

# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program

www.tist.org

English Version

TIST is an innovative, time - tested, afforestation program led by the participants.



Gantangine Cluster meeting held on 21/06/2023.

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# TIST: CCBA Public Comments Requested.

Clean Air Action Corporation (CAAC) is pleased to announce its intent to verify the following project for the fourth time under the Climate, Community and Biodiversity Alliance (CCBA) standards:

- TIST Program in Kenya VCS-005 (VCS737), formerly CCB-002, was previously verified 25 March 2021. This verification is for the period 23 May 2020 through 14 April 2023.
- TIST Program in Kenya VCS-006 (VCS899), formerly CCB-003, was previously verified 17 May 2021. This verification is for the period 06 January 2021 through 14 April 2023.
- TIST Program in Kenya VCS-009 (VCS996), formerly CCB-004, was previously verified 25 March 2021. This verification is for the period 23 May 2020 through 14 April 2023.

To receive the verification, CAAC must demonstrate, among other things, that TIST is beneficial to climate, community and biodiversity. CAAC has submitted a Monitoring Report (MR) to Verra (the entity that manages VCS and CCB) and to EPIC Sustainability Services Pvt. Ltd., a CCBA certified auditor.

We are required to disseminate the monitoring results. For those of you with internet access, including at a cyber café, we welcome you to visit these webpages where the Monitoring Reports and other documents are available for review. In addition, there is a Public Comments link where comments may be submitted (just below the map). The comment period is open until 08 July 2023.

KE005: <https://registry.verra.org/app/projectDetail/VCS/737>

KE006: <https://registry.verra.org/app/projectDetail/VCS/899>

KE009: <https://registry.verra.org/app/projectDetail/VCS/996>

We also provide TIST project pages where additional documentation is available:

KE005: <http://www.tist.org/PD-KE-VCS-005%20Documents.php>

KE006: <http://www.tist.org/PD-KE-VCS-006%20Documents.php>

KE009: <http://www.tist.org/PD-KE-VCS-009%20Documents.php>

For those without Internet, the monitoring results were published in the May 2023 Kenya newsletter, Mazingira Bora.

The following are the monitoring results for their respective PDs:

<b>Climate</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD Live Trees	2,690,275	1,622,971	597,901
PD carbon to date (t)	1,506,329	1,134,369	467,888
PD carbon this period (t)	397,586	38,384	134,805
<b>Community</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD members	35,318	35,324	12,205
PD Small Groups	5,168	3,961	1,731
KE members in TIST	130,534	same	same
KE Small Groups in TIST	18,490	same	same
KE active members	90,100	same	same
KE Members with GhG contracts	87,178	same	same
KE Carbon Payments from Start	\$3,080,673	same	same



KE Carbon Payments this period	\$2,042,974	\$1,818,880	\$2,042,974
KE Training, Climate change, from start	161,844	same	same
KE Training, Climate change, this period	36,114	38,497	36,114
KE Training, Conserv Farming, from start	261,643	same	same
KE Training, Conserv Farming, this period	44,638	47,517	44,638
KE Training, health, from start	134,917	same	same
KE Training, health, this period	2,039	2,086	2,039
KE Training, biodiversity, from start	278,250	same	same
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PD indigenous trees	375,963	258,182	99,714
PD indigenous hectares	1,575	1,046	331
<i>vitex keniensis</i> trees	20,407	12,181	5,899

Notes:

- the period is the monitoring period of the PD.
- training is person-sessions such as at Cluster meetings.
- PA is a project area, also termed a grove.
- *Vitex keniensis* is the Meru Oak

We are seeking gold level CCB certification for each project.

**Climate Change Adaptation Benefits:** The three projects have removed 3.1 million tonnes of CO<sub>2</sub> from the atmosphere. TIST members are trained in Conservation Farming to help address climate resiliency. The PD documents thousands of trees that help retain soil moisture, provide shade and prevent erosion. TIST provides new community organization in the form of Clusters and Small Groups.

**Exceptional Community Benefits:** TIST is demonstrated to be pro-poor in a poor area with net positive impacts on the community. Farmer

members generate and receive short- and long-term benefits. TIST trains farmers in many sustainable development programs that, when implemented, generate benefits to well-being. They grow trees and receive a share of the carbon revenues. They determine where to grow their trees, what species to grow that will be most beneficial to their well-being and how many to plant. During this period, the average farmer has received \$3,557 in monetized benefits. As separate classes, the average vulnerable and women member has received \$1,246 and \$3,368, respectively.

**Exceptional Biodiversity Benefits:** *Vitex keniensis* (Meru Oak) is endemic to the Mount Kenya region and is listed as endangered on the IUCN Red List. The population trend is assessed as decreasing. TIST farmers in this PD have planted and maintained over 38,487 *Vitex keniensis*, a clear, direct benefit to the species.

For questions, please contact [CharlieWilliams@CleanAirAction.com](mailto:CharlieWilliams@CleanAirAction.com)



# TIST Farmers Combat Global Warming and Climate Change.

**T**IST farmers have responded to a global call to combat global warming and climate change. Many farmers have sought understanding through TIST seminars/trainings and at Cluster meetings to learn and understand more about global warming, its effect on the climate, and mitigation approaches. We see many impacts of climate change today. Just to illustrate a few instances of impacts, the El Nino floods of 1998 that ravaged most of the country and the long drought that followed, and the strong hurricane of 2004 were likely intensified by global warming. Other notable illustrations are the gradual wearing off the glaciers at the peak of Mt. Kenya, unpredictable weather patterns that have resulted in crop failures in many areas, drying of water springs and water catchments areas, among many others.

This month's newsletter will share training notes from seminars so that we all can understand global warming and climate change better. We will begin by defining each term and explaining it further and then learn how your trees play a significant role in mitigating the effects of global warming.

## **What is Global Warming?**

Global warming refers to an average increase in the Earth's temperature, which in turn causes changes in climate. A warmer Earth may lead to changes in rainfall patterns, stronger storms, a rise in sea level, crop failures, and a wide range of impacts on plants, wildlife, and humans. When scientists talk about the issue of climate change, their concern is about global warming caused by human activities and the extremes of climate and weather variability this brings about.

## **Is the Earth getting warmer?**

Yes! The Earth has warmed by about 1°C over the past 100 years. Many of the world's leading climate scientists think that things people do are helping to make the Earth warmer, such as burning of fossil fuels including coal, petrol, and natural gas, and cutting forest and managing land poorly.

## **What is the Greenhouse Effect?**

The greenhouse effect is the rise in temperature that the Earth experiences because certain gases in the atmosphere, called greenhouse gases, like carbon dioxide, nitrous oxide, sulphur dioxide, and methane trap energy from the sun. Major sources of carbon are deforestation, gases emitted from

industries, gases emitted from motor vehicles, gases emitted from burn of wood fuel or charcoal and burning of forests.

## **What are the dangers of Global Warming?**

- Severe water stress in the arid and semiarid land areas would result in more areas becoming desert.
- Increased spread of diseases like malaria. As areas become warmer, they become suitable breeding grounds for mosquitoes, and increasing risks of malaria infection. Many families and health institutions can be impacted, average life spans decline, and infant mortality rates rise.
- Decreased agricultural production in many tropical and subtropical countries, especially countries in East Africa. Due to decreased rainfall and increased breeding of pests due to increased warming, the production of food crops may decrease, and this results in poverty and hunger among many families and communities.
- Higher worldwide food prices. As more farmers get less yields and food supplies become scarce, the prices increase because the demand is high and supply is low.
- Major changes in the productivity and composition of critical ecological systems, particularly forests. Water catchment areas in the mountains and forests continue to dry up. This will affect the ability to irrigate crops and will reduce stream flows necessary to keep dams and reservoirs replenished. This will reduce generation of hydroelectric power. Our industries, hospitals and other institutions that heavily rely on electricity will be severely affected. The supply of piped water to urban areas as well as rural homes will also be affected.
- Tens of millions of people at risk from flooding and landslides, driven by projected increases in rainfall intensity and in coastal areas, rising sea levels.

## **How can I prevent Global Warming? Plant and care for trees!**

As mentioned above, carbon dioxide is one of the gases that cause global warming. Trees absorb carbon dioxide from the air during photosynthesis and store it in the wood, roots and soil as cellulose carbon. However, when trees are cut and burned, they release the carbon they had stored back to the air.

**Did you know each tree could create a microclimate?**

Trees and their cover cool the surface of the earth. Feel the comfort of the shade of a tree. Notice that the soil below is moister than where the sun bakes it with no shade. When the ground stays cooler, the ground holds more moisture longer. This means that trees on your land will help improve the amount of water in your soil and help retain it for a longer time. This will help your crops and also even help the water users in your area.

**What are carbon credits?**

To make a TIST carbon credit requires 3 things:

- 1) A real and additional reduction in the carbon dioxide (CO<sub>2</sub>) being emitted to the air;
- 2) A promise to keep the carbon out of the air for many years;
- 3) A Verification by an independent third party that certifies that the actions have taken place according to all the rules.

Trees absorb carbon dioxide from the air during photosynthesis and store it in the wood, roots and soil. The amount of carbon taken from the air and stored can be measured and calculated, and then, when verified as accurate, this absorption of carbon dioxide can be sold on the world market as carbon credits. Buyers can purchase these credits to offset their carbon dioxide emissions.

TIST is able to sell the carbon absorbed in trees just like producers sell sugar and milk. With carbon, however, you don't ship the tree to the market. Instead, the value is from the carbon taken out of the air, kept in the tree on your farm or forest, measured and reported. The trading of carbon credits can be done in New York, Chicago, London, and other cities globally, or it can be arranged between people or companies directly. We have to meet the market rules and requirements. We cannot clear forest or cut trees to plant trees since this is bad for the environment. We have to commit to keep trees in a grove growing for the long-term, 30 years or more. We have to report data accurately. Once trees are planted, some measurements and calculations are made to measure the amount of carbon TIST farmers trees have absorbed. Note again, trees are never actually taken to the markets. They remain in the shambas and the longer they stay alive, the longer the period of receiving payments. So, the farmer keeps the trees, the fodder, the firewood, and the fruits and the nuts. The money that TIST makes selling carbon offsets creates a new source of income and is then shared with TIST Small Groups and used to support the costs of TIST, including training, quantification, and management.

**Do all trees absorb the same amount of carbon?**

No, trees with wider circumference (more biomass) store more carbon than trees that are thin. Taller trees also absorb more carbon than short trees. Therefore, trees that are thick will bring more income from carbon credits. This means trees planted with good spacing have a chance of growing big and tall and earn more carbon income. They do not compete for soil nutrients and water as much as trees that are closely spaced.

Therefore, in order to receive good payments out of our trees, it is important to plant them in a good enough spacing that will allow them to grow healthy, tall and big. Thinning some of the trees to harvest firewood and keep the other trees growing well is usually the best way to manage your trees.

**Where/who are the buyers of carbon credits?**

Currently, carbon credits are sold on voluntary markets and in compliance markets. They may be certified in different ways, just as there are different brands and certifications for other products you buy and sell (like coffee, and organic coffee under different labels). TIST could market its carbon credits on the compliance or the voluntary market because they are of high quality.

There are many different standards in these markets with different and ever-changing rules about tree planting, monitoring, and reporting that we must meet to sell carbon offsets. We use the highest quality standards for the Validation and Verification — the Verified Carbon Standard (VCS) and the Climate, Community, and Biodiversity Alliance Standards (CCBA).

**TIST has two basic types of buyers:**

The first is made up of people willing to give money to encourage people to plant trees. Examples include paying for tree planting projects to make a wedding or a conference carbon neutral. The second type is made up of companies in the US, Europe, Canada and other industrial countries that are making voluntary commitments to reduce their GhG emissions either because they are good stewards of the environment or they are preparing for future regulatory requirements.

TIST is very happy to have good quality carbon credits, and to be able to supply many different customers.



## Planting Trees in Dry Areas.

**A**s TIST continues to expand both in high potential and dry areas, we face challenges in tree survival. In TIST, we always develop and share Best Practices, and this has always helped us in the TIST family get good results.

Below are some Best Practices that we can try in tree planting in dry areas:

1. Site selection for your nursery is especially important in dry areas. Seedlings will need to be watered once or twice each day when they are young. Consider keeping the seedlings in a convenient area near your home so you can use household water for seedlings. Using a windbreak around the nursery will reduce water use, and provide shade to protect young seedlings.
2. Early Preparation: Prepare the holes for tree planting possibly 1 month before the onset of the rain, the hole will crack and this will help in easy water penetration when it rains. After the first downpour, plant the trees and fill in the hole starting with the topsoil and manure.
3. Try using rainwater harvesting techniques, like micro-basins, so that more water reaches trees. Trees may also better survive if planted near areas where water flows seasonally.
4. Mulching: Mulch after planting the trees. This will help in moisture retention as it reduces evaporation. Using a compost manure will add nutrients to soils, but rock mulching can also provide some benefit in rocky areas.
5. Agro forestry: Let us try to practice agro forestry. The survival rate of trees planted in farm areas is higher than those planted in grassland and bushy areas since trees are better cared for and on better soil.
6. Choose species that grow well in dry areas. Often indigenous species from the surrounding area are strong survivors. Some examples include *Melia*, *Acacia seyal*, and *Muuuku (Terminalia brownii)*.
7. Protect existing trees and allow them to regenerate. These established trees are strong, and can often survive difficult seasons if we protect them. They provide an important source of locally adapted seeds as well as shade and other services.
8. Raised seedbeds or sunken seedbeds can help. When we establish the raised seedbed, we get seedlings with strong roots, so their survival rate is high. It may also help to keep seedlings a bit longer in the nursery so they can grow bigger and stronger. However, a sunken seedbed may also be a good choice since it shelters the seedlings and reduces drying. In this case, be careful to turn seedlings frequently so roots don't grow into the ground below the tubes, damaging roots in transplanting.

Let's use the best practices we have and develop and share with others so that we can achieve more results and help TIST grow in our areas.

# Mazingira Bora



# TIST

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**Kimereu Version**

*TIST is an innovative, time - tested, afforestation program led by the participants.*



**Mkutano wa Nguzo ya Gantangine uliofanyika tarehe 21/06/2023.**

**Inside:** TIST: CCBA, maoni jaku nijakwendeka. Page 2

Arimi ba TIST kurua na murutira na ugaruruku wa riera. Page 4

Uandi miti ndene ya ntuura injumu. Page 5



## TIST: CCBA maoni jaku nijakwendeka.

**C**lean Air Action Corporation (CAAC) iri na gikeno kubumenyithia wendo wayo wa gutegerwa ngugi kiri murudi juju kagita kangi ka jana ndeene ya Climate, Community and Biodiversity Alliance(CCBA) Standards.

- Muradi wa TIST ndeene ya Kenya VCS-005 (VCS737), iria yaijikene ja CCB-002, yategi tia muthia 25th March 2021.Utegi uju ni wa kagita ga kuuma 23rd May 2020 gwita 14th April 2023.
- Muradi wa TIST ndeene ya Kenya VCS-006 (VCS899), iria yaijikene ja CCB-003, yategi tia muthia 17th May 2021.Utegi uju ni wa kagita ga kuuma 6th January 2021 gwita 14th April 2023.
- Muradi wa TIST ndeene ya Kenya VCS-009 (VCS996), iria yaijikene ja CCB-004, yategi tia muthia 25th March 2021.Utegi uju ni wa

kagita ga kuuma 23rd May 2020 gwita 14th April 2023.

Kuumba kugwata verification iji, CAAC nonkinya yumbe kuonania amwe na jangi ati, Muradi wa TIST uri na baita kiri riera, amemba na antu bonthe na nkinya jaria jatithiurukirite. CAAC ni ijejanite ripoti ya utegi ngugi (MR) kiri Verra (baria bategagiira ngugi cia VCS na CCB) na nkinya kiri EPIC sustainability Services pvt.Ltd., baria betikiritue gutega ngugi ni CCBA.

Nitubataranitue kuonania mpumi iji jiegie monitoring. Kiri baria bari na internet, ona kethira ni gwita cyber, nitukuburomba bwite webpages iji naria ripoti ya utegi ngugi na ntumiri ingi iri nikenda ciomba gutegerua. Amwe na jau kuri na public comments link aria maoni jomba gutumwa (o au nthiguru ya map). Kagita ka gutuma maoni ni karuguri mwanka 08 July 2023.

KE005: <https://registry.verra.org/app/projectDetail/VCS/737>

KE006: <https://registry.verra.org/app/projectDetail/VCS/899>

KE009: <https://registry.verra.org/app/projectDetail/VCS/996>

Nitukuejana nkinya TIST project pages aria uumba kwona mantu jangi

KE005: <http://www.tist.org/PD-KE-VCS-005%20Documents.phd>

KE006: <http://www.tist.org/PD-KE-VCS-006%20Documents.php>

KE009: <http://www.tist.org/PD-KE-VCS-009%20Documents.php>

Kiri baria batina internet, mpumi iji cia utegi ngugi niciandikirwe May 2023 ndeene ya Mazingira Bora.

Iji nijio mpumi cia utegi ngugi kiri PDs.

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<i>vitex keniensis</i> trees	20,407	12,181	5,899

**Ririkana:**

- Period ni kagita karia gatumikire gutega ngugi ya PD.
- Training ni kagita ja karia ka micemanio ya clasta.
- PA ni Project Area kana aria ngugi ya TIST iritiritue kana grove.
- *Vitex keniensis* ni meruoak kana muhuru.

**Turicua kiwango kia gold kiri certification ya CCB kiri o project.****Baita cia kumenyaniria na ugaruruku wa Riera:**

Project iji ithatu niciumbite kurita 3.1 million tonnes jia kaboni kuuma rierani. Amemba a TIST nibaritanagwa urimi wa CF nikenda boomba kurua na ugaruruku wa riera. PD iji nionantie miti magiri maingi iria itethagiiria kugiria gwita kwa ruuji kuuma muthetune, kuejana mwigunyi na kugitiira gwita kwa muthetu. TIST ni ijejanaga mibangire ingi kiri community bakathithia clasta na tukundi tunini.

**Baita ingi jia mwanya kiri community:** TIST yonekaga juri muradi wa antu athini kiri guntu kuri na thina na ikiretaga mantu ja baita kiri community.

Arimi baria amemba niboombaga kuthondeka na kwona baita cia kagita gakuhi na gakaraja. TIST ni ithomithagia arimi njira inyingi cia gwita na mbere na aria jathithagua nijaretaga baita na gwikara bweega. Arimi baandaga miti na bakoomba kugwata gicunji kia mbeba kuumania na wendia wa kaboni. Arimi nibo bamenyaga aria bakaanda miti, mithemba ya miti iri bakwenda na iria ikethirwa iri na baita kiri bo eene na nkinya ni miti igana bakaanda. Kagitene gaka, ki murimi wa miti itingii niombaga kugwata \$3,557 baita cionthe itaritue. Kwa njira mwanya mwanya, murimi ari na thina na ekuru niboombita kugwata baita \$1,246 na \$3,368.

**Baita cia mwanya jiegie maria matuthiurunkite:**

*Vitex keniensis* (meru oak) muhuru ni muti jwa region ya Mount Kenya juria juri thinene ya kuthira kuringana na rekodi ya IUCN red list. Namba ya miti iji nonka ikwonania igiita mbere kunyiha. Arima ba TIST kiri PD nibaandite miti iji na bakamimenyeera miti nkuruki ya 38,487 njira ya utheri yegie kugitira muti uju wa muhuru.

Ukethira uri na kiuria, araniria na [CharlieWilliams@CleanAirAction.com](mailto:CharlieWilliams@CleanAirAction.com)



# **Arimi ba TIST kurua na murutira na ugaruruku wa riera.**

**A**rimi ba TIST niberutaniritie kurua na kuongereka kwa murutira na ugaruruku wa riera. Arimi baingi nibetite mbere kumenya kiri seminar cia TIST, ithomo na nkinya kiri micemano ya clasta mantu jegie murutira na ugaruruku wa riera na mathina jaria jejanagia na nkinya njira cia kurigiiria. Nandi iji ni tukwona ugaruruku u mwingi muno. Gwa ukuhi nitukuririkana mbura ya Elnino mwaka wa 1998 iria yathukirie imera na nyuma kwagia na kiangazi, rukungi rwa hurricane 2004 ni jionereria jia ugaruruku wa riera. Nandi iji kuri na kwaga mbura, ringi mbura inene na nkinya kwomokanga ni jionereria jia ugaruruku wa riera. Jionereria ingi ni kuthira kwa mbarabu kirimani kia Mt Kenya, kugaruka kwa mbura na riuga kuria gutumite imera ikaaga gukura guntu kuingi, kwija kwa ngige, kunyaruka kwa nduuji na nkinya naria nduuji ciumite.

## **Murutira wa nthiguru nimbi?**

Guku ni kuongereka kwa murutira kiri nthiguru, na gukareta ugaruruku. Nthiguru iri na murutira ni kugejaga na njira ya murire wa mbura, nkwa inene, gwita kwa nduuji ja maria, kuthoka kwa imera na thina kwoneka kiri imera, nyomoo na nkinya antu. Riria ataramu bakwariria kugaruka kwa riera, bethagirwa bategerete murutira wa nthiguru uretetwe ni ngugi iria antu baritite benyangia jaria jatuthiurukite.

## **Nthiguru ga ikugia murutira nkuruki?**

ii! Nthiguru ni igiite na wongereka wa murutira na 1°C gwa kagita ka miaka 100 mikuruku. Atalamu ba riera ni baiji ngugi iria igwitua ni antu nijio jiongagiira murutira kiri nthiguru ja kuethia ja makara, betroli, ngasi, kugita muthitu na kurima bu thuku.

## **Ugaruruku wa murutira ndeene ya nyumba nimbi?**

Guku ni kuongereka kwa murutira kiri nthiguru niuntu bwa ngasi iria jiithagirua iri kiri riera ja kaboni dioxide, nitrous oxide, sulphur dioxide na methane iria ijukagia migwi ya riuga na gukagia murutira. Njira iria Nene ya kureta kaboni ni kugita miitu, ma industry kurekeria giko rierani, togi kuuma kiri ngari, togi kuuma kiri gwakia nku na makara na kurithia miitu.

## **Thina ya kurugutiira kwa nthiguru imbi?**

- Thina ya nduuji guntu kuumo kugatuma kugatuika jangwa.
- Kwo gereka kwa mirimu ja malaria. O uria kuri na murutira nou rwagi ruciaranaga na kwongerera ugwatithania wa malaria. Micii i mingi ni ito githagua ni thina iji na muturire ukanyihia.
- Kunyihia kwa maciara kiri miunda kuria kurimagwa aja East Africa. Bubu niuntu bwa unyihu wa mbura na kwongereka kwa tunyomoo twinyangia imera niuntu bwa murutira guku kuretaga kunyia kwa maketha naku gukareta ukia na mpara kiri micii na antu.
- Kwongereka kwa maguri ma biakuria nthiguru yonthe. O uria arimi bakugwata maketha makai na biakuria bikanyihia, maguri nikamongerekaga niuntu nika ikwendeka ni antu baingi nacio ni inkai.
- Ugaruruku kiri guciarithania na muno kiri miitu. Ithima cia nduuji na kuuma irimani na miitu gwita mbere kunyara. Guku gutumaga antu bambiria gwikira imera ruuji na ruuji rukanyihia kiri miuro iria yongagiira nduuji Kiri dams na maria. Guku gutumaga inya wa thitima ukanyihia. Ma Industry, cibitari na baria batumagira inya wa thitima nibatongithagua ni thina. Gutambia kwa ruuji rwa mibibu kiri matauni na micii nkinya bu nibwonaga thina.
- Ma million ikumi ma antu kwithirua bari thinani ya nduuji na kwomoka kwa mithetu niuntu bwa mbura na kwongereka kwa nduuji kiri maria.

## **Boomba kunyihia kwongereka kwa murutira ati?**

### **Anda na umenyeeere miti!**

Kaboni dioxide ni imwe ya ngasi iria jiongagiira murutira. Miti ikujagia ngasi iji riria ikuthithia biakuria na gwika mutine, miriine na nkinya muthetune. Kunari uu, miti igatemwa ikina ithua icokagia kaboni iji ikigwite ringi rierani.

**Ni uraiji o muti ni uthithagia kariera kaju?**

Miti na gukunikira kwaju ni kuretaga mpio kiri nthiguru. Ita mwigunyine wa muti wigie. Ukoona ati ruungu rwa miti kuri na tuuji gukira kuria riuga rigukinyiira muthetu o rimwe. Riria muthetu juri na mpio nou jumbaga gwika ruuji. Guku ni kuuga miti kiri muunda jwaku ikoongera nduujji kiri muthetu na gwika gwa kagita kanene. Guku kugatethia imera na nkinya atumiri ba ruuji.

**Kaboni credit nimbi?**

Kuthithia TIST kabon credit kwendaga mantu 3:

- 1) Untu bungwa bwa kuonania wongereku wa unyihia wa kabon dioxide kuuma rerani.
- 2) Kiriko gia kueria kaboni kuuma rerani gwa kagita ka miaka imingi.
- 3) Gutegerwa ngugi ni antu ba kathatu kuonania mantu jaria jekikite kuringana na mawatho.

Miti ikucagia kabon dioxide kuuma kiri riera kagita ga kuthondeka biakuria na kumiika kiri muti,miiri na muthetune. Kiwango gia kaboni kiria kiriti kuuma rerani na giekwa ni miti, no kithimwe na kigatarwa na kiarikia kuthithirua verification ati ni kia mma ujukia uu wa kaboni no wite kwendua kiri thoko cia manthiguru ja kaboni iriti rerani. Aguri na bagure credit iji kunyia iria barekeretie rierani kana bagatethia kiri ugaruruku wa riera.

Tist niumbaga kwendia kaboni iria iri ndeene ya miti oja endia ba sukari kana iria. kiri thoko ya kaboni,utikagia miti kiri thoko. No ri,thogora wa kaboni iria iriti rerani, igekwa kiri miti miundani yetu kana miitu ikathimwa na ikamenyithanua. Wendia wa kaboni credit nobuthithike New York, Nairobi, London na tauni cionthe kiri nthiguru kana imabanganua kuuma ki muntu na ungi kana makambuni o rimwe. Nonkinya tukinyanirie mawatho Jonthe jegie thoko. Tutumba gutema miitu kana miti nikenda tuanda miti niuntu bubu tibweega Kiri jaria jatuthiurukite. Nonkinya tugeka miti iji igikuraga gwa kagita ka nene nkuruki ya miaka 30. Ripoti ya miti nonkinya ithirwe iri na mma. Kuuma miti ya andwa,kuri na ithimi ithithagua na macabu kwona kaboni iria miti ya murimi ijukitie.Miti ititaga no ikaraga miundene na o uria iri muo nou igeta mbere kureta mbeca. Murimi niwe wikaga miti,matunda,iria,nku, na nkinya nkandi. Mbeca iria TIST yonaga kuuma kiri wendia wa kaboni ni bwongagira mbeca kiri murimi na ikagaukanua kiri

ikundi cia TIST, na gutetheria kiri ngarama cia muradi Kiri kuthomithia, utari miti na urungamiri ngugi.

**Miti yonthe ijukagia kiwango gia kaboni kiganene?**

Ari,miti iri na uriku u munene nou igaga kaboni inyingi gukira iria iri na uriku u munini. Miti i miraja nkinya yoo ni ijukagia kaboni inyingi gukira imikui. Kwogu, miti iria iri iminene imareta mbeca inyingi jia kaboni. Guku ni kuuga miti iria iri na utiganu umwega iri na kaanya ga kunenea na kugwata kaboni inyingi. Miti iji ititunyanaga ruuji kana biakuria kuuma kiri muthetu ja iria iandi ikuhaniritie muno.

Nikenda uumba kugwata marihi ja meega kuma kiri miti, nonkinya uandi miti n utiganu umwega uria ugatuma ikure bweega,imiraja na inenei. Kugita miti imwe nikenda wona nku na gutiga ingi ikura bweega ninjira injega ya kumenyeera miti.

**Ni ku/Nuu muguri wa kaboni credit?**

Narua iji, kaboni credit ciendagua kiri thoko cia kwiendera na thoko ikuthingatiira mawatho. No ciithirie ciitikiritue na njira mwanya oja uria kwithagirua kuri na mawatho mwanya nkinya kiri into ingi iria tugura. TIST noyendie kaboni credit kiri thoko ya compliance kana ya voluntary niuntu Nikinyirite kiwango kia iguru muno.

Kuri na mawatho ja maingi jari jacenjagia o kagita jegie kuanda,g utegeera na ku ripoti jaria nonkinya tuthithie nikenda twendia kaboni. TIST itumagira kiwango kia iguru buru kiri validation na verification -Verified Carbon Standards (VCS) na The Climate, Community and Biodiversity Alliance Standards (CCBA) Tist ni muradi wiki kiwango kia iguru buru "Triple Gold" kiri VCS na CCBA.

**TIST iri na aguri ba kawaida bairi:**

Wa mbere ni antu bari na Wendi wa kuejana mbeca gwikira antu inya ya kuanda miti. Kwa ngerekana ni kuriha uandi wa miti niuntu bwa miranu na micemanio ya kaboni neutral.

Wa keru ni kambuni kuuma US, Europe, Canada na nthiguru ingi iria ciiejanite kunyihia kuthoka kwa riera niuntu ni arata ba riera kana nibakwibanga kuthingatiiramawatho ja riera.

TIST iri na gikeno kwithirua iri na kaboni credit ya kiwango kia iguru na nkinya kuumba gukinyiiria aguri bangi baingi.



## Uandi miti ndene ya ntuura injumu.

**O**uria TIST igwita na mbele gutamba ndene ya ntuura irina kanya gakathongi na injumu, nitugutirimana na magerio jamaingi kiri gutuura kwa miti. Ndene ya TIST nituthithagia na kugaana mitire imiega buru ya kuthithia mantu, na bubu nibututethagia batwi ndene ya nja ya TIST rionthe kwona maciara jamathongi.

Aja ni mitire imwe iria miega buru iria tuumba kugeria kiri uandi miti ndene ya ntuura injumu:

1. Utaari bwa antu a gwika munanda jwaku burina bata mono ndene ya ntuura injumu. Miti igetie gwikirwa ruuji rimwe kana jairi o ntuku riria inyii. Thugania gwika miti antu aria gukuiriteie nja nikenda ugatumira ruuji ruria rugutumirwa nja gwikira miti. Kunyiyia ruugo akui na munanda gugatethia kunyiyia utumiri bwa ruuji na kua miti iminini kirundu.
2. Kuthuranira kurio: Thuranira marinya ja kuanda miti kwombika mweri jumwe mbele ya mbura, kirinya gikaunika na bubu bugatethiakuthioa gutonya kwa ruuji riria gukaura. Nyuma ya ngai ya mbele anda miti na ujurie kirinya ukiambagiria na muthetu jwa iguru riu mboleo.
3. Geria gutumira njira cia kugwatia ruuji rwa ngai nikenda ruuji rurwingi rukinyira miti. Miti ikoomba gutuura yaandwa akui na aria ruuji rwithagirwa ruriku rionthe.
4. Gukunikira muthetu: Gukunikira muthetu warikia kuanda miti. Bubu bugatethua gwika ruuji niuntu nikunyiagia gukamatwa ni riu. Gutumira mboleo ya imera gukoongera nutrienti muthetune indi gukunikira na maiga kinya ku no kulete baita guntune kuria kurina maiga jamaingi.
5. Kuungania imera na miti: Tugerieni kungania imera na miti. Miti iria iandagwa muundene niyo yuumbaga gutuura nkuruki ya iria iri ithakene niuntu nimenyagirwa na iri muthetune jumwega nkuruki.
6. Taara mithemba iria igakura bwega ndene ya ntuura injumu. Miti ya gintwirekuuma kiri ntuura iria ithiurukite niumbaga gutuura. Mng'uanano imwe ni *Melia*, *Acacia seyal*, na *Muuuku (Terminalia brownii)*.
7. Menyeera miti iria irio na umitikirie iciarane. Miti iji irio irina inya na niumbaga gukurukira mbura injumu twamikaria. Niejanaga kiumo kia bata kia mbeu cia gintwire amwe na kirundu na mantu jangi.
8. Minanda itiritie kana injiri no itethie. Riria twambia minanda itithitue, nituonaga miti irina miti imiriku na kwou igatuura. No itethie kinya gwika miti munandene igita riraja nikenda inenea nkuruki na igia inya. Indi minanda ya kwinjira no ithirwe iri imiega niuntu nikunikagira miti na ikanyia kuuma. Aja, menyeera kugaruria miti o nyuma ya igita nikenda miri itigakure itonya muthetune rungu rwa mubuko, na kwou igitaria miiri igita ria kuthamia.

Tutumireni mitire iria miega buru iria turinayo, na tuthithie na kugaana na bangi nikenda tukinyira maciara jamaingi na tutethia TIST gukura ndene ya ntuura cietu.

# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program

www.tist.org

**Kikuyu Version**

**TIST is an innovative, time - tested, afforestation program led by the participants.**



**Mucemanio wa clasta wa Gantangine uria wahanikire mweri 21/06/2023.**

**Inside:** TIST: CCBA Muingi Kuria Murugamo. Page 2

Arimi a TIST kuhurana na urugari thi yothe na ucenja a riera. Page 4

Uhandi wa miti kundu kumu. Page 6



## TIST: CCBA Muingi Kuria Murugamo.

**C**lean Air Action Corporation (CAAC) ni ikenene kwanirira wendi wake wa guthurima mirandi kwa ihinda ria kana thiini wa maria maturigiciirie, na murugamo wa Community and Biodiversity Alliance (CCBA):

- TIST Program thiini wa Kenya VCS-005 (VCS737), iria yari CCB-002, ni yetikirikire mweri 25 March 2021. Yetikirikire kuma mweri 23 May 2020 kinya mweri 14 April 2023.
- TIST Program thiini wa Kenya VCS-006 (VCS899), iria yari CCB-003, ni yetikirikire mweri 17 May 2021. Yetikirikire kuma mweri 6 Januari 2021 kinya mweri 14 April 2023.
- TIST Program thiini wa Kenya VCS-009 (VCS996), iria yari CCB-004, ni yetikirikire mweri 25 March 2021. Yetikirikire kuma

mweri 23 May 2020 kinya mweri 14 April 2023.

Kwamukira witikiriku uyu, CAAC no nginyagia yonanie, hamwe na maundu maya, ati TIST niyo iragunika na maria maturigiciirie, community na biodiversity. CAAC ni ineanite riboti (Monitoring Report – MR) kiri Verra (aria maramataga VCS na CCB) na kuri EPIC Sustainability Services Pvt. Ltd., na nio atari a mathabu a CCBA.

Turabatarikana kurumirira macokio. Aria mari na mangihota kuingira internet, kana cyber café, turakuria uingire webpages kuria riboti na maundu mangi mekiritwo. Hamwe na macio, no wandike woni waku hau na no maneanwo (thi ya mbica). Woni waku ni muhingurire nginyagia mweri 8 July 2023.

KE005: <https://registry.verra.org/app/projectDetail/VCS/737>

KE006: <https://registry.verra.org/app/projectDetail/VCS/899>

KE009: <https://registry.verra.org/app/projectDetail/VCS/996>

Oro ho ni tuteithagiriria TIST project pages angikorwo kuri na document ingi ciongerereka:

KE005: <http://www.tist.org/PD-KE-VCS-005%20Documents.php>

KE006: <http://www.tist.org/PD-KE-VCS-006%20Documents.php>

KE009: <http://www.tist.org/PD-KE-VCS-009%20Documents.php>

Aria matari na internet, macokio mao ni mandikirwo ngathiti-ini ya Mazingira Bora ya mweri wa May 2023.

Maya nimo macokio ma PDs:

<b>Climate</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD Live Trees	2,690,275	1,622,971	597,901
PD carbon to date (t)	1,506,329	1,134,369	467,888
PD carbon this period (t)	397,586	38,384	134,805
<b>Community</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD members	35,318	35,324	12,205
PD Small Groups	5,168	3,961	1,731
KE members in TIST	130,534	same	same
KE Small Groups in TIST	18,490	same	same
KE active members	90,100	same	same
KE Members with GhG contracts	87,178	same	same
KE Carbon Payments from Start	\$3,080,673	same	same



KE Carbon Payments this period	\$2,042,974	\$1,818,880	\$2,042,974
KE Training, Climate change, from start	161,844	same	same
KE Training, Climate change, this period	36,114	38,497	36,114
KE Training, Conserv Farming, from start	261,643	same	same
KE Training, Conserv Farming, this period	44,638	47,517	44,638
KE Training, health, from start	134,917	same	same
KE Training, health, this period	2,039	2,086	2,039
KE Training, biodiversity, from start	278,250	same	same
KE Training, biodiversity, this period	2,218	2,355	2,218
People employed or contracted	118	same	same
PD Live Trees	2,690,275	1,622,971	597,901
PD Fruit and nut trees	438,497	259,316	97,109
PD Eucalyptus trees	281,797	194,495	59,998
<b>Biodiversity</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD Live Trees	2,690,275	1,622,971	597,901
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD indigenous trees	375,963	258,182	99,714
PD indigenous hectares	1,575	1,046	331
<i>vitex keniensis</i> trees	20,407	12,181	5,899

Ririkana:

- Ihinda riri ni ihinda ria kurumirira PD.
- Guthomithio ni oro mundu mucemano-ini wa clasta.
- PA ni kuria project iri, na niyo grove.
- *Vitex keniensis* niguu Meru Oak.

Turetha thahabu ya CCB certification hari project ciothe.

#### Umithio wa kumenyera ucenja wa riera:

Projects ithatu cirutite tani milioni 3. I cia CO<sub>2</sub> kuma riera-ini. Amemba a TIST mathomithio Conservation Farming niguu guteithia maria maturigiciirie. PD yandikithitie miti makiri iria iteithagia kuiga tiri na ugunyu, kiruru, kugiririria tiri gukuo ni kiguu. TIST iteithagia na guthondeka ciungano cia community iri ta clasta na ngurubu nini.

**Uthithio wa community ni wa mwanya:** TIST ni yonanitie ati ti thini matura-ini maria mathini kuri aikari a kuo. Arimi ni mamukagira umithio wa ihinda

ini na ihinda iraihu. TIST ni ithomithagia maundu mega ma uthii wa nambere, mangikwo, mangithondeka umithio kuri andu. Mahandaga miti na makamukira igai ria carbon revenues. Mabangaga kuria makuhanda miti yao, mithemba ya miti iria igukorwo na umithio kuri o na uria makuhanda. Mahinda maya, arimi aingi ni amukirite \$3,557 ihana ta maciaro ma umithio wao. Hamwe na uguo, atumia amwe ni mamukirite \$1,246 na \$3,368.

#### Umithio wa Biodiversity ni wa mwanya:

*Vitex keniensis* (Meru Oak) ni imwe ya miti iria ikuraga matura ma Mount Kenya na ni imwe ya miti iria yandikithio na IUCN Red List ati iri ugwati-ini ya guthira. Ni irathira na ihenya muno. Arimi a TIST hari PD ino ni tuhotete kumenyerera makiria ma miti 38,487 *Vitex Keniensis*, mitheru, na umithio wa miti ino.

Niundu wa ciuria, ariria

CharleWilliams@CleanAirAction.com



## Arimi a TIST kuhurana na urugari thi yothe na ucenjia a riera.

**A**rimi a TIST gwitikira ritana ra thi kuhurana na urugari wa thi na ucenjia wa riera. Arimi maingi ni mamenyete maundu maingi kuhitukira seminars/mathomo ma TIST kuhitukira micemanio ya clasta guthoma na kumenya maundu maingi ma urugari thi yothe na uria ithukagia riera, na uria tungihurana na guo. Ni tuonete mathina ma riera umuthi. Muhiano wa mathina, mbura ya El Nino mwaka wa 1998 iria yaurire nene na thutha ng'aragu nene iria yarumiriirie, na huho nene cia mwaka wa 2004 iria ciarehirwo ni uhiuhu wa riera. Mahinda maya ng'aragu, muiyuro wa kiguu na gwatuka kwa thi ni mamwe ma kwonania uguo. Maundu mangi ni ta kuringuka kwa ice kirima-ini kia Mt. Kenya, kwaga kumenyeka kwa imera na guchungiriria kwa irio kwaga matura maingi, ngunga, kuniara kwa ithima na kuria mai maumaga hamwe na mangi maingi.

### Urugari thi yothe ni ki?

Urugari thi yothe ni kwongerereka kwa urugari thi yothe, uria utumana gucenjia kwa riera. Thi iri na urugari icungariria gucenjia mahinda ma mbura, huho nene, kwambatira kwa maria, irio kwaga, na kuhinyiririka kwa mimera, nyamu, oro na andu. Hindi iria athomi magweta gucenjia kwa riera, makoragwo marongoreirie urugari wa thi uria urehetwo ni maundu maria andu mekaga magutuma maundu maya mahanike.

### Thi ni iragia na urugari?

ii! Thi ihuhite ta 1°C handu-ini ha miaka 100 iria mihituku. Athomi a thi a riera ni moi maundu maria andu mekaga guteithiriria uhiuhu wa riera, maundu maya ni ta guchina makara ma mahiga, maguta na natural gas, na gutheria mititu na kwaga kumenyerera migunda.

### Mathina ma greenhouse ni ki?

Mathina ma greenhouse ni kuongerereka kwa urugari uria thi igiaga nanguo niundu wa gas iria irekagiriria, itagwo greenhouse gases, ta carbon dioxide, nitrous oxide, sulphur dioxide na methane trap energy kumana na riuu. Maundu maria matuma carbon igie ni kunina mititu, gas iria cirekagiririo iganda-ini, gas iria cirekagiririo ni ngari, gas iria cirekagiririo ugicina mahuti kana makara na gucina mititu.

### Ni mogwati monekaga riria kwagia na urugari mungi thi?

- Kwaga mai gutumaga kuria kumu kugie na ng'aragu.
- Kuingiha kwa mirimu ta malaria. Matura maria mari na urugari muingi, gukoragwo nikuo rwagi ruciaranagira, na gutuma kugie na kugwatania kwa malaria. Famili nyingi na mathibitari ni cihinyagiririo, maicha ma gutura thi makanyiha, na guciarana gukanyiha.
- Magetha ma urimi makanyiha mabururi maingi, na makiria maburui ma Afrika ya irathiro. Niundu wa kunyiha kwa mbura na kwongereka gwa tutambi guciarana niundu wa riera kuhuhu, maciaro ma irio kunyiha na gucungiriria thina na ng'aragu famili-ini nyingi.
- Irio kugia goro thi yothe. Niundu wa arimi kwaga magetha mega irio cikanyiha, thogora ukongerereka tondu irio ni nini.
- Ugaruruku wa mukuririe na ugaruruku wa mititu. Kuria mai maumaga irima-ini na matitu kuma. Uu utumaga aria marimaga na mai kunyihia mai njui-ini iria ciheaga dem mai kuhua. Kwa uguo dem iria cithondekaga thitima kwaga mai. Iganda citu, mathibitari na kundu kungi kuingi kuria kuhuthagira thitima kwaga thitima. Mai ma miberethi maria mahuthikaga mataunini kwaga horo hamwe na micii itu.
- Mamilioni ma andu gukorwo hatika-ini ya muiyuro wa mai na kwenyuka gwa thi, iria cirehagwo ni mbura nene na gichua-ini, na wongerereka wa mai iria-ini.

### Ndingihota atia kugutira uhiuhu wa riera?

#### Kuhanda na mumenyerera miti!

Tauria ndauga hau iguru, carbon dioxide ni imwe ya gases iria citumaga kugie na uhiuhu wa riera. Miti inyuaga carbon dioxide kuma riera-ini mahinda ma photosynthesis na kumiiga miti-ini, marita na tari ihana ta cellulose carbon. Niundu ucio, riria miti yatemwo na gucinwo, irutaga carbon iria ireigiiri igacoka riera-ini.



**Ni ui ati oro muti no uthondeke microclimate?**

Miti na kiruru kiayo ihehagia thi. Tawicirie kiruru kia miti. Tiri uria uri hari kiruru ukoragwo uri na ugunyu gukira uria riuu riagina hatari kiruru. Hindi iria tiri uri na muhehu, tiri ni ugaga ugunyu ihinda inene. Undu uyu uteithagia mimera na andu aria mahuthagira mai itura rianyu.

**Carbon credits ni ki?**

Guthondeka TIST carbon credit urabatara indo ithatu.

- 1) Kuniyihia kuongerereka kwa carbon (CO<sub>2</sub>).
- 2) Kunina carbon biu riera-ini handu-ini ha miaka maingi.
- 3) Gwitikirwo na mundu wa gatatu uria igwitikira ati ciiko iria cirekwo ni njega kiwatho.

Miti inyuaga carbon dioxide kuma kuri riera hindi ya photosynthesis na kuriiga muti-ini, mirita-ini na tiri. Githimi gia carbon iria cimite riera-ini na kuigwo no ithimwo, na thutha ya tarwo ati ni ma, carbon dioxide iria inywitwo kwendo thoko ya thi ta carbon removal credits. Aguri maguraga credits ino niguo kunyihia carbon dioxide iria irarekerio niguo gueithia ugaruruku wa riera.

TIST ni ihotaga kwendia carbon iria inyuitwo ni miti ota uria athondeki wa cukari kana iria mendagia. Hari carbon, ndutwaraga muti thoko-ini. No faida iri kumanagia na carbon iria yumanagia na riera, iria iigitwo miti-ini iria iri mugunda-ini waku kana mititu, igathimwo. Biacara ya carbon credits no ikwo matauni-ini ta New York, Nairobi, London na tauni ingi nyingi thi yothe, kana no ibangwo kuri andu na makabuni. No nonginya tuhingie mawatho mothe. Tutingitheria mititu kana gutema miti niguo tuhande miti tondu ni guthukia maria maturigicirie. Nonginya twirutire kuiga miti ikundi-ini ciitu kwa mahinda maraihu ta miaka 30 kana makiria. No nginya tuheane data itu wega. Hindi iria miti yahandwo, nituthimanaga na tugatara kumenya carbon iria arimi a miti a TIST inyuite. Miti ndithamaga. likaraga migunda-ini na oro uria irakura noguo marihi maraingiha. Kwa uguo, murimi aigaga miti, thumu, ngu na matunda na mbegu. Mbeca iria TIST ithondekaga na kwendia carbon cithondekaga njira ingi ya kugia na mbeca na ikagayanwo kuri TIST Small Groups na iria ingi cigatumirwo ni TIST na maundu mangi ta, guthomithia arimi, gutara miti na urugamiriri.

**Miti yothe niinyuaga carbon iiganaiine?**

Gutiri, miti iria mitungu (more biomass) ugaga carbon nyingi gukira miti miceke. Miti miraihu inyuaga carbon nyingi gukira miti mikuhi. Kwa ugwo, miti iria mitumanu niigukuhe faida nene ya carbon credits. Uu ni kuga ati miti ihanditwo itaganitio wega ni itunguhaga na kuraiha wega na uguo gukuhe faida njega ya carbon. Ndicindanaga gwetha giakuria tari-ini oro na mai ukiringithania na iria ihanditwo itumanite.

Kwa ugwo, niguo kugia na marihi mega kumanagia na miti, ni wega kuhanda miti itaganukite wega niguo ikure iri mitungu, miraihu, na miarie. Guthathaura imwe na kumitwa ngu na gutiga iria ingi igikura wega niguo wega wa kumenyerera miti.

**Ni ku/nu uguraga carbon credits?**

Riu, carbon credits yendagio thoko-ini ya andu a kwirutira na thoko cia wendi mwega. Ni ni ciitikiritio ni undu wa maundu maingi, oro ta uria thoko cia indo iria ingi uguraga. TIST ni yendagia carbon credits kuri andu a kwirutira na wendi mwega tondu ikoragwo iri njega muno.

Ni gukoragwo na maundu matiganite thiini wa thoko ici ta mawatho maritu muno ma irihi ria kuhanda miti, gutungata, na gutangatha at no nginya tumenderie carbon offsets. Tuhuthagira ikiro cia iguru gutara ta – the Verified Carbon Standard (VCS) na the Climate, Community, and Biodiversity Alliance Standards (CCBA). Turi a gikiro kia iguru ka program “Tripple Gold” kuri VCS na CCBA.

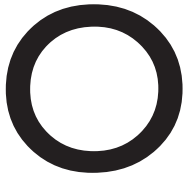
**TIST iri na mithemba iri ya aguri.**

Ya mbere ithondeketwo ni andu aria metikirite kuheana mbeca ciao niguo kuiguithia arimi mahande miti. Uguo ni ta kuga ati kurihana niguo miti ihandwo niguo kunyitithania kana guthondeka micemano ya carbon neutral. Undu wa keri uthondeketwo ni makabuni maria manene ma US, Europe, Canada na mabururi maria mangi mari na makabuni maria marerutira kunyihia uruti wa GhG tondu ni marena kugie na maria maturigicirie maikare mari mega na kugie na mawatho ma riera mega.

TIST ni ngenu niundu wa kugia na carbon credits njega muno, na tukahota kwenderia andu a mithemba maingi.



## Uhandi wa miti kundu kumu.



TIST igithiaga na-mbere na gukura miena yothe iria yaraga na yumaga, nitukoragwo na mathina ma gukuria

miti. Thiini wa TIST tukuragia na tugatwarithia mitaratara miega, na njira ino niituteithitie thiini wa TIST kugia na maciaro mega.

Ino ni imwe ya mitaratara ya kurumirira gukuria miti kundu kumu:

1. guchagura handu hega ha ha nathari ya miti. Mimera niiribatara kuheo maai riita 1 kana maita 2 hari o muthenya riria iri minini. Cagura kuhanda mimera hakuhi na mucii niguo uhuthire maai manyumba gutiriria mimera. Ukihuthira indo ciakugitira ruhuho guthiururukiria nathari yaku nigukunyiha uhuthiri wa maai na kuhe mimera kiiruru.
2. Uhariria wa tene: hariria marima ma kuhandira miti muno mweri 1 mbere ya mbura, iria nirigwatuka na uteithie maai kuingira tiiri-ini wega mbura yaura.
3. Geria gutega maai ma mbura niguo maai maingi makinyire miti. Miti noikure wega riria yahandwo kuria maai mageraga.
4. Ikira mahuti mugundaini niguo maige ugunyu tiiri-ini.

5. Hamda miti mugundaini wa irio. Riria wahanda miti mugunda-ini niikuraga wega tondu niiramenyererwo hamwe na irio iria iri mugunda.

6. Cagura mithemba ya miti iria ikuraga wega na riuu. Muno miti ya ki-nduire niyo miega. Kwa muhiano Melia, Acacia, na Muuku(Terminalia brownii).

7. Menyerera miti iria iri kuo na umihotihie gutherema. Miti ino mikuru iri na hinya, na noiikare gwa kahinda karaihu twamimenyerera. Niiheanaga kihumo kia mbegu cia kuhanda.

8. Tuta njoe iguru nociteithie. Riria twathondeka tuta njoe iguru, nitugiaga na mimera iri na miri iri na hinya na irakura wega. Noiteithie kuiga mimera iri na hinya thiini wa nathari niguo ikure iri minene na ikure na uraihu munene. No ona kuri o uguo tuta njoe iguru noikorwo iri njega tondu niitumaga mimera ndigakue na ihenya. Niundu wa uguo, menyerera na ugarure mimera niguo miri ndigakinye thi.

Reke tuhuthire mitaratara miega na tukuraniaea na tuthomithanie na nitukwigwatira maundu manene thiini wa TIST.

# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program

www.tist.org

**Kiswahili Version**

*TIST is an innovative, time - tested, afforestation program led by the participants.*



**Mkutano wa Nguzo ya Gantangine uliofanyika tarehe 21/06/2023.**

***Ndani  
ya  
Gazetti***

**TIST: Maoni ya Umma ya CCBA Yameombwa. Uku. 2**

**Wakulima wa TIST Wapambana na Joto Duniani na Mabadiliko ya Tabianchi. Uku. 4**

**Kupanda miti katika maeneo kavu. Uku. 6**



## TIST: Maoni ya Umma ya CCBA Yameombwa.

**S**hirika la Clean Air Action (CAAC) linafuraha kutangaza nia yake ya kuthibitisha mradi ufuatao kwa mara ya nne chini ya viwango vya Umoja wa Hali ya Hewa, Jamii na Bioanuwai (CCBA):

- Mpango wa TIST nchini Kenya VCS-005 (VCS737), ambayo zamani ilikuwa CCB-002, ilitibitishwa awali tarehe 25 Machi 2021. Uthibitishaji huu ni wa kuanzia tarehe 23 Mei 2020 hadi 14 Aprili 2023.
- Mpango wa TIST nchini Kenya VCS-006 (VCS899), ambayo zamani ilikuwa CCB-003, ilitibitishwa awali tarehe 17 Mei 2021. Uthibitishaji huu ni wa kuanzia tarehe 06 Januari 2021 hadi 14 Aprili 2023.
- Mpango wa TIST nchini Kenya VCS-009 (VCS996), ambayo zamani ilikuwa CCB-004, ilitibitishwa awali tarehe 25 Machi 2021.

Uthibitishaji huu ni wa kipindi cha 23 Mei 2020 hadi 14 Aprili 2023.

Ili kupokea uthibitishaji, CAAC lazima ionyeshe, miongoni mwa mambo mengine, kwamba TIST ni ya manufaa kwa hali ya hewa, jamii na viumbe hai. CAAC imewasilisha Ripoti ya Ufuatiliaji (MR) kwa Verra (huluki inayosimamia VCS na CCB) na kwa EPIC Sustainability Services Pvt. Ltd., mkaguzi aliyeidhinishwa na CCBA.

Tunatakiwa kusambaza matokeo ya ufuatiliaji. Kwa wale walio na ufikiaji wa mtandao, pamoja na mkahawa wa mtandao, tunakukaribisha kutembelea kurasa hizi za wavuti ambapo Ripoti za Ufuatiliaji na hati zingine zinapatikana kwa ukaguzi. Kwa kuongeza, kuna kiungo cha Maoni ya Umma ambapo maoni yanaweza kuwasilishwa (chini kidogo ya ramani). Kipindi cha maoni kimefunguliwa hadi tarehe 08 Julai 2023.

KE005: <https://registry.verra.org/app/projectDetail/VCS/737>

KE006: <https://registry.verra.org/app/projectDetail/VCS/899>

KE009: <https://registry.verra.org/app/projectDetail/VCS/996>

Pia tunatoa kurasa za mradi wa TIST ambapo nyaraka za ziada zinapatikana:

KE005: <http://www.tist.org/PD-KE-VCS-005%20Documents.php>

KE006: <http://www.tist.org/PD-KE-VCS-006%20Documents.php>

KE009: <http://www.tist.org/PD-KE-VCS-009%20Documents.php>

Kwa wale wasio na Mtandao, matokeo ya ufuatiliaji yalichapishwa katika jarida la Kenya la Mei 2023, Mazingira Bora.

Yafuatayo ni matokeo ya ufuatiliaji kwa PD zao husika:

<b>Climate</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD Live Trees	2,690,275	1,622,971	597,901
PD carbon to date (t)	1,506,329	1,134,369	467,888
PD carbon this period (t)	397,586	38,384	134,805
<b>Community</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD members	35,318	35,324	12,205
PD Small Groups	5,168	3,961	1,731
KE members in TIST	130,534	same	same
KE Small Groups in TIST	18,490	same	same
KE active members	90,100	same	same
KE Members with GhG contracts	87,178	same	same
KE Carbon Payments from Start	\$3,080,673	same	same



KE Carbon Payments this period	\$2,042,974	\$1,818,880	\$2,042,974
KE Training, Climate change, from start	161,844	same	same
KE Training, Climate change, this period	36,114	38,497	36,114
KE Training, Conserv Farming, from start	261,643	same	same
KE Training, Conserv Farming, this period	44,638	47,517	44,638
KE Training, health, from start	134,917	same	same
KE Training, health, this period	2,039	2,086	2,039
KE Training, biodiversity, from start	278,250	same	same
KE Training, biodiversity, this period	2,218	2,355	2,218
People employed or contracted	118	same	same
PD Live Trees	2,690,275	1,622,971	597,901
PD Fruit and nut trees	438,497	259,316	97,109
PD Eucalyptus trees	281,797	194,495	59,998
<b>Biodiversity</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD Live Trees	2,690,275	1,622,971	597,901
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD indigenous trees	375,963	258,182	99,714
PD indigenous hectares	1,575	1,046	331
<i>vitex keniensis</i> trees	20,407	12,181	5,899

Vidokezo:

- Kipindi ni kipindi cha ufuatiliaji wa PD.
- Mafunzo ni vikao vya mtu binafsi kama vile kwenye mikutano ya Nguzo.
- PA ni eneo la mradi, pia huitwa shamba.
- *Vitex keniensis* ni Meru Oak

### Tunatafuta cheti cha kiwango cha dhahabu cha CCB kwa kila mradi.

Manufaa ya Kukabiliana na Mabadiliko ya Tabianchi: Miradi hiyo mitatu imeondoa tani milioni 3.1 za CO<sub>2</sub> kutoka angani. Wanachama wa TIST wamefunzwa katika Kilimo Hifadhi ili kusaidia kukabiliana na ustahimilivu wa hali ya hewa. PD huandika maelfu ya miti ambayo husaidia kuhifadhi unyevu wa udongo, kutoa kivuli na kuzuia mmomonyoko wa udongo. TIST hutoa shirika jipya la jumuiya katika mfumo wa Vikundi na Vikundi Vidogo.

**Manufaa ya Kipekee ya Jumuiya:** TIST imeonyeshwa kuwa inapendelea maskini katika eneo maskini lenye matokeo chanya kwa jamii. Wanachama wa wakulima huzalisha na kupokea

faida za muda mfupi na mrefu. TIST huwafunza wakulima katika mipango mingi ya maendeleo endelevu ambayo, inapotekelezwa, hutoa manufaa kwa ustawi. Wanapanda miti na kupokea sehemu ya mapato ya kaboni. Wanaamua wapi kupanda miti yao, ni aina gani ya kukua ambayo itakuwa ya manufaa zaidi kwa ustawi wao na ni ngapi za kupanda. Katika kipindi hiki, mkulima wa wastani amepokea \$3,557 katika manufaa ya kuchuma mapato. Kama madarasa tofauti, wastani wa washiriki walio katika mazingira magumu na wanawake wamepokea \$1,246 na \$3,368, mtawalia.

**Manufaa ya Kipekee ya Bioanuwai:** *Vitex keniensis* (Meru Oak) inapatikana katika eneo la Mlima Kenya na imeorodheshwa kama iliyo hatarini kutoweka kwenye Orodha Nyekundu ya IUCN. Mwenendo wa idadi ya watu unatathminiwa kuwa unapungua. Wakulima wa TIST katika PD hii wamepanda na kudumisha zaidi ya 38,487 *Vitex keniensis*, manufaa ya moja kwa moja kwa spishi.

Kwa maswali, tafadhali wasiliana na [CharlieWilliams@CleanAirAction.com](mailto:CharlieWilliams@CleanAirAction.com)



# Wakulima wa TIST Wapambana na Joto Duniani na Mabadiliko ya Tabianchi.

**W**akulima wa TIST wameitikia wito wa kimataifa wa kukabiliana na ongezeko la joto duniani na mabadiliko ya tabianchi. Wakulima wengi wametafuta uelewa kupitia semina/ mafunzo ya TIST na kwenye mikutano ya vikundi ili kujifunza na kuelewa zaidi kuhusu ongezeko la joto duniani, athari zake kwa hali ya hewa, na mbinu za kukabiliana nazo. Tunaona athari nyingi za mabadiliko ya hali ya hewa leo. Ili tu kuelezea matukio machache ya athari, mafuriko ya El Nino ya mwaka 1998 ambayo yaliharibu sehemu kubwa ya nchi na ukame wa muda mrefu uliofuata, na kimbunga kikali cha 2004 kuna uwezekano kuwa kilizidishwa na ongezeko la joto duniani. Ukame wetu wa sasa, mafuriko na maporomoko ya ardhi ni ushahidi zaidi. Vielelezo vingine mashuhuri ni kuchakaa taratibu kwa barafu kwenye kilele cha Mlima Kenya, hali ya hewa isiyotabirika ambayo imesababisha kuharibika kwa mazao katika maeneo mengi, nzige, kukauka kwa chemchemi za maji na maeneo ya vyanzo vya maji, miongoni mwa mengine mengi.

## Ongezeko la Joto Ulimwenguni ni nini?

Ongezeko la joto duniani linarejelea ongezeko la wastani la joto la Dunia, ambalo husababisha mabadiliko ya hali ya hewa. Dunia yenye joto zaidi itasababisha mabadiliko katika mifumo ya mvua, dhoruba kali, kupanda kwa kina cha bahari, kuharibika kwa mazao, na athari nyingi kwa mimea, wanyamapori na wanadamu. Wanasayansi wanapozungumzia suala la mabadiliko ya hali ya hewa, wasiwasi wao ni juu ya ongezeko la joto duniani linalosababishwa na shughuli za binadamu na kukithiri kwa mabadiliko ya hali ya hewa na hali ya hewa ambayo huleta.

## Je, Dunia inazidi joto?

Ndiyo! Dunia imekuwa na joto kwa takriban 1°C katika miaka 100 iliyopita. Wanasayansi wa hali ya hewa duniani wanajua kwamba mambo ambayo watu hufanya yanasaidia kufanya Dunia kuwa na joto zaidi, kama vile uchomaji wa nishati ya mafuta ikiwa ni pamoja na makaa ya mawe, petroli, na gesi asilia, na kukata misitu na kusimamia ardhi vibaya.

## Athari ya Greenhouse ni nini?

Athari ya chafu ni kupanda kwa halijoto ambayo Dunia hupata kwa sababu gesi fulani katika angahewa, zinazoitwa gesi chafu, kama vile kaboni dioksidi, oksidi ya nitrojeni, dioksidi ya sulfuri, na methane hunasa nishati kutoka kwenye jua. Vyanzo vikuu vya kaboni ni ukataji wa miti, gesi zinazotoka viwandani, gesi zinazotoka kwenye magari, gesi zinazotokana na uchomaji wa kuni au mkaa na uchomaji wa misitu.

## Je! ni hatari gani za Ongezeko la Joto Ulimwenguni?

- Mkazo mkubwa wa maji katika maeneo ya nchi kavu na yenye ukame ungesababisha maeneo mengi kuwa jangwa.
- Kuongezeka kwa magonjwa kama vile malaria. Kadiri maeneo yanavyozidi kuwa na joto, yanakuwa mazalia ya mbu yanayofaa, na kuongeza hatari ya kuambukizwa malaria. Familia nyingi na taasisi za afya zinaweza kuathiriwa, wastani wa muda wa maisha hupungua, na viwango vya vifo vya watoto wachanga hupanda.
- Kupungua kwa uzalishaji wa kilimo katika nchi nyingi za tropiki na za joto, hasa nchi za Afrika Mashariki. Kutokana na kupungua kwa mvua na kuongezeka kwa kuzaliana kwa wadudu waharibifu kutokana na ongezeko la joto, uzalishaji wa mazao ya chakula unaweza kupungua na hivyo kusababisha umaskini na njaa miongoni mwa familia na jamii nyingi.
- Bei za juu za vyakula duniani kote. Wakulima wengi wanapopata mavuno kidogo na usambazaji wa chakula kuwa haba, bei huongezeka kwa sababu mahitaji ni makubwa na ugavi ni mdogo.
- Mabadiliko makubwa katika uzalishaji na muundo wa mifumo muhimu ya ikolojia hasa misitu. Maeneo ya vyanzo vya maji katika milima na misitu yanaendelea kukauka. Hii itaathiri uwezo wa kumwagilia mimea na itapunguza mtiririko unaohitajika ili kuweka mabwawa na hifadhi kujazwa tena. Hii itapunguza uzalishaji wa umeme wa maji. Viwanda vyetu, hospitali na taasisi nyingine zinazotegemea sana umeme zitaathirika pakubwa. Usambazaji wa maji ya bomba kwa maeneo ya mijini pamoja na nyumba za vijijini pia utaathirika.
- Makumi ya mamilioni ya watu walio katika hatari ya mafuriko na maporomoko ya ardhi, yanayotokana na makadirio ya ongezeko la kiwango cha mvua na katika maeneo ya pwani, kupanda kwa kina cha bahari.

## Ninawezaje kuzuia Ongezeko la Joto Ulimwenguni?

### Panda na utunze miti!

Kama ilivyoelezwa hapo juu, kaboni dioksidi ni mojawapo ya gesi zinazosababisha ongezeko la joto duniani. Miti huchukua kaboni dioksidi kutoka kwa hewa wakati wa usanisinuru na kuihifadhi kwenye kuni, mizizi na udongo kama kaboni selulosi. Hata hivyo, miti inapokatwa na kuchomwa moto, hutoa kaboni nyingi iliyokuwa imehifadhi hewani.

**Je! unajua kila mti unaweza kuunda hali ya hewa ndogo?**

Miti na kifuniko chake hupoza uso wa dunia. Jisikia faraja ya kivuli cha mti. Ona kwamba udongo ulio chini ni unyevu kuliko mahali ambapo jua huichoma bila kivuli. Wakati ardhi inakaa baridi, ardhi inashikilia unyevu zaidi kwa muda mrefu. Hii ina maana kwamba miti katika ardhi yako itasaidia kuboresha kiasi cha maji katika udongo wako, na kusaidia kuhifadhi kwa muda mrefu zaidi. Hii itasaidia mazao yako na pia hata kusaidia watumiaji wa maji katika eneo lako.

**Mikopo ya kaboni ni nini?**

Ili kutengeneza mkopo wa kaboni wa TIST kunahitaji vitu 3:

- 1) Kupungua kwa kweli na ziada kwa dioksidi kaboni (CO<sub>2</sub>) katika hewa;
- 2) Ahadi ya kuweka kaboni nje ya hewa kwa miaka mingi;
- 3) Uthibitishaji wa mtu wa tatu huru ambaye anathibitisha kwamba hatua zimefanyika kulingana na sheria zote.

Miti huchukua kaboni dioksidi kutoka kwa hewa wakati wa photosynthesis na kuhifadhi kwenye kuni, mizizi na udongo. Kiasi cha kaboni inayochukuliwa kutoka hewani na kuhifadhiwa kinaweza kupimwa na kukokotwa, na kisha, ikithibitishwa kuwa sahihi, ufyonzwaji huu wa kaboni dioksidi unaweza kuuza kwenye soko la dunia kama mikopo ya kuondoa kaboni. Wanunuzi wanaweza kununua mikopo hii ili kukabiliana na utoaji wao wa hewa ukaa au kusaidia mabadiliko ya hali ya hewa.

TIST inaweza kuuza kaboni iliyofyonzwa kwenye miti kama vile wazalishaji wanavyouza sukari na maziwa. Kwa kaboni, hata hivyo, husafirisha mti kwenye soko. Badala yake, thamani ni kutoka kwa kaboni iliyotolewa kutoka hewani, iliyohifadhiwa kwenye mti kwenye shamba lako au msitu, iliyopimwa na kuripotwa. Biashara ya mikopo ya kaboni inaweza kufanyika New York, Nairobi, London, na miji mingine duniani kote, au inaweza kupangwa kati ya watu au makampuni moja kwa moja. Tunapaswa kukidhi sheria na mahitaji ya soko. Hatuwezi kufyeka msitu au kukata miti ili kupanda miti kwani hii ni mbaya kwa mazingira. Inabidi tujitolee kuweka miti katika shamba kwa muda mrefu, miaka 30 au zaidi. Tunapaswa kuripotwa data kwa usahihi. Mara tu miti inapopandwa, baadhi ya vipimo na hesabu hufanywa ili kupima kiasi cha miti ya wakulima wa TIST ya kaboni imefyonzwa. Miti haiondoki. Wanabaki kwenye mashamba na kadiri wanavyokaa hai, ndivyo muda wa kupokea malipo unavyoongezeka. Kwa hiyo, mkulima hutunza miti, malisho, kuni, na matunda na karanga. Pesa ambazo

TIST hutengeneza kwa kuuza gesi ya kaboni hutengeneza chanzo kipya cha mapato na kisha hushirikwa na Vikundi Vidogo vya TIST na kutumika kugharamia gharama za TIST, ikijumuisha mafunzo, ukadiriaji na usimamizi.

**Je, miti yote inachukua kiasi sawa cha kaboni?**

Hapana, miti yenye mduara mkubwa (majani zaidi) huhifadhi kaboni zaidi ya miti ambayo ni nyembamba. Miti mirefu pia inachukua kaboni zaidi kuliko miti mifupi. Kwa hiyo, miti ambayo ni nene italeta mapato zaidi kutoka kwa mikopo ya kaboni. Hii inamaanisha miti iliyopandwa kwa nafasi nzuri ina nafasi ya kukua kubwa na mirefu na kupata mapato zaidi ya kaboni. Hawashindanii virutubishi vya udongo na maji kama vile miti iliyotengana kwa karibu.

Kwa hiyo, ili kupokea malipo mazuri kutoka kwa miti yetu, ni muhimu kuipanda katika nafasi nzuri ya kutosha ambayo itawawezesha kukua na afya, mirefu na kubwa. Kupunguza baadhi ya miti ili kuvuna kuni na kuweka miti mingine kukua vizuri kwa kawaida ndiyo njia bora ya kusimamia miti yako.

**Wanunuzi wa mikopo ya kaboni wako wapi nani?**

Hivi sasa, mikopo ya kaboni inauzwa kwenye masoko ya hiari na katika masoko ya kufuata. Zinaweza kuthibitishwa kwa njia tofauti, kama vile kuna chapa tofauti na uidhinishaji wa bidhaa zingine unazonunua. TIST inaweza kuuza mikopo yake ya kaboni kwa kufuata sheria au soko la hiari kwa sababu ni ya ubora wa juu.

Kuna viwango vingi tofauti katika masoko haya vyenye sheria zinazobadilika kila mara kuhusu upandaji miti, ufuatiliaji, na kuripoti ambazo ni lazima tuzingatie ili kuuza bidhaa za kaboni. Tunatumia viwango vya ubora wa juu zaidi vya Uthibitishaji na Uthibitishaji — Kiwango Kilichothibitishwa cha Carbon (VCS) na Viwango vya Muungano wa Hali ya Hewa, Jumuiya na Bioanuwai (CCBA). Sisi ndio programu iliyoorodheshwa zaidi - “Triple Gold” kwa VCS na CCBA.

**TIST ina aina mbili za msingi za wanunuzi:**

Ya kwanza inaundwa na watu walio tayari kutoa pesa kuhamasisha watu kupanda miti. Mifano ni pamoja na kulipia miradi ya upandaji miti ili kufanya harusi au mkutano usio na kaboni. Aina ya pili inaundwa na makampuni nchini Marekani, Ulaya, Kanada na nchi nyingine za viwanda ambazo zinajitolea kwa hiari kupunguza utoaji wao wa GhG ama kwa sababu wao ni wasimamizi wazuri wa mazingira au wanajiandaa kwa mahitaji ya udhibiti wa siku zijazo.

TIST ina furaha sana kuwa na mikopo bora ya kaboni, na kuweza kusambaza wateja wengi tofauti.



## Kupanda miti katika maeneo kavu.

Jinsi TIST inavyoendelea kutamba katika maeneo yaliyo na uwezo mkuu na makavu, inakumbana na changamoto katika kuishi kwa miti. Katika TIST sisi huanzisha na kugawana mazoezi au njia bora za kufanya mambo, na hili limetusaidia kila wakati katika familia ya TIST kupata matokeo mazuri.

Hapa chini ni njia chache bora tunazoweza kujaribu tunapopanda miti katika maeneo kavu:

1. Uteuzi wa mahali pa kuanzisha kitalu chako. Miche itahitaji kuwekewa maji mara moja au mbili kila siku ikiwa michanga. Fikiria kuweka miche yako karibu na nyumba ili uweze kutumia maji yanayotumika nyumbani kuimwagia. Kutumia miti ya kupunguza upepo kutapunguza matumizi ya maji na itaipa miche yako michanga kivuli.
2. Maandalizi ya mapema: Andaa mashimo ya kupanda miti mwezi mmoja kabla ya mvua kuanza ikiwezekana, shimo litapasukapasuka na ili litasaidia maji kuingia udongoni kwa urahisi kunaponyesha. Mvua wa kwanza ukishaanguka, panda miti na ujaze shimo kwanza na udongo wa juu halafu mbolea.
3. Jaribu kutumia njia za kushika maji ya mvua ili maji mengi zaidi yaweze kufikia miti. Miti pia itaweza kuishi ukiipanda karibu na maji yaliyopo kila msimu.
4. Kufunika ardhi: Funika ardhi baada ya kupanda miti. Hili litasaidia kuzuia kupotea kwa maji kwa sababu kunapunguza kubebwa kwa maji na jua. Kutumia boji kutaongeza virutubisho udongoni, lakini kufunika kwa mawe pia kwaweza kuleta faida zingine katika maeneo yenye mawe.
5. Kilimo mseto: Tujaribu kilimo mseto. Kiwango cha kuishi cha miti iliyopandwa katika mashamba ni juu zaidi ya iliyopandwa misituni na vichakani kwa sababu itatunzwa na ipo katika udongo bora.
6. Chagua aina inayokua vizuri katika maeneo kavu. Mara nyingi miti ya kiasili iliyotoka eneo linalozingira huweza kuishi san asana. Mifano ni *Melia*, *Acacia seyal*, na *Muuuku (Terminalia brownii)*.
7. Linda miti iliyopo na uiruhusu kuzaa. Miti hii iliyopo ni yenye nguvu na yaweza kuishi katika misimu iliyo na ugumu tunapoilinda. Inatupa chanzo la mbegu zilizozoea eneo hilo pamoja na kivuli na vinginevyo.
8. Vitalu vilivyoinuka vyaweza kusaidia. Tunapoanzisha vitalu hivi, tunapata miche yenye mizizi yenye nguvu kwa hivyo itaishi. Vinaweza pia kusaidia kuweka miche kwa muda mrefu zaidi katika kitalu ili iwe mikubwa na yenye nguvu. Hata hivyo, vitalu vilivyochimbiwa vyaweza kuwa chaguo nzuri kwa sababu vinafunikia miche na vinapunguza kufa. Hapa, kuwa mwangalifu na ugeuze miche kila baada ya wakati Fulani ili mizizi isimee na kuingia udongoni.

Tutumieni njia bora zaidi tulizonazo, na tutengeze na kugawana na wengine ili tuweze kufikia matokeo mengi na kusaidia TIST kukua katika maeneo yetu.



# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program

www.tist.org

**Kikamba Version**

*TIST is an innovative, time - tested, afforestation program led by the participants.*



**Ngwatanio ya TIST Gantangine wumbanoni woo matuku 21/06/2023.**

**Inside:** TIST: Ukuklyo wa mawoni ma CCBA kuma kwa ene nthi. Page 2

Aimi ma TIST kusiia uvyuvu wa nthi na movinduku ma nzeve. Page 4

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**TIST: Ukuklyo wa mawoni ma CCBA kuma kwa ene nthi.**

**C**lean Air Action Corporation (CAAC) mena utanu kutangaasa kana yina muvango wa kuthiana na mawalanio na project ila syi ungu wa kilasi kya Climate (movinduku ma nzeve), Community (ekali ma kisio) na Biodiversity (kila kyonthe kikalaa kisioni) Alliance (wiw'ano/kukwatiania) (CCBA).

- Walanio wa TIST Kenya VCS-005 (VCS-737) ila mbeeni yeetawa (CCB-002) ila mwiso yila uthianwa na kuvitukithwa 25/03/2021, ila yai ungu wa uthiani wa kilungu kya kuma 23/05/2020 kuvika 14/04/2023.
- Walanio wa TIST Kenya VCS-006 (VCS899) ila mbeeni yeetawa (CCB-003) ila mwiso yila uthianwa na kuvitukithwa 17/05/2021, ila yai ungu wa uthiani wa kilungu kya kuma 23/05/2020 kuvika 14/04/2023.
- Walanio wa TIST Kenya VCS-009 (VCS996) ila mbeeni yeetawa (CCB-004) ila mwiso yila uthianwa na kuvitukithwa 25/03/2021, ila yai

ungu wa uthiani wa kilungu kya kuma 23/05/2020 kuvika 14/04/2023.

Nitwavitukithiw'e, CAAC nomuvaka yonanie mawonanio kati wa maundu angi kana TIST yina vaita kwa uvinduku wa nzeve, kwa mbai na ekali ma kisio na kyothe kila ki nthini wa kisio. CAAC ninenganite livoti yoo ya usyaiisya (Monitoring Report (MR)) kwa Verra (yaani kwa kikundi kila kiungamiaa VCS na CCB) na kwa EPIC sustainability services pvtltd., ila ni mwiki wa masavu ma CCBA.

Nitukwendeka tunyaiikye uvoo iulu wa matokeo ma usyaiisya. Kwala mwina internet onaethiwa mwithi cyber nituumuthokya musisye webpage vala livoti ithi sya usyaiisya na mathangu angi mavata mevo undu wa kusomwa. Kwongellela vena link ya utkutetheesya kumya woni waku iulu wa uvoo uu na kutuma itheo wa mavu. kumya mawoni maku nikuingue muvaka matuku 08/07/2023 atia link ithi kusoma livoti ya usyaiisya wa ngwatanio ithi itatu syivaaya iulu na mauvoo angi ma meko ma TIST.

KE005: <https://registry.verra.org/app/projectDetail/VCS/737>

KE006: <https://registry.verra.org/app/projectDetail/VCS/899>

KE009: <https://registry.verra.org/app/projectDetail/VCS/996>

Nitunenganite mathangu angi iulu wa maundu ala TIST iendeesye na yikite me ungu wa link ii:

KE005: <http://www.tist.org/PD-KE-VCS-005%20Documents.php>

KE006: <http://www.tist.org/PD-KE-VCS-006%20Documents.php>

KE009: <http://www.tist.org/PD-KE-VCS-009%20Documents.php>

Kwa ala matena internet (nzia nzau sya mikumukanilye) livoti ino yi ithanguni ya Mazingira Bora ya Kenya ya mwai wa katano (May 2023)

Vaa itheo vena usungio wa usyaiisya kwinana na PDS

<b>Climate</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD Live Trees	2,690,275	1,622,971	597,901
PD carbon to date (t)	1,506,329	1,134,369	467,888
PD carbon this period (t)	397,586	38,384	134,805
<b>Community</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD members	35,318	35,324	12,205
PD Small Groups	5,168	3,961	1,731
KE members in TIST	130,534	same	same
KE Small Groups in TIST	18,490	same	same
KE active members	90,100	same	same
KE Members with GhG contracts	87,178	same	same
KE Carbon Payments from Start	\$3,080,673	same	same



KE Carbon Payments this period	\$2,042,974	\$1,818,880	\$2,042,974
KE Training, Climate change, from start	161,844	same	same
KE Training, Climate change, this period	36,114	38,497	36,114
KE Training, Conserv Farming, from start	261,643	same	same
KE Training, Conserv Farming, this period	44,638	47,517	44,638
KE Training, health, from start	134,917	same	same
KE Training, health, this period	2,039	2,086	2,039
KE Training, biodiversity, from start	278,250	same	same
KE Training, biodiversity, this period	2,218	2,355	2,218
People employed or contracted	118	same	same
PD Live Trees	2,690,275	1,622,971	597,901
PD Fruit and nut trees	438,497	259,316	97,109
PD Eucalyptus trees	281,797	194,495	59,998
<b>Biodiversity</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD Live Trees	2,690,275	1,622,971	597,901
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD indigenous trees	375,963	258,182	99,714
PD indigenous hectares	1,575	1,046	331
<i>vitex keniensis</i> trees	20,407	12,181	5,899

#### Manya

- PD ivinda ya usyaiisya.
- Kumanyisya/Kuvundisya ni yila kwi mbumbano sya ngwatanio.
- PA ni kisio kila ki wia (Project Area) ila ingi yitawa groove.
- Vitex Keniensisi ni muthemba wa muti wonekaa Meru.

Twimatha kwambatw'a ndeve na kutwikithwa ndeve ya thaavu kwa CCB na wia uu.

#### Uvinduku wa nzeve na useo wa kumanyia:

kati a mawia (project) aaya atatu nitukwatite tani milioni 3.1 sya nzeve itavisaa (carbon) kuma kwa mawithyululuko. Aimi ma TIST nimamanyia w'a iulu wa nima ya kusuvia kutetheesya kwailya uvinduku wa nzeve. Mathangu ma PD ya makili ma miti ila itetheesya kwikalaya kimeu muthangani, kwikia muunyi na kusiia muthanga kukuwa. TIST ninenganae mwolooto wa ukwatania mbai kwa kuete ngwatanio na tukundi tunini.

**Vaita wi w'oka kwa mbai:** TIST niyoobnanisye kwithiwa isuvia ngya isioni ila syibna ukya kwanzia ya mawoni na mwolooto wina uthuthio. Aimi ala ni

amemba nimakwataa vaita wa ivinda inini na vaita wa ivinda iasa. TIST nimanyiasya aimi iulu wa mawalany'o ma maendeeo ma kwikala, yila meekwa nimaetae vaita na useo wa thayu. Ta kuvanda miti na kukwata ndivi ya kuaa ya nzeve itavisaa. Nimaamuuua niva meuvanda miti yoo, mithemba ya miti ila meuvanda ila yina vaita munene kwoo na kwa mathayu moo na undu meumivanda. Ivindani yii, muimi wa katikati niwakwatia \$3,557 vaita wa mbesa. Kw kilasi kivathukanio kwa amemba ala onzu na iveti nimakwatie \$1,246 na \$3,368 matianie uu.

#### Vaita wa mwanya wa kukwataniani na kwikalania (biodiversity):

*Vitex keniensis* (Meru oak) muthemba wa muti ula wonekaa Meru ula wika nesa kisioni kya kiimani kienne kya Kenya na muti ula muthemba waw'o uandikithyitw'e ta uendee nakwaa iulu wa nthi ni IUCN Red List. Muthemba uyu niwonekete uendee na kuoleka muno, aimi ma TIST ala me kisioni kii nimaudandite nikana kuwikalaya vala mena miti mbee wa 38,487 ya *Vitex Keniensis*, ula ni utheu wa vaita kwa muthemba uyu wa muti.

Kwa makulya kwa ndaia neena na: [CharlieWilliams@CleanAirAction.com](mailto:CharlieWilliams@CleanAirAction.com)



## Aimi ma TIST kusiia uvyuvu wa nthi na movinduku ma nzeve.

**A**imi ma TIST nimaendee kwosa itambya ya kuola uvyuvu wanthi na uvinduku wa Nzeve. Aimi aingi

nimakulitye kuelewa kwa nzia ya movundisyo na semina ma TIST na kwanzia ya mbumbano sya ngwatanio kumanya na kuelewa iulu wa Uvyuvu wa Nthi, movinduku nthini wa nzeve, na undu matonya kwika. Nitukwona movinduku kivathukanio ma nzeve umuthi. Kwa ngelekanio El Nino ila ya 1998 ila yeenthiiwe nthi youthe na yaatiwa ni munyao wa ivinda iasa na kiseve kinene kila kyakusiwe 2004 ila andu meeliilwe ta syakathiwe ni uvyuvu wa nthi. umunthi munyao, Mutiuuko wa muthanga, kiw'u kila vandu, nimokusi amwe. Ukusi ungi nita kuoleka kwa mbalavu kiimani kya Mt. Kenya, mavinda ma mbua matekueleeka ala matumite liu ulea ikika isioni mbingi, Ngiie, kukusiwa kwa kung'ala kwa nthongo itangalaa na maundu angi methiitwe.

### Kuvyuva kwa Nthi nikiyau?

Uvyuvu wa nthi ni kwasya kana kuendee nakwithiwa uvyuvu wi iulu kwi undu weethiwa vasu tene, ula naw'o uetae mauvinduku ma nzeve. Nthi mbyuvangu nikuete uvinduku wa mavinda ma mbua ya nthwa na ya uua, kikungu/kikungu/kilingi kiito, kiw'u kya ukanga kwambatanga, liu kulea usyaa na miti kukwatwa ni munyao vamwe na nyamu sya kithekani na andu. yila andu ma saesi meuneenea uvinduku wa nzeve, meneena kukonya meko na uvinduku munene wa nzeve na kila kietae mauvindu aya.

### Nthi niyiendee na kuvyuva?

Yii! Nthi niyongelete uvyuvu ula nita 10C kwa myaka 100 mivitu. Asomi ma movinduku ma seve nimesi kana maundu ala andu mekaa nimatumite nthi iendee na uvyuva, maundu ta kuvivya mauta, mavia ma uvivya ta coa, mauta ma ngali, ngasi ila sumaa nthi, kutema miti na kuema usuvia muthanga.

### Nikiyau kietawe ni Yumba ya Ngilini (greenhouse)?

Nyumba ya ngilini ni ni kwambata kwa uvyuvu kula nthi yiw'aa kuma ngasi ila syalechw'a mawithyululukoni na syitawa greenhouse gases ila nita carbon dioxide (nzeve itavisaa), nitrous oxide, sulphur dioxide na methane trap ula nivinya kuma suani. Wumo wa carbon ni kutemwa kwa miti, nzeve/ngasi ila ilekaw'a ni industries, ngali, ngu syavivw'a kana makaa na kuvivw'a kwa mititu.

### Ve muisyo mwau wa Kuvyuva kwa nthi?

- Nthina wa kiw'u isioni ila itauaa nesa na mang'alata ni utwika weu.
- Kwongeleka ka uwau ta ndetema. undu kwaendee na uvyuva, niw'o kuendee kwithiwa kwi isio seo sya umuu kusyaana na na kuete wongeleku wa uwau wa ndetema. Na kii nikuete uvinduku misyini na kundu kwa uiiti, ingi kuona ivinda ya kwikala thayu munamuno ikw'u sya syana kwongeleka.
- Kuola ngetha thini wa nthi ila ni Tropical na Subtropical, munamuno ta nthi sya umiloni wa sua sya ilembeta ya Africa (East Africa). Nundu wa uoleku wa mbua na wongeleku wa tusamu tula tuviviitaa kusyaana nundu wa uvyuvu, utusya wa liu kuoleka na kii kiisyya ungya na nzaa/yua misyini na mbaini.
- Mathooa me yiulu ma liu. Undu aimi aingi maendee ukwata ngetha nini now'o liu uendee na kunyiva kwoou kwongeleka kwa thooa nundu aui naingi kute ala me uta.
- Undu kila kindu kiendee uvinduka now'o mawithyululukoni ikwithiwa na mauvindu muno mititu. Isio sya iimani na mititu ila syithiwa syi wumo wa kiw'u kuendee kuma. Kii nakyo kiyothotheea kwaa kwa kiw'u kya ungyithy'a mimea na kuoleka kwa kiw'u kitheete mbusini kila kyaile kwikalya masilanga na kula kiw'u kisuviiawa kwi kiw'u. Kiinakyo kiyiola vinya wa ukuna mwaki wa sitima. Nasuyo industry situ masivitali na mivea yothe ila itumiaa mwaki wasitima onayo kuvikiwa nimathina aa. Kiw'u kya muveleki kwaa isioni sya matoni na misyini onayo.
- Makilingi na mamilionii ma andu kwithiwa muisyoni wa kutuuukiwa ni muthanga na mbua itena kithimi, syothotheetwe ni mbua mbingi na isioni sya utee wa maukanga nundu wa kwongelka wi'u ukangani.

### Tutonya usiia ata uvyuvu kwongeleka?

#### Kuvanda na kusuvia miti!

Otondu tuwetete vaa iulu, nzeve itavisaa (carbon Dioxide) ni ngasi imwe ila ietae uvyuvu wa nthi. Miti niyosaa carbon dioxide kuma nzeveni ila ikusevya liu wayo na kumia mithambani, miini na muthangani ta cellulose carbon. Onakau miti ino yatemwa na kuvivw'a, nilekasya nzeve ino inaiite ingi nzeve.

**Niwisi kala kila muti nouseuyve kauvinduku ka nzeve?**

Miti na matu mayo nimavwikaa na kuthithya muthanga. Kweew'a uthyumuo wa kwikala muunyiini Ona kana muthanga usu wi muuyini uilye ta mwiu kwi ula wi suani. Yila mutanga wekala wi muthithu, kimeu nikikalaa ivinda iasa. Kii nikwasya miti ila yi kithekani kyaku ikaailya kiw'u kila ki muthangani waku na kwikala kwa ivinda iasanga. Kii kikatetheesya mimea yaku na kiw'u kwa ala mevakuvi naku.

**Nikya kitawa Carbon Credits?**

Kutwikithya TIST carbon credit wendekaa syindu 3:

1. Kindu kivo na kyongelelee kuoleka nzeve itavisaa (carbon Dioxide) nzeveni.
2. Kuikiithya na kwikia muikio kana makekalya nzeve itavisaa ite nzeveni kwa myaka mingi.
3. Kuikiithw'a na kuvitukithwa ni mundu wa katatu kana itambya yii niyeekikie kwianana na miao.

Miti niyosaa nzeve itavisaa kuma nzeveni iiseuyva liu(photosynthesis) na kumia mithambani, miini na muthangani. Kiwango kya nzeve itavisaa kuma nzeveni na kw'iwa no kithimwe na kotalwa, naindi kuikiithya na taw'o, kukunda nzeve ino itavisaa na kuthimwa no iteke sokoni wa nthi syothe ta carbon removal credits. Aui mauaa credit ithi kuola muio woo wakwithiwa mayumwa nzeve itavisaa ila itetheesya kuvindua nzeve.

TIST niyithiitwe itonya kuta nzeve itavisaa ila imunditwe ni miti oulu utonya uta sukali na yia. Na nzeve itavisaa, onaku tuilikasya miti melini na kumitwaa soko. indi twosaa lato wa nzeve itavisaa ula mutale na kulivotiwa wumitw'e kiseveni na kwiwa mitini ila yi miundani kwitu kana mititu. Utandithya wa nzeve itavisa/carbon credits nutonya kwikika New York, Ilovi, London, na misyi ingi minene nthi yoonthe, kana kuvangwa katikati wa andu na kambuni. Nonginya tuvikie mawalany'o na miao ila yendekaa sokoni uyu.

Tuitonya utema miti youthe kana kwenga mititu nundu ni uthuku kwa mawithyululuko. Nanginya twiyumye kwikalaya miti ila tuuvanda kwa ivinda iasa ta myaka 30 kana mbeange. Nitwaile ukuna livoto na uvoo waw'o. Yila miti yavandwa matambya na masavu nimekawa kumanya kiwango kya nzeve itavisaa kila miti ya muimi yakunda. Miti ndiendaa, itiwaa ovau, kwoou muimi niwikalaa na miti yake iunenga, uithyo wa indo, ngu, matunda na mbindi/ngii. Mbesa ila TIST yaseuyva kuma kuta nzeve itavisaa niseuvasnzia nzau sya kuete ukwati na indi

kuaana na aimi ma ikundi nini sya TIST na kutumia kuungamia uthukumi wa TIST ula nita, kuvundisya, Kuvitukityya na utongoi.

**Miti yoonthe ikundaa nzeve itavisaa yianene?**

Any'ee nivethiawa na kivathukanio kwianana na undu muti wiana nundu miti ila mithathay niyiaa nzeve mbingi kwi miti yina mithamba mitheke. Miti miasa niyosaa nzeve itavisaa mbingi kwi miti mikuvi. Kwoou miti ila mithathau nikuunengane isavu ya ukwati kuma nzeveni itavisaa. Kii nikwasya miti ivanditwe na utaaniu ula waile yina ivuso inene ya kwianana na kunenenva vamwe na kuasava na kuete ukwati mwingi kuma kwa nzeve itavisaa. Nundu miti ino nding'ang'aniaa liu kuma muthangani na kiw'u nundu nditinianie muno.

Kwoou nikana kukwata ndivi nzeo kuma mitini, nuseo kuvanda miti yina utaaniu wianie nikana yiane nesa yimiasa na mithathau. Kutaanisa miti imwe na kumiketha na kumisea ta ngu na kueba imwe kuendeeza na kwiana ni nzia nzeo ya kwailya miti yaku.

**Niva na nuu uuaa nzeve ino itavisaa (carbon credits)?**

Kwayu, nzeve itavisaa itesawa sokoni sya kwiyumya na soko ila ingi memuamba. Vala nivituukithasya na nzia syikivathukanio, otondu kwi brand kivathukanio na uvitukithya wa syindu ingi uuuaa. Tist nitonya umathia soko nzeve itavisaa nthini wa soko ino nundu nzeve ino niya kiwango kiiulu.

Ve iwango kivathukanio sokoni uyu na syikalaa iisesya na miao iulu wa uvandi wa miti, kumisyaiisya na kutunga livoti nikwaile nikana tutonye uta nzeve itavisaa. Ni tutumiaa nzia ya kiwango kya iulu vyu kuthiana na kuvitukithya ila ni Verified Carbon Standard (VCS) na Climate, Community and Biodiversity Alliance Standards (CCBA). Nithyi tunengetwe kiwango kya iuly kwa waliano uyu - "Triple Gold" ke VCS na CCBA.

**TIST yithiawa na aui kundu kwili.**

Muui wa mbee ni mundu ula ukwenda kunengane mbesa kuthuthya andu kuvanda miti. Ngelekany'o ni kuiva miti ivandwe kuweuyva alusi kana wumbano wa carbon neutral. Aui makeli masevitw'e ni kambuni kuma US, Europe, Canada na nthi ingi ila syina ma industry kwiyumya kuola nzeve ya yumba sya ngilini (GhG) nundu wa kwithiwa ni meyumitye kwailya mawithyululuko kana nimeyumbanitwe kuola mawendekethyo.

TIST nindanu kwithiwa na uvitukithya mwailu wa nzeve itavisaa (carbon credits) na kwithiwa tutonya uteea kastoma kivathukanio.



## Kuvanda miti isioni ila nyumu.

**O**undu TIST iendee kwiana isioni ila itembunu na ila mbumu, now'o kuendee kwithiwa na uito wa miti kwikala. Nthini wa TIST nitwianasya na kumanyianya iulu wa nzia nzeo, na uu nututethetye ta musyi wa Tist kukwata ueti museo.

Vaa ve nzia imwe nzeo tutonya utata kutumia tuivanda miti isioni mbumu

1. Kisio kya kivuio. kivuio nikyaile ungithwa keli kwa muthenya, Sisyawikie kivuio vakuvi vandu utonya kungithya na kiw'u kila utumia vu musyi. Uitumia kusii nzeve niikuola utumiku wa kiw'u na uimanthia muunyi kusuvia miti isu minini.
  2. Inza maima tene ta mwai umwe mbee wa mbua kwambiia, yiima yii niyikwatuka na na kutuma kiw'u kilika na nthi. itina wa mbua ya mbee kua vanda miti na uyususya yiima na muthanga wa yiulu na vuu.
  3. Tata utumie nzia ya uketha kiw'u kya mbua ta tutila na kuikiithya kiw'u nikyavikia miti. Miti ingi noyikale nakwika nesa ethiwa yandandwa vala kiw'u kisilaa.
  4. Kwikia muunyi ungu kana matu. kii nikitetheeasya kwia kimeu na kuola kukuwa kwa kiw'u ni nzeve. Kutumia vuu wa yiima nikwongeleela unou wa muthanga na ingi ithiwa vai matu ona ivia noyitumike kuvwika muthanga.
  5. Ingi tutate uvanda miti miundani nundu muti uvanditwe muundani withiawa na ivuso inene ya kwikala kwi ula uvanditwe kithekani nundu vaa muundani nusuviawa na muthanga wavo nimuseo.
  6. Nzakua mithemba ya miti ila yikaa nesa isioni nyumu kuma mawithyululukoni. Ngelekany'o ni Melia, musemei, Muuku (terminalia brownii)
  7. Nzuvia miti ila yivo noimieka iendee na kusaana. Miti ino yithiawa yi milumu na kaingi nivitukaa mawumu othe ala yeethiana namo. Yithiawa yi ya vata kunengane mbeu na ninenganae muunyi na moseo angi.
  8. Ivuio syi kitandani nitethasya. Yila twavua itandani nitukwataa mbeu yina mii milumu na niyithiawa itonya kwikala na kumiisya. Ingi noitetheesye miti kwikala kivuioni ikaneneva na kwithiwa na vinya. Ingi kitanga kii ethiwa nikiliku nokisiie sua na kiw'u kuthi na mituki. Ingi ithiwa uivindua miti yikivuioni kusuvia mii ndikamee ilike na muthangani ungu na kwanangika ivinda ya kumithamya kuma kivuioni.
- Ekai tutumie nzia nzeo ila twinasyo, twiane na kumanyiany'a ithyotho tuvukie ukwati museo na kutethye Tist kwiana isioni situ.

# Mazingira Bora



# TIST

The International Small Group & Tree Planting Program

www.tist.org

**Kipsigis Version**

**TIST is an innovative, time - tested, afforestation program led by the participants.**



**Mkutano wa Nguzo ya Gantangine uliofanyika tarehe 21/06/2023.**

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# TIST: CCBA Sometab Ng’olion en Bikab Boror.

**C**lean Air Action Corporation (CAAC) ko baibai kobarasta kole tnye maget kochigil tetutik cheisibu en kasarta nebo ang’wan kotiengee Climate, Community and Biodiversity Alliance (CCBA)

2021.Chigiloni ko bo Kasartab 23 arawetab Mamut en kenyitab 2020 akoi tarikit 14 arawetab Baki 2023.

- Tetutietab TIST en Kenya VCS-005 (VCS737), nekitako CCB-002, ako ne kikichigile nebo let en tarikit 25 arawetab Kiptamo) somok-2022. Chigiloni ko bo Kasartab 23 arawetab Mamut en kenyitab 2020 akoi tarikit 14 arawetab Baki 2023.
- Tetutietab TIST en Kenya VCS899, nekitako CCB-003 ako ne kikichigile nebo let en tarikit 17 arawetab Mamut kenyitab 2021.Chigiloni k obo Kasartab 16 arawetab Mulgul en kenyitab 2021 akoi tarikit 14 arawetab Baki 2023.
- Tetutietab TIST en Kenya VCS-009 (VCS996), nekitako CCB-004 ako ne kikichigile nebo let en tarikit 25 arawetab Kijtamo kenyitab

Asimuch inyoru chigilonito, CAAC ko nyolu koobor, en tuguk alak, kole TIST k obo kelchin en Itondab emet, bororiet ak terchinosiekab itonwekab emet. Kikokoito CAAC Arorutietab Chigilet koityi Verra (ne noton ko tononchin VCS ak CCB) ak koityi EPIC Sustainability Services Pvt. Ltd, chigilindetab olekiboisioito tuguk ne kikoyan CCBA.

Nyolu kiyogten walutikab chigilisiet . en okwek che otindoi internet, kobot che otindoi cyber ketochok ochut webpages ole mi Walutikab Chigilisiet ak tuguk alak che mi orit yoton asiomuch ogeer. Ako kora ko mi komosto ne kimuche kemwaen ng’olion ne itinye chi ako mi oret ne kechutito yoton en ng’wony en mapit ne mi legem yu. Kasarta ne imuche imwaen ng’olion ko yataat akoi tarikit 8 arawetab Mg’eyet (tisab) kenyitan 2023.

KE005: <https://registry.verra.org/app/projectDetail/VCS/737>

KE006: <https://registry.verra.org/app/projectDetail/VCS/899>

KE009: <https://registry.verra.org/app/projectDetail/VCS/996>

Kitindoi kora pechisiek chebo Tetutietab TIST ole imuche inyorchu tuguk alak.

KE005: <http://www.tist.org/PD-KE-VCS-005%20Documents.php>

KE006: <http://www.tist.org/PD-KE-VCS-006%20Documents.php>

KE009: <http://www.tist.org/PD-KE-VCS-009%20Documents.php>

En okwek che motindoi internet, ko walutikab chigilisiet ko kikakinde barweatb Mazingira Bora. Nebo arawetab Mamut (5) en 2023.

Cheisibu ko walutikab chigilisiet chebo tugukab tetutik.

Climate	KE VCS 005	KE VCS 006	KE VCS 009
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD Live Trees	2,690,275	1,622,971	597,901
PD carbon to date (t)	1,506,329	1,134,369	467,888
PD carbon this period (t)	397,586	38,384	134,805
Community	KE VCS 005	KE VCS 006	KE VCS 009
PD members	35,318	35,324	12,205
PD Small Groups	5,168	3,961	1,731
KE members in TIST	130,534	same	same
KE Small Groups in TIST	18,490	same	same
KE active members	90,100	same	same
KE Members with GhG contracts	87,178	same	same
KE Carbon Payments from Start	\$3,080,673	same	same





KE Carbon Payments this period	\$2,042,974	\$1,818,880	\$2,042,974
KE Training, Climate change, from start	161,844	same	same
KE Training, Climate change, this period	36,114	38,497	36,114
KE Training, Conserv Farming, from start	261,643	same	same
KE Training, Conserv Farming, this period	44,638	47,517	44,638
KE Training, health, from start	134,917	same	same
KE Training, health, this period	2,039	2,086	2,039
KE Training, biodiversity, from start	278,250	same	same
KE Training, biodiversity, this period	2,218	2,355	2,218
People employed or contracted	118	same	same
PD Live Trees	2,690,275	1,622,971	597,901
PD Fruit and nut trees	438,497	259,316	97,109
PD Eucalyptus trees	281,797	194,495	59,998
<b>Biodiversity</b>	<b>KEVCS 005</b>	<b>KEVCS 006</b>	<b>KEVCS 009</b>
PD Live Trees	2,690,275	1,622,971	597,901
PD hectares	9,120	5,640	2,121
PD project areas	17,358	13,111	4,058
PD indigenous trees	375,963	258,182	99,714
PD indigenous hectares	1,575	1,046	331
<i>vitex keniensis</i> trees	20,407	12,181	5,899

**Ng'olion**

- Period ko kasartab chigilisiet en tugukab tetutiet.
- Training ko kasartab konetisiet en chito kou chonbo tuiyosiekab Isasamet.
- PA tetutietab emet, ako kikureen kora grove.
- Vitex keniensis ko saptetab Meru.
- Vitex keniensis is the Meru Oak.

**Borotetab Kondietab walutikab Itindab**

**Emet:** Tetutichoton somok ko kikoisto tannisiek milionisiek 31 chebo koristo ne ya en tapoyat. Temikab TIST ko kinete akobo Temisietab Ripetab Emet asi komuch kotoret en kimnatetab muitaet en itonsab emet. Tugukab Tetutietab ko tindoo tugukab ketik elipusiek che toreti koriib beek en ng'ung'unyek, ko ko urwet ak kotoret en loisietab ng'ung'unyek. TIST ko koonu banganutiet ne leel en oretab Isasamok ak Kotuyosiek che Mengechen.

**Borotet ne inengen nebo bororiet:** Kikoboor TIST kole toreti che seretos en emotinwek che mi sereteet ako nyoru kiy en bororiet. Temik che membaek ko chobe ako nyoru borotosiek chebo

kasarta ne nwach ak ne koi. TIST konete temik en tetutik che chang chebo bandaab taa, che oloon kakisultaen, ko konu borotet en sobet. Mine ketik ak konyoru pjeutikab koristo ne kioldoo. Tilu olekimuche keminchi ketikuak, ak ketik anchoon, ak komwa kole anchon ketik che konu boroteet en sobetab biik ako at ache kemine. en kasaraton, ko kikonyorchi nekit temindat aketugul \$3,557 en boroteet netinye ak rabisiek. En kyumosiek che terterchin, ko biik che nyorotin ak kwonyik ko kikonyorchigee \$1,246 and \$3,368 , agetugul.

**Kelchinoik che ichegen chebo Terchinosiekab**

**Emet:** *Vitex keniensis* (saptetab Meru) ko kinyorchin missing komostab Tulwetab Mt Kenyaako agenge en ketik che mi en ng'oiyondit en sirtukiab IUCN Red List. Koitosiekchuak ko togu kobendi ng'wony. Temikab TIST en Tugukab Tetutiet ko kikomiin ak koriib *Vitex keniensis* che sire 38,487, ne noton ko koboronet kele mi borotet en sambulisek che terterchin.

En tebutik, onyoru kaikai  
CharlieWilliams@CleanAirAction.com



# Temikab TIST ko Kirindo Tesetab Burgeiyet en Ng'wony ak Waletab Itondab Emeet.

**T**emikab TIST ko ko koyan kursetab kekirinda tesetab burgeiyet en ng'wony ak waletab itondab emeet. Kikocheng' temik che chang kakuiyet kobun konetutikab TIST ak tuiyosiekab Isasamet asikonai ak kokuyo missing akobo tesetab burgeiyet en ng'wony, kiit neyoe en itondab emeet, ak ortinwek che kimuche keistongee choton. Togu en betusiechu kiit ne yoogse an waletab itondab emeet. Asi kimuch kiboor alak en tuguk che yoogse, ko kinyo roptab El Nino en 1998 ne kiit kobar tuguk che chang' en emeet ak yeityo kosib kemeut neo, ak chepiyiyet neo en 2004 che choton ko kikonu burgeiyet neo netesokge en ng'wony. Kemeut ne mii nguni, maaranet ak ng'isyogenetab ng'wony ko koborunoikab choton. Koborunoik alak ko ng'isyogenetab koikab beek (teluchi) en tilwetab Mt. Kenya, itondab emeet ne mekimuche kenai ole nyontutoo che choton ko kokong'em minutik en komoswek che chang', kipreng'enyit, kondametusiek ak segenisiek che chang' che yomtos, ak alak che chang'.

## Tesetab Burgeiyetab Ng'wony ko Nee?

Tesetab Burgeiyetab Ng'wony ko tesetab maat nemi en emeet ne wendi kowole itondab emeet en ng'wony. Maat ne tesogse en ng'wony ko wole ole robondoo en ng'wony, ropwek che echeen, tesetab beek en nyanchosiek, weketab minutik, ak tukuk alak che chang' che yoogse en minutik tugul, tong'ikab timin, ak biik. Olon kang'alaal kipng'omoik akobo waletab itondab emeet, ko kiit ne ikimite ko resetab burgeiyet en ng'wony ne noton ko ibu boisionikab biik ak itondab emeet ne wekogse missing' ak kowolowologse.

## Tos burgeitu ng'wondet missing i?

Ee! Kikotesak maat en ng'wony en koiteteab 1°C en kenysisiek 100 che kokosirto. Ingen kipng'omoik kole tigik che yoe biik ko noton ne ikochin ng'wony koeti maat missing, cheu belsetab mwanik, tilletab ketik ak ribet ne rorunoot nebo mbarenik.

## Greenhouse Effectko nee?

Greenhouse effectko testeba burgeiyet nebitu en emeet amun en koriswek chemi barak che kikureen *greenhouse gases*, cheucarbon dioxide, nitrous oxide, sulphur dioxide, ak methaneche choton ko tere

kimnatetab asista. Ole oo en ye bunu koristo ne ya ko tiletab osnosiek, iyet nebunu olekichoben tuguk (factories), iyetab karisiek, belsetab kwenik anan ko neseek, ak belsetab osnosiek.

## Ne ng'oindo neibu tesetab burgeiyet en ng'wony?

- Rorunetab beek en melewosiek kokonu kotesak melewet en ng'wony
- Mionwokik che tesogse cheu malalaria. Olon katesak burgeiyet en emeet kogochin mbu kotesak ak koib mionwokik cheu malaria. Ite inoniton kochil korik che chang' ak sipitalisiek ak kochuchuch kenysisiek che soptos biik en emeet ak meetab lagok che mengechen.
- Ichuchuchogse kesutik en mbarenik en emotinwek chemi kwenetab ng'wony cheu chebo Afrika Kong'asis. Inoni ko amun ming'in ropta ne ropani ako tesogse tong'ik che ng'eme minutik ako ite inoni kokgo bananda en emeet ak ruposiek en korik che chang'
- Bendi barak olietab tuguk che chang' en ng'wony. Roru kesutik en temik ako bendi ng'wony tuguk en ndonyosiek, koba barak olietab tuguchoton amun chong'oitu biik chemochu tuguk che momi ako mo chogu choton.
- Chong'oitu tuguk che wologse en ole kichopto tuguk ak itonwekab emeet missing' ko osnosiek. Tesogse koyomtos kondametusiekab beek en tulonok al osnosiek. Wendi ng'wony koretoetab beek koityi mbarenik ak kotutiginitu beek en oinosiek ak silangosiek ak ole kiteremen beek. Ni kondoo ng'wony chopteab kimnatetab sitimet. Sipitalsiek, factorisiek, ak musognotosiek alak che tiengge sitimet ko seretos. Ng'eme kora koretoetab beek koba korik ak ngonosok che echeen.
- Tamanusiekab millonisiekab biik koite konyor maranosiek, ng'isiokonosiekab ng'wony, amun iutoo ropta neo agot en emotinwek che negitin ak nyanchosiek amun bendi barak beek kolite korotinwek che kimenye.



## Amugtoi ano akirinda tesetab burgeiyetab ng'wony?

### Miin ak iriib ketik!

Kou yon kakimwa en barak yu, ko koristo ne kiguren carbon dioxide ko ne konu burgeuyet neo en emeet. Ichute ketik korisiito olon chobe amitwokik ak konde orit en ketik, tigitik ak ng'ung'unyek koik *cellulose carbon*. Kobaten olon kakitil ak kkebeel ketik koisto korisoton komanda kwo barak.

### Ingen ile imuche ketik agetugul kotoo itondab emeet ne ming'in i?

Ketik ak uronokuak kokoitite ng'wony. Kass anyinyindab urwetab ketik. Keer ile twon olemi urwet kosir ole momi urwet. Olon kakaititi ng'wony koite koriib beek che chang' koga gee. Inoni kotogu kele ketik kokochin mbareng'ung' kogonor beek en kasarta ne koi. Toerti inoni minutiguk ak alak che boisien beek en komostang'ung'.

### Carbon credits ko nee?

Asi kimuch keyai carbon credit ko nyolu tuguk somoku:

- 1) Kachuchuget nebo iman nebo *carbon dioxide (co2)* en koristo.
- 2) Tilet iyan iiste carbon en koristo en kenysiek che chang'.
- 3) Chigilet koyob chito ne ter nebo somok ne mwoe kole boisionichoton ko kikitesta kotienge ng'otutik tugul.

Ichute ketik carbon dioxide en koristo olon chobe amitwokik ak konde ketik orit ak tigitik en ng'ung'unyek. Kimuche kepiman korosoton ne koichut ketik ak kogonor ak keyai koitet komie, ako olon ka kiyai komie kimuche kialda en ndonyoisiekab ng'wony kou *carbon removal credits*. Imuche olik koal *credits* chotonasikomuch kowalen koristo neya ne kikocher anan ko asi kotoret en itondab emeet.

Imuche TIST koalda carbon ne ichute ketik kou olon kioldo sugaruk ak chego. Kobaten en carbon ko moimikogse keib ketik koba bitosiehcun kialda. Oliet ko koristo ne ya ne kokiisto en emeet ne mi en ketik en mbareng'ung' anan ko osnet, ne kakechigil ak kemwa. Kimuche kialda koristo en ngonosok che echeen cheu New Yirk, Nairobi, London ak alak en ng'wony anan kimuch ketet en kampunisieka ak biik agenge en agenge. Nyolu keityin makutik ak tetutikab ndonyo. Mokimuche kebar osnosiek anan ketil ketik asi kemin ketik amun inonito ko ya en itondab emeet. Nyolu kiyan kerib ketik en timwekiok en kasarta ne koi neite kenysiek 30 anan kosir. Nyolu kemwai koitosiekab ketik kou oleu. Olon kakimin ketik ko nyolu kebiman ak keya

isabu kele carbon ne tiana ne koichut ketikab temik. Mobendi ketik. Tebie en mbarenik ako ingotebi kokagee ko nyoru lipanosiek che chang' kogagee. So, ribe temindet ketik, amitwakikab kiyagik, kwenik, ak logoek. Rabisiek che nyoru TIST en aldaetab kosristo koityin temik en Kotuiyosiek che Mengechen ako choton kora ketoretan boisionikab TIST cheu kanetisiet, koitosiek, ak telechinetab TIST.

### Imuche ketik tugul kochuut koristo ne kergee i?

Achicha, ketik che toldol kochute koristo neo kosir ketik che tenden. Ketik che koen kora kochute korosto neo kosir ketik che nwoke. Kou noton, ketik che toldol koibu rabisiek che chang' en aldaetab koristo. Noton koboru kele ketik che kakimin kolochin ko tinye kamuget koegitun missing' ak ko koegitun ak koib rabisiek che chang'. Mo moitos amitwikik en ng'ung'unyek ak beek kou ketik che kakimin korigin.

Kou noton, ko asi kimuch kenyorchigee rabisiek che chang' kobun ketikiok, k obo komonutiet kemin en oleimuche konyorchigee chametabgee ak kogoegitun ak koegitun. Kimuche ketil ketik alak che korikigee ak koik kwenik ak kerib che kong'et asi koegitun amun noton ko oret ne mie en ribetab ketik.

### Ano/ng'oo che ole koristo?

En nguni, kiole koristo en ndonyoisiek che chemngee biik ak en mogutikab sirosiek. Kimuche kechomchi en ortinwek che terterchin kou tugul alak tugul en ndonyoisiek. Imuche TIST kwalda korito en kotienggee mogitik ana ko en chametab olindet amun bo oliet ne mi baraj.

Mi mokutik che terterchin en ndonyoisiek ak tetutik che wologse en abogora akobo minsetab ketik, ole kichigildo ak ole kikoitoto logoiwek che nyolu keiitn asi kimcuh kialden. Kiboisien makutik che mi barak che bo *Validation and Verification — the Verified Carbon Standard (VCS) and the Climate, Community, and Biodiversity Alliance Standards (CCBA)*. Echek kemi barak en tugul – “Triple Gold” for VCS and CCBA.

### Tindo TIST olik oeng

Ne taa ko biik che konu rabisiek asi kocher biik komin ketik. En korogut ko che liponi ,imsetab ketik asi kogo kootuiyet. Nebo oeng' ko kampunisieka en Amerika, Ulaya, Canada ak emotinwek alak che kikitestaa che kikokogee kotoret en istoetab koristo ne ya rn chamrnyuan nrbo itondab emeet anan ko tete mogutikab betusiek che bwone/

Baibai TIST ko tindo olietab koristo (carbon credits) nebo barak ak komuch koaldechik olik che chang'..



## **Minet AB'ketik en emet ne ya'mat.**

**K**otese ta TIST kotese tai en ole yamaat ak ole moginyorunen bek, Kiger komi yomutyet en sobet 'ab ketik. En TIST Kogibche kila ak kila practices che impya, ak kigo toretch niton en family nenyon neboTIST kenyorun wolutik cheyachen.

Che isubu ko oratinwek che kimuche keboishen en emotinwek che yomyotin:

1. Lewenet 'ab ole ichoben nursery neng'unget ko kit nebo maana. Seedlings koyoche kinde bek yon kagemin. Imuche imin seedlings en ole negit ak kaa asi konyumnyumit kondeet 'ab bek. Kora kimuche iboishen windbreak en kaa koter korito komabar seedlings.
2. Preparation ne taa: Chob keringoik 'ab ketik en arawet ageng'e kotomo koit robwek, Toreti inoniton keringoik kochut pek . Yon kagoit robta neta imin ketik .Min ketik ak ikonaam ngungunyek chebo barak kosibu mbolea.
3. Yom iboishen oret 'ab harvesting bek 'ab robta, kou negarims ak micro-basins, Asi koitchi ketit beek chechang'. Kora ketik kosobtos zaidi en ole neg'it ak bek.
4. Mulching: mulchen ketik yon karimiin . inoniton kobose komoib asista anan ko koristo, beek . Kora yon kogiboishen mbolea che compost kotese rurutik, Lakini en ole miten koik kimuche keboishen rock mulching .
5. Agro forestry: ongeyom kinetge , ak keyai agro forestry . Ketik che kagimin en imbarenik kotinye nafasi newon koechegitun kosir che minotin en ole miten osnoshek ak suswek angamun riboksek komye ago nyoru ng'ung'unyek che kororon.
6. Chaguan species cherutu en korotinwek che yomyotin. Sanasan ketik chebo komosoton che indeginous ko choton che yechegitun kosir igo. Ketik cheu *Melia*, *Acacia seyal*, ak *Muuuku (Terminalia brownii)*.
7. Rib ketik che miten en inguni ak itoret icheget koregenereten . Ketichuton kogimen , ago ichek komuche kosobcho ogot en betushek che momiten robwek. Konu ichek seeds che kimuche kenyor en oret ne nyumnyum ak uronok.
8. Raised seedbeds anan ko sunken seedbeds komuche kotoret. Yon kogichob seedbed ne kitogos , kenyoru seedlings che kimen , so ingunon kosobtos. Kora kotoreti seedlings koyechegitun en petit agoik che kimen . lakini seedbed ne sunken komuche kora kogararan angamun tere asista komabar seedlings . En komositon ibwaat iwisowisi seedlings asi mochut tigitik ngweny, tun kowe chok yon kisibto.

Ongeboishen practice che kitinye, ak keendelezan oratinwechuton asi kenyorun rurutik ak koyet TIST en komoswechok.