (*inset*) is ranked globally as one of the scientists whose research work in forestry and agriculture is recognised with over 110 citation.

From the presentation it has been noted that forested landscapes in Kenya look great from outside according to Patrick Shepherd - CIFOR, however the country must rehabilitate 5.1 ha of approximately potential 38. 8 million ha by 2030, as pledged in Bonn Challenge.

These landscapes experience degradation caused by dry conditions, (prolonged drought), forest and woodland degradation, overgrazing, natural calamities such as forest fires, pest and diseases, landslides and hurricane.

"Restoration of such landscapes will include integration of multiple use of various technologies – conserving valuable tree species, application of drones to rehabilitate fragile ecosystems, growing drought tolerant tree and crops, integrating fruit trees and others with potential to absorb carbon, water harvesting, control of grazing and invasive species," said Dr. Ndufa.

Senior Deputy Director in charge of Research and Development Dr. Jane Njuguna in her opening remarks (vitual) stated that KEFRI scientists will continue to share forestry information and research finding with stakeholders and publics with an objective to share new knowledge that will improve forestry and related socio-economic sectors.

KEFRI 6th scientific monthly colloquium was held on 30th November 2022, where the speaker, Dr. George Muthike, a principal research scientist-made a presentation dealing on integrating forest products in green economy and climate change space.

Dr. Muthike (*inset*) who holds a Bachelor of Science in Wood Science and Technology, MPhil. Wood Science and Technology, both from Moi University, Kenya, and a PhD. in Biomechanical and Environmental Engineering from Jomo Kenyatta University of Agriculture and Technology, noted forestry sector is a key source of employment engaging over 50,000 to 600,000 people directly and indirectly respectively. However, forest products and their role in green economy and climate change is less understood.

"Demand for forest products, goods and services will increase due to rapid population growth projected to reach 80million in Kenya by 2050. Integrating forest products in green economy and climate change space is therefore a sure bet to sustainable forest management and improved livelihoods of many communities in Kenya," said Dr. Muthike.

The intervention will entail aggressive research, development and promotion of policies and institutional frame works, efficient technologies for harvesting, processing and utilization of forest resources wood and non-wood forest products (NWFP), value addition, streamline raw materials available, embracing biomass as alternative sources of fuelwood and for construction materials and finally, marketing, capacity building of sector players.

"KEFRI is one of the strongest research institutions in the country with ample forest experts and is working towards digitization of all the forest products," said KEFRI Director Dr. Joshua Cheboiwo

The Director further stated that monthly colloquiums are meant to enhance scientists share information to peers and other stakeholders locally and globally.

Memorandum of Understanding

KEFRI signed a Memorandum of Understanding (MoU) with Lukenya University to undertake collaborative forestry research in Kenya's drylands.

KEFRI Director Dr. Joshua Cheboiwo and Lukenya College Director Stanislaus Mwilu on 22nd November 2022, signed the 5-yr agreement during a colourful ceremony held at KEFRI Headquarters, Muguga.

"KEFRI is pleased to collaborate with Lukenya University in wood science, silvopastoralism and allied natural resources focusing on improving arid and semi-arid lands in Kenya," said Dr Cheboiwo.

During the meeting Dr. Cheboiwo also revealed that KEFRI looks forward to collaborate with other institutions with similar interests to fully make use of its available infrastructure, as well as human capacity with great experience to propel research in drylands.

It emerged that KEFRI has developed knowledge in dryland forestry as well improved several tree species to increase productivity on yields such as quality timber, sppecies with high tolerance to dryland climatic conditions, and other innovations to mitigate climate change.

The University which is under Kasanga Mulwa Foundation, is located at Mtito-Andei, in Makueni County, aspires to be a centre of research not only in Makueni region but globally.

According to the signed document, the two bilateral parties have agreed to establish research trials, build capacity of students, staff and other stakeholders as well as exchange information with impact to education, health, agricultural and environment.

"I am pleased to note that KEFRI has conducted extensive research in drylands of Kenya and selected tree species especially Acacia species that are suitable for rehabilitating those dryland regions," said Director Mwilu.

The University seeks to collaborate with KEFRI in wood science and timber processing, afforestation research in ASALs, generation of timber based products for the Kenyan market, targeting *Melia volkensii* and its value addition chain.

Mr. Ulrich Krueger, the Lead of Development as well as human capacity praised KEFRI for the great experience to propel research in drylands.

KEFRI MoU with Better Globe Forestry

KEFRI and Better Globe Forestry Ltd also renewed collaboration to enhance forestry research and development in Kenya.

Director KEFRI Dr. Joshua Cheboiwo and Managing Director of Better Globe Forestry Mr Jean Paul Deprins signed the MoU for collaboration in areas that include:

* Project development and implementation
* Institutional Capacity building
* Training and exchange programmes
* Joint research, innovation and technology development and information transfer
* Sharing of physical facilities
* Joint publication
* Resource mobilization and joint contractual engagement.

PCEA Church sign MoU with KEFRI

KEFRI also signed an MoU with PCEA Ngong Hills Presbytery, Kerarapon Parish, Oloolua Church.

In the agreement, KEFRI and the PCEA church will grow over 1 million trees annually on the church owned land; sensitize church members on climate change and forestry; species site matching, promotion and adoption of appropriate on-farm tree growing technologies.

In his remarks the General Assembly Moderator Rt Reverend Thegu Mutahi stated that the collaboration marked the beginning of a new journey for Oloolua Parish which has been in existence for the past 87 years.

The Rt. Revernd also urged congregants to ensure that the 200 indigenous tree seedlings that were planted during the signing ceremony are natured to maturity untill they form a forest.

"God's greatest wealth is creation and we need to jealously guard it," he said.

Dr. Cheboiwo thanked the PCEA Church for their interest to work with KEFRI.

"This is the start of a long partnership. We are ready to set up demo plots with core farmers on the church farm in Rumuruti. KEFRI will offer technical expertise and guide farmers throughout the establishment process," he said.

PCEA Moderator, Right Reverend Thegu Mutahi visiting laboratories KEFRI headquarters Muguga where propagation of *Melia volkensii,* Bamboo *and* many other species is undertaken

PCEA Moderator visit KEFRI

On 9th November 2022, KEFRI Director Dr. Joshua Cheboiwo hosted Presbyterian Church of East Africa (PCEA) delegates led by the General Assemby Moderator Rev. Thegu Mutahi at the headquarters.

KEFRI and the Church leadership has shown interest to collaborate in environmental conservation, specifically growing trees to achieve the 30 percent national cover by 2032.

Both parties will come up with Memorandum of understanding to enhance operationalization of growing 10million trees by 2030.

Director KEFRI urged communities to plant trees and conserve the environment for the current and future generations.

Trees provide us with many benefits necessary for survival, including clean air, access to clear water, shade, and food. They also give us hope and insight, and courage to persevere – even in the harshest conditions. Trees teach us to stay rooted while soaring to great heights (Kaylee Brzezinski, 2020).

The Rt Rev Thegu Mutahi reiterated the church's commitment to assist the government attain the 15 billion tree target.

The parties will collaborate in the following areas;

 *Seed orchard /stand establishment of *Melia volkensii*
   and any other tree species agreed upon by the parties

 *Progeny test establishment

 *Resource mobilization

 *Sharing of physical facilities

 *Exchange and dissemination of information

 * Commercialization and marketing of products
   and services.

 * Management of the tree seed orchard.

"The clearest way into the Universe is through a forest wilderness."
"Trees give peace to the souls of men."
*"If you would know strength and patience, welcome the company of trees."*
"To be without trees would, in the most literal way, to be without our roots."

Source: TreeClicks.com

KEFRI partnership with WINROCK

KEFRI Director Dr. Joshua Cheboiwo, held a consultative meeting with Katie Goslee, the Director for WINROCK International, at KEFRI headquarters on 12th October 2022

The discussion focused on the implementation of Offset of National Emissions through Sustainable Landscapes project (ONE-SL) which aims to support countries in developing an operational jurisdictional REDD+ program with nested projects that can attract private sector funding.
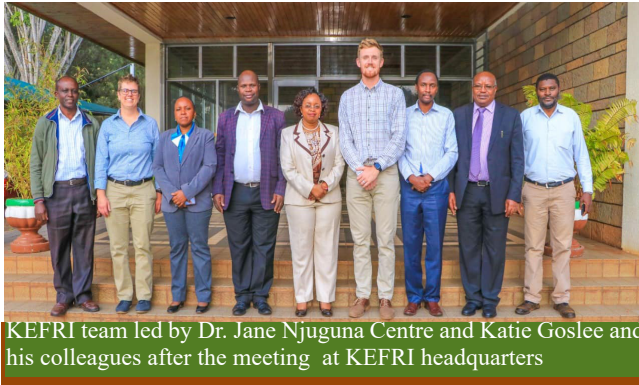
KEFRI team led by Dr. Jane Njuguna Centre and Katie Goslee and his colleagues after the meeting at KEFRI headquarters

"ONE-SL is a 3-year project (2020-2023) funded by the United States and seeks to work with relevant entities in Kenya. It is conducting country assessments in 8 countries – Colombia, Peru, Uruguay, Kenya, Uganda, Zambia, Cambodia, and Vietnam," said Goslee.

The project is providing technical support and tools to countries, project developers, and private sector entities to support jurisdictional "reducing emissions from deforestation and forest degradation" (REDD+) programs that yield high quality offsets.

ONE-SL will develop assessment tools, ascertain the status of REDD+ jurisdictional and nesting efforts and the private sector environment in each country, and then identify 3-4 countries for Stage 2 implementation.

REDD+ is a climate change mitigation approach developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) that enables financial incentives to developing countries for actions to reduce carbon emissions from forest land.

Jurisdictional REDD+ operates across political boundaries and land-use types to implement national or sub-national programs that can incorporate – or 'nest' – individual projects involved in conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

To sell offsets on the market, countries must consider existing international commitments towards the reduction of greenhouse gases as outlined in their Nationally Determined Contributions (NDC) and ensure that emission reductions are not double counted.

ONE-SL will develop an enhanced understanding and capacity for successful implementation of nested jurisdictional REDD+ programs and provide technical support and tools to countries, project developers, and commercial industry offset purchasers.

The project will undertake the following activities:
1. Provide an overview of key requirements for Kenya to access result based payments under the United Nations Framework Convention on Climate Change (UNFCCC) the leaf initiative CORSIA and other mechanism.
2. Based on RBP requirements, assess the current level of readiness in Kenya and identify policy, legal and institutional gap.
3. Develop a roadmap to implement the priority actions identified from this assessment
4. Identify areas of technical support that can be provided by ONE-SL and ares that require engagement of other and or long-term activity.

What is status of Hemp in Kenya?

Director KEFRI and Green Corporation Global Limited CEO Mr. Michael Karanja, on 23rd November 2022, held discussion that explored possible strategies and partnership with relevant institutions to develop policies and explore legal framework for industrial Hemp in Kenya.
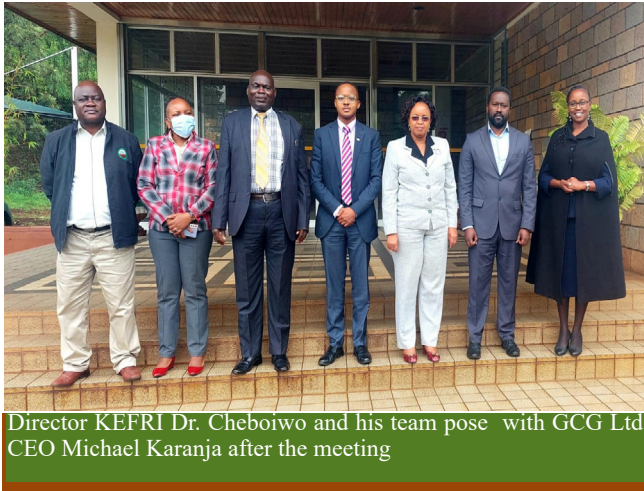
Director KEFRI Dr. Cheboiwo and his team pose with GCG Ltd CEO Michael Karanja after the meeting

Green Corporation Global, registered in 2014 is seeking partnership to research on growth and production of assorted items which are good for the health and even better for the environment.

Industrial Hemp is one of the unexploited fast maturing short term crop that can reduce deforestation, Green house gases, minimize use of plastic materials, and create employment globally, according to the company's chief executive officer Mr. Michael Karanja.

"Several Hemp products including fibre for textile, paper, biodegradable/compostable plastic granules, foodstuff, nutraceutical grain and oils can be utilised to benefit the economy of the country as well as the environment," Karanja said.

Research has shown that Hemp matures within 3 months, and is one of the most sustainable plants on the planet for resilience to climate change. It can be a source of sustainable fuel, sequesters 6 ton of CO_2 per ha which is 4 times much more than a 20 years forest plantation can absorb thereby slowing GHGs in the atmosphere further stated Karanja.

Unfortunately, policy and legal framework to guide registration and development of Industrial Hemp remains one of the greatest challenge in Kenya and Africa", said Mr. Karanja

"Forestry, agricultural, construction and manufacturing are some of the downstream sectors that stand to benefit as a direct result of embracing Hemp," Karanja said.

Bio Char development in Kenya

Professor Hino Hiyoruki from North Carolina University - USA paid a courtesy visit to KEFRI Director Dr. Joshua Cheboiwo, on 25th October 2023, and held a discussion on Kenya Biochar Production Project.

Biochar is a soil nutrient which is effective not only for raising the yield of agricultural production but also repairing degraded soil. It has an immense surface area and complex pore structure that attracts and holds moisture, nutrients and agrochemicals.

The Projects long-term goals include:

1. Adopt to climate change, with biochar as carbon sink and reversal of desertification (greening of barren land).
2. Manage Prosopis to safeguard livelihood and environment for Kenyan stakeholders.
3. Strengthen the agro-processing industries by raising crop yields and moving to "green manufacturing" i.e Carbon negative products; both goals enabled with biochar.
4. Alleviate poverty through creation of jobs, along with restoration of farmland and green pasture for livestock.

The project which will be undertaken in arid lands in Kenya, aims to reduce uncontrolled growth of Prosopis which is outcompeting grasses and crops for scarce water, overtakes farmland and rangelands.

Dr. Hideyuki Kubo from the Institute for Global Environmental Strategies, Japan accompanied by Shimizu Tadashi, Project formulation advisor JICA-Kenya, on 3rd November 2022, paid a courtesy call to Director KEFRI Dr. Joshua Cheboiwo to discuss areas of collaboration.

Dr. Kubo stated that his institute aim to study past tree growing activities supported by JICA projects in Kenya and theorize intervention approaches adopted in natural resource management for enhancing climate change resilience.

"This research aims to identify intervention approaches in which the concept of 'resilience' to climate change can lead to solutions to challenges at the field level,"said Dr. Kubo.

The output of the research is expected to formulate specific policy and recommendations toward achieving climate change policy goals.

KEFRI/JIFPRO

Japan International Forestry Promotion and Cooperation Centre (JlFPRO) and Komatsu Limited will work together with KEFRI to investigate performance of deep rooted trees in Kenya's dryland parts.
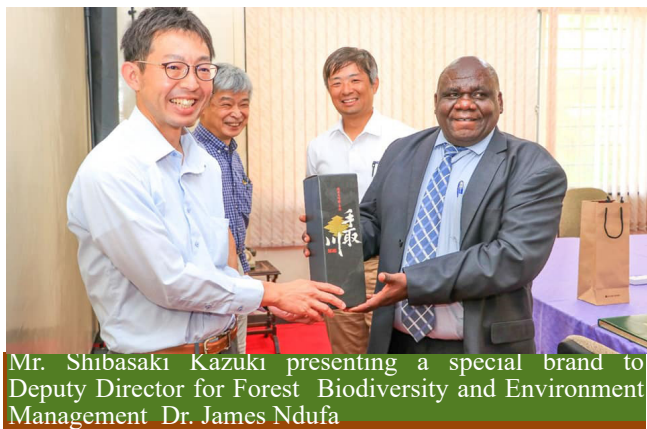
Mr. Shibasaki Kazuki presenting a special brand to Deputy Director for Forest Biodiversity and Environment Management Dr. James Ndufa

KEFRI Director Dr. Joshua Cheboiwo, during the meeting held on 24th October 2022, at KEFRI headquarters, lauded the collaboration between the two organizations.

"Research on morphological and survival of seedlings in the dryland has been ongoing with over 25 deep rooted dryland species so far screened for water retention and survival," Director further said.

The project researcher Mr. Shibasaki Kazuki, lead his team in deliberating on climate change, carbon market and publishing of past and current dryland forestry research works in Kenya.

Strengthen Participatory Forest Management

The Centre for Natural Resources Management. (CINAREMA), executive Director Ms. Ann Mbora, accompanied by Ms. Leila Ndiema, Head of Programme Support Farm Africa and Dr. Diana Onyango, Technical Manager Farm Africa held a discussion with Director KEFRI Dr. Joshua Cheboiwo on concept to enhance capacity for Community Forest Association (CFA) and strengthening coherence between Forestry lnstitutions, Communities and Stakeholders undertaking Participatory Forest Management in Kenya.

The project's main objective is to enhance capacity and governance for forest management lnstitutions for sustainable forest management and improvement of CFA members and community livelihoods.

Adopt a culture of professionalism

The Director KEFRI, Dr. Joshua Cheboiwo urged staff to adopt a culture of professionalism, hardwork, networking, global positioning and transparency.

While addressing staff during a forum held on 25th October, 2022 at the headquarters, the Director stated that KEFRI has 128 scientific staff with capacity and capability to propel the national mandate of producing 1000 metric tonnes of quality tree seeds to achieve the 30% forest cover by 2032.

"Globaly we are facing serious economic challenges and the only means of survival is to embrace proactive and selfless leadership that will consequently lead to improved productivity, expansion of job opportunities and donor funding," said Dr. Cheboiwo

Dr. George Muthike, presented a sermonett from the book of Isaiah 3:1-10, citing the difficulties and tribulations humans are undergoing. But there is hope for the righteous and for waywards too if they correct omissions.

Deputy Director for Human Resources Management Mrs Everyne Oroni, announced that new medical insurance cover will resume from 1st November 2022 to October 2024 covering 2-years.

However, staff are advised to use the fund prudently to minimize over-expenditure.

"Let's seek outpatient medical services from accredited facilities and also register with National Hospital Insurance Fund (NHIF)," said Oroni.

The 1st Environmental Conference, Nairobi

KEFRI Senior Deputy Director Research and Development, Dr. Jane Njuguna attended the 1st Environment Institute of Kenya (EIK) National Conference Nairobi, on 25th November 2022.

Dr. Njuguna's presented a paper that focused on the contribution of forest research in keeping the planet afloat. The topic was in line with the conference theme 'Can Planet Earth stay Afloat for Inter-generation Equity'.

Earlier in the day Ms. Ivy Kimama a Research Scientist in Quality and Environmental Management, also made a presentation on the research factors affecting ISO 14001-EMS adoption in the public sector.

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KEFRI's Central Highlands Regional Director Dr. Eston Mutitu demonstrating tree planting skills to a group of communities who turned up in tree planting exercise at Njambini to commemorate 102 birthday of Hero Field Marshal Dedan Kimathi

KEFRI donate seedlings to DKF

KEFRI donated 200 assorted tree seedlings to Dedan Kimathi Foundation as it marks 102 birthday of Hero Field Marshal Dedan Kimathi.

The event held at Njambi-ini, Nyandarua county, on 31st October 2022, culminated a week-long of tree planting campaign where 1000,102 tree were planted in the counties of Kakamega, Vihiga, Bungoma, Busia and Nyandarua.

The Chief Guest, Nyandarua Senator Hon. John Muhia Methu, who is also the Senate Chairperson of Environment, Water, Wildlife, Land and Natural Resources, said President William Ruto's announcement seeking Kenyans to grow 15 billion trees is part of the country's climate change mitigation agenda by 2032.

KEFRI regional director for Central Highlands Research Programme (CHERP) Dr. Eston Mutitu commended the mutual relationship between the two institutions. Dr. Mutitu while addressing the media at the function noted that KEFRI has previously supported the Foundation with technical backstopping as well as materials to establish tree nursery.

"The government is distributing quality seeds and seedlings to ensure the country achieve 30% forest cover by 2030," said Dr. Mutitu.

Other representative at the function were Kenya Forest Service, Nyandarua County Government, Linda Mazingira Initiative, and Nairobi City Water and Sewerage Company.

"Dedan Kimathi Foundation has planted 2 million trees in 47 counties and aims to plant 30millions by 2030. In Nyandarua County planting of trees is ongoing along Sasumua watershed and the degraded forest sites in Aberdare ranges," said the Foundation CEO Ms. Evelyn Wanjugu Kimathi.

Reflecting on this birthday, we should always ask ourselves: What if Mau Mau heroes did not find the forests which they used as basis for planning, training and organization, could the freedom struggle have succeeded?, the Foundation has posted on their social media.

On 11th October 2022, KEFRI also distributed 1067.7 kgs of assorted tree seeds and 2 million potting bags to Tana and Athi Rivers Development Authority as part of 'The National Strategy for Achieving and Maintaining over 10% tree cover by 2022'. This noble objective will enable TARDA raise the requisite quantities of assorted seedlings (2 million) in Masinga, Kiambere, Tana Bridge, Waterloo, Machakos and Kinangop tree nurseries. Communities and other key stakeholders will plant the seedlings at the Tana and Athi Rivers Basins for the purpose of environmental conservation.

Induction for New employeees

The newly engaged KEFRI employee's underwent a 3-day induction course at the headquarters from 13th to 15th November 2022. Speaking during the opening session, Director KEFRI Dr. Joshua Cheboiwo urged the new staff to be resourceful in their respective areas and adhere to work ethics. Deputy Driector for Human Resources Management Madam Everlyne Oroni in her remarks stated that staff induction is an effective and efficient means of outlining workplace policies and procedures to new staff.

"We are providing specific information to enable new employees understand their role and how to perform their duties. We are also setting expectations within the larger context of institution goals, objectives and the business operation as a whole," said Oroni.

KEFRI AGM Pension

KEFRI held its Annual General Meeting for the Defined Contribution Retirement Benefits Scheme for the year ended June 2022. KEFRI's Chairman of Board of Directors Dr. John Waithaka urged staff to prepare for retirement early enough through contributing effectively to the scheme. "KEFRI is a unique institution with minimal statutory debts and my administration aspire to improve the pension and other welfare issues of staff," Waithaka said.

Dr. Waithaka further said; saving for retirement is critical to staff who plan to take care of their future life in retirement. "Retiree majorly use pension to offset medical bills, meeting basic needs, thus, additional voluntary contributions is critical investment for staff who intend to increase their returns. - pension. According to the Chairman of the trustee Dr. George Muthike, last year the scheme had the highest net return of 14.2 %, with 32 staff having exited the service within the period.

Staff Exit

No. Name	P/No.	Exit Date	Exit type
1 Jane Nyang'ea Mwaura	6321	1.7.2022	Ret
2 Absolom M. Memba	6195	1.7.2022	Ret
3. Charles Wahome Kingori	6158	1.7.2022	Ret
4. Mary Wanjiku Kingori	6172	1.7.2022	Ret
5. James Ndungu Kuria	6333	1.7.2022	Ret
6. John Wainaina Mwaura	6223	1.7.2022	Ret
7. Ayubu Owino Oluoch	6425	1.7.2022	Ret
8. Abdub Ayano Gonosa	5675	1.7.2022	Ret
9. Beatrice Nasimiyu Ndakwe	5599	1.7.2022	Ret
10. Julius Kithonga Nguli	6785	1.7.2022	Ret
11. Mutemi Mutia	6508	1.7.2022	Ret
12. Charles Ouko Oricho	6765	1.7.2022	Ret
13. Shadrack Ouma Odhiambo	6374	1.7.2022	Ret
14. Hellen Achieng Ouma	6224	1.7.2022	Ret
15. James Musemi Katembu	6065	1.7.2022	Ret
16. Ali Zimba Buya	5770	1.7.2022	Ret
17. Gideon Mukuna Musili	5754	1.7.2022	Ret
18. Joseph Muindi Kalani	5828	1.7.2022	Ret
19. Jemimah Ayoo Oguta	6795	1.7.2022	Ret
20. Jeremiah Sukano Musango	6288	1.7.2022	Ret
21. Michael Opiyo Ogendo	6281	1.7.2022	Ret
22. Esther Mukuhi Gitau	6343	1.7.2022	Ret
23. Margaret Bonareri Omenda	5881	1.7.2022	Ret
24. Joyce Nthenya Katiku	6359	1.7.2022	Ret
25. Alice Bosibori Omenda	5527	1.7.2022	Ret
26. Jane Otieno Oballa	6002	1.7.2022	Ret
27. William Omondi Oloo	6127	1.7.2022	Ret
28. Jared Oriwa Oriwa	5609	1.7.2022	Ret
29. Stephen Muriithi Isaiah	5781	1.7.2022	Ret
30. David Ngugi Gatuha	5501	1.7.2022	Ret
31. Luke Gibera Agesa	5469	1.7.2022	Ret
32. Geoffrey Ndungu Karanja	6672	1.7.2022	Ret
33. James Maina Maina	6975	1.7.2022	Res
34. Samuel Ndungu Mbugua	5600	31.7.2022	Ret
35. Catherine Njeri Kirai	5637	3.8.2022	Ret
36. Joyce Atieno Ojino	7181	1.8.2022	Res
37. Julius Samini Kazungu	7088	24.8.2022	Ret
38. Rosemary Auma Okello	5864	11.9.2022	Ret
39. Kevin Muriithi Micheni	7110	1.9.2022	Res
40. Gilbert Uhuru Okose	5496	28.9.2022	Ret
41. Elizabeth Ngina Maruku	6047	24.9.2022	Ret
42. Winfred Muthoni Gichuki	6339	22.9.2022	Ret
43. Sylestine Awino Oduor	6266	30.9.2022	Ret
44. Patrick Kahura Maguru	6191	3.10.2022	Ret
45. Shem Ogalo Odiyo	6241	24.10.2022	Ret
46. Joseph Ooko Duyu	6248	20.10.2022	Ret
47. Peter Wanganga Wanzetse	5950	24.11.2022	Ret
48. Michael Omondi Oketch	6865	1.12.2022	Ret
49. Robert Wanjama Mwangi	5837	12.12.2022	Ret
50. Ephantus Muriithi Njagi	6372	12.12.2022	Ret
51. Eunice Gathoni Wakaba	5626	23.12.2022	Ret
52. Penuel Nyagaka Oyabi	6329	23.12.2022	Ret
53. Norah Achieng Adero	5472	24.12.2022	Ret
54. Lucas Anthony Amayoti	6235	31.12.2022	Ret

Key: Ret:- Retirement
Res:- Resignation

Wishing you and your family peace, health and happiness

Merry
CHRISTMAS
& HAPPY NEW YEAR
2023