

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
W W W . t i s t . o r g

English Version

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



TIST Farmers in UK for Taylor Tea Party last November.

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TIST Farmers in Kenya, Uganda and India continue to receive 70% profit share from Carbon Credits Revenues.

Clean Air Action Corporation (CAAC) through TIST Program is fulfilling its obligations on profit sharing from Carbon revenues. TIST farmers have a contractual agreement with Clean Air Action Corporation to jointly create salable carbon credits and share profits. Since 1999 when TIST was founded in Tanzania, the journey towards creating new revenue streams for TIST tree growers' farmers has finally bore fruits.

Beginning November 2019, profit share money began to be distributed to the farmers. By Christmas day (25/12/2019), 135 Small Groups in Uganda had received their profit share. In Kenya more than 300 Small Groups had also received their 70% profit share while over USD 26,000 had been issued to TIST farmers in India.

In all Three (3) countries, farmers have expressed their excitement. They are also hopeful the Carbon market is going to improve this year and in the future. Jane Nduta Karugu (MUTHAIGA (F) 2008KE2715) from Kwajebi Cluster in Kenya had this to say, "Today I am very much thankful for receiving my share of carbon profits. benefit. I am now more motivated to continue planting trees, encouraging my Small Group and Cluster members to add more trees in their farms. God bless TIST to expand more and benefit many more farmers."

As a reminder, CAAC is only able to share carbon credits profits to her farmers, after selling verified carbon tonnes, pay off the money farmers have been getting in pre - payments, meet office expenses, employee salaries and reimbursements, costs of the newsletters, seminars and trainings and many more other costs. The 70% profit share vouchers are based on the profit and not the selling price. We know that a profit is arrived at when we have a selling price minus a cost price. (Selling Price - Cost Price = Profit)

For every Small Group that cut down trees, or removed some of their groves from TIST, they are not eligible for profit sharing until the tonnes lost have been made up. In our profit share calculation, we have to take into account any missing groves for each Small Group. Those are the "Total Tonnes Lost".

It is unfair that Small Group members that have maintained their trees have to make up for trees harvested by other members. But that is exactly what happens. As TIST, we encourage you to invite the members who cut down trees, sit down with them and help them understand how it is going to cost them because they cut down trees, ask them to pay back the prepayments, and plant new trees. This will help the Small Groups to learn the TIST Values of being mutually accountable and be honest.

How can Small Groups who have cut down trees make up for the tonnes lost?

- Lost tonnes will be made up by the Small Group by planting many more new trees.
- Others by maintaining the existing trees and letting their growth exceed the lost tonnes. For some, this will occur naturally because tonnes lost are a small proportion and their trees are healthy.
- We expect that in this verification we have just done, most of the Small Groups who have lost tonnes, their tonnes will be verified, and the lost tonnes will be made up.

What happens when Small Groups cut down trees?

- It should be understood by all the members that when someone cuts down their trees, everyone is affected by the loss.
- TIST loses the tonnes of carbon that have already been sold and in times of profit sharing, TIST has to first pay off for the tonnes lost before a profit is made
- It's not good when the Verifiers see groves cut down. This can make them worry about the other TIST members, and their actions in future.

The Greenhouse sale agreement contract between Small Groups and CAAC calls for maintaining the tree groves for 30 years and replanting any trees that die. Thinning the tree groves is best practice, and can provide firewood, timber, etc. After 10 years, each Small Group can harvest up to 5% of their trees each year. Clear cutting is never a best practice - it harms the soil, the streams, and the biodiversity.

Let's work together to make sure our tree groves and our farms continue to improve!



Heavy rains experienced in East Africa. Some of the ideas to control Flooding and Landslides.

Last rain season (October – December 2019), many parts of East Africa and Southern Africa experienced heavy rainfall that was beneficial in some areas but still caused damage through flooding and landslides.

Floods are caused by many factors generally prolonged heavy rainfall (locally concentrated or throughout a catchment area), failure of dams, or other structures that retain water. Periodic floods occur on many rivers, forming a surrounding region known as the flood plain.

During times of rain, some of the water is retained in ponds or soil, some is absorbed by grass and vegetation, some evaporates, and the rest travels over the land as surface runoff. Floods occur when ponds, lakes, riverbeds, soil, and vegetation cannot absorb all the water. Water then runs off the land in quantities that cannot be carried within stream channels or retained in natural ponds, lakes, and man-made reservoirs. River flooding is often caused by heavy rain. A flood that rises rapidly, with little or no warning, is called a flash flood. Flash floods usually result from intense rainfall over a relatively small area, or if the area was already saturated from previous precipitation.

On the other hand, landslides occur when the slope (or a portion of it) undergoes some processes that change its condition from stable to unstable. This is essentially due to a decrease in the shear strength of the slope material, to an increase in the shear stress borne by the material, or to a combination of the two. A change in the stability of a slope can be caused by a number of factors, acting together or alone. Natural causes of landslides include, saturation by rain water infiltration; rising of groundwater or increase of pore water pressure (e.g. due to aquifer recharge in rainy seasons, or by rain water infiltration); increase of hydrostatic pressure in cracks and fractures; loss or absence of vertical vegetative structure, soil nutrients, and soil structure (e.g. after a wildfire – a fire in forests lasting for 3–4 days); erosion of the toe of a slope by rivers among others

Landslides are aggravated by human activities, such as: deforestation, cultivation and construction; vibrations from machinery or traffic; blasting and mining; earthwork (e.g. by altering the shape of a slope, or imposing new loads); in shallow soils, the removal of deep-rooted vegetation that binds colluvium to bedrock; agricultural or forestry activities (logging), and urbanization, which change the amount of water infiltrating the soil.

Methods of flood management

Some methods of flood control have been practiced for many years. These methods include planting vegetation to retain extra water, terracing hillsides to slow flow downhill, and the construction of floodways (man-made channels to divert floodwater).^[1] Other techniques include the construction of levees, lakes, dams, reservoirs,^[1] retention ponds to hold extra water during times of flooding, protect wetlands and introduce plant trees strategically

Hazard reduction - Strategic retreat

One way of reducing the damage caused by flooding is to remove buildings from flood-prone areas, leaving them as parks or returning them to wilderness.

Measures against landslides

- Reinforcement of floor slabs and external walls in existing buildings.
- Installation of drainage pipes for rainwater, slope drainage.
- Planting of slopes that are vulnerable to **landslides** with deep-rooted trees and shrubs.

What to do During a Landslide

- Stay alert and awake. ...
- If you are in areas susceptible to landslides and debris flows, consider leaving if it is safe to do so.
- Listen for any unusual sounds that might indicate moving debris, such as trees cracking or boulders knocking together.



TIST Kenya farmers participates in Taylors Tea party in United Kingdom.

Last year, November, Five 5 TIST leaders also farmers visited the UK to celebrate the program's success with Taylors Tea, meet with universities, and spread the word of TIST. They visited London, as well as the towns of Exeter, York, and Harrogate.

People in the UK were inspired by the work of TIST farmers. By speaking directly with British companies and organization, TIST Kenya leaders were able to explain how the program had changed their lives and brought new opportunity to their communities. This helps TIST find good partners in the carbon market.

Indigenous trees: What are they, and why are they important?

Farmers in TIST plant hundreds of species of trees, including fruit and nut trees, trees for fodder, trees that improve soil fertility, and species that can be harvested for timber. More and more farmers are choosing to plant indigenous tree species for their many benefits.

What is an indigenous tree?

An indigenous, or native tree is one that is well adapted to an area because it has grown and reproduced naturally there over a long period of time. Not all species that are familiar to us are indigenous. Many have been introduced by people from areas far away. There are over 800 species of trees that are indigenous to Kenya.

Why are indigenous trees important?

Because indigenous trees have evolved with the local environment, animals, plants, and other organisms around them, they are well suited to the area. Often, this means that they can grow well

without expensive additional inputs like pesticides or fertilizers. They often require less maintenance than exotic, introduced species. They diversify our farms, so that risks of pest outbreaks can be lower. They provide habitat and food for wildlife and diverse benefits for us from their fruits, timber, leaves, and traditional medicine. Introduced, or exotic species, can provide many benefits, but some can become weedy and crowd out other trees or crops.

When we plant indigenous trees on our farms, we are helping protect species that have been useful to our mothers and fathers, to our grandparents, and to the people and wildlife of Kenya for generations. We are still learning about the benefits of the many species around us. When we plant indigenous species, we can help ensure that the trees and their benefits are there for our children.



In TIST, we have some additional incentives for planting indigenous tree species. Groups near rivers who follow TIST best practices for riparian areas and plant indigenous trees may qualify to receive an additional incentive through the TIST Riparian Initiative. TIST Small groups near protected forests who plant indigenous trees may be eligible to join CFAs to plant indigenous species and earn carbon income in these forests. Starting in this payment, you'll notice an additional Indigenous Tree Incentive on your vouchers. Each indigenous tree quantified in your TIST grove qualifies for this new incentive of 1 shilling per indigenous tree per year. It is important to note that this incentive is available because of support from USAID. Unlike the tree payments, which are funded through carbon sales and so will last for at least 30 years, the incentive for indigenous trees is shorter-term, and dependent on outside funding. Currently, we have funding for the additional indigenous tree incentive through 2013. We will work to try to secure additional funding so that we may be able to extend the incentive for a longer time.

Which tree species are indigenous?

There are hundreds of indigenous tree species in Kenya, and many introduced species that also provide good benefits. Here are some examples of each:

Indigenous trees for Kenya

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Some other trees have been in Kenya for a long time, and are very useful, but are not indigenous. Some of these include mango, macadamia, casuarina, gravellia, bottlebrush, and Mexican green ash.

Try planting some indigenous trees in your shamba today! Look around and see what species grow in the forests near you. Ask your neighbors and cluster members what trees they grow, and which trees in forests provide important benefits for them. If we work together, we can protect this great resource of diverse forests for our children and generations to come. Please call Jeniffer Kithure for information on indigenous trees or the Riparian Initiative at 0726319539.



Deforestation and forest land degradation are serious problems. What can we do?

Deforestation is the removal of trees and other woody vegetation cover.

Forests and woodlands cover about a third of the world's land surface. They regulate climate, protect water resources, provide forest products (e.g. timber, medicine, fruit, and more) worth billions of dollars and support a tremendous variety of plant and animal species. Yet they are being destroyed at a rate of 20 million hectares per year. Half of the world's population depends on these forests for fuel, yet roughly 100 million people do not have enough fuel for minimal energy requirements.

Major causes of deforestation:

- Deforestation occurs when vegetation is cleared for activities like farming or grazing and uses such as: firewood, brick making, fish smoking, tobacco curing, tea drying, construction, and timber.
- Forest degradation is when a forest becomes less diverse and resilient due to poor use and management (for example, when old trees are all cut, leaving mainly brush, or when a useful species is all harvested so that it disappears from the forest, or when forest is heavily grazed, so that trees can't grow to replace those that die).
- Much of deforestation and forest land degradation results from a lack of awareness of the full value of trees.
- In some cases, the value of trees may be known but poverty and the idea that there are no good alternatives lead people to clear trees.

Consequences of Deforestation:

- **Soil erosion:** lack of tree cover and root binding exposes soil to erosion.
- **Lack of forest resources:** removing trees destroys habitats, reduces biodiversity, removes

food and medicinal resources, and increases competition for construction materials. People will have to walk further for firewood, and if forest products are being bought, prices will rise.

- **Deforestation also means we lose the many other benefits of trees:**

Trees act as a windbreak, retain moisture, add oxygen to the air, and add nutrients to soil. Hence without trees the local climate will become drier with increased risk of flooding, wind erosion, decreasing soil fertility and diminished air quality.

What can we do to prevent deforestation and forest degradation?

- Establish tree nurseries and distribute or sell seedlings to the community.
- Use energy-saving cook stoves that use less firewood and charcoal.
- Use alternative sources of energy and fuel when possible (e.g. heating from the sun, sawdust, coffee and risk husks, grass, weeds, crop wastes, animal waste).
- Carry out tree planting activities. Become a successful, effective TIST group! Encourage your neighbors and friends to join TIST as well.
- Do not cultivate land bordering a river or swamp. Leave trees and vegetation to grow to protect these waters.
- Be careful to not over-graze land. Limit animals' access to tree seedlings that they may destroy to give the forest a chance to regrow.
- Encourage agro-forestry or the use of woodlots. Having trees on your land provides good access to forest products and helps protect nearby forest.

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Kimereu Version

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



Wakulima wa TIST wakiwa UK katika party ya campuni ya Majani chai ya Taylor mwezi uliopita

Inside: Arimi ba TIST ba Kenya, Uganda na India nimbetite mbere kugwata baita yao ya 70% kuuma kiri wendio bwa ruugo. *Page 2*

Mbura inene kwoneka East Afrika. Njira imwe jia kunyiyia kwagaga kwa miguuu na kwomoka kwa mithetu. *Page 3*

Arimi ba TIST ba Kenya kugwatanira kiri mambura ja Taylors Tea Rulaya (UK- United Kingdom). *Page 4*

Miti ya gintwire: Nimbi, na niki irina bata? *Page 4*

Niatia tuumba kuthithia? Ugiti miti na uthukia bwa miunda ya miitu ni thiina inene. *Page 6*



Arimi ba TIST ba Kenya, Uganda na India nimbetite mbere kugwata baita yao ya 70% kuuma kiri wendio bwa ruugo.

Clean Air Action Corporation(CAAC) gukurukira Muradi jwa TIST ni ikuingia mawirane jayo jegie ugai bwa baita ya kwendia ruugo.

Arima ba Tist bari na kiriko na Clean Air Action Corporation kuthithia ruugo rwa kwendia jaru (Carbon Credits) bacoke bagaane baita. Kuuma 1999 riria Tist yambiririe Tanzania, rugendo rwa kuthondeka mbeca iji gukurukira uandi bwa miti na arimi nandi ni rwonete matunda.

Kwambiria Novemba 2019, mbeca cia baita nijambiririe kunenkerwa arimi. Thigunku igikinya (25/12/2019), Ikundi 135 kuuma Uganda ni ciari ikugwata baita yao. Guku Kenya naku nkuruki ya ikundi 300 niciumbite kugwata baita ya 70% na nkuruki ya USD26,000 niciakinyire arimi ba TIST Nthiguru ya India.

Kiri nthiguru iji ithatu (3) arimi nibonanitie gikino kiao. Arimi bari na nkinya mwirigiro ati baita iji nigwita kwongereka mwaka juju ona miaka ikeja. Jane Nduta Karugu (MUTHAIGA (F) 2008KE2715) kuuma clasta ya Kwa Jebi nthiguru ya Kenya ari na bubu bwakuuga, "Narua iji ndina gikeno kinene muno ikugwata mbeca cia Carbon. Nandi ninkwigua mbikiri inya ya gwita mbere kuanda miti, kumenyithia amemba ba gakundi na nkinya clasta boongere miti ndeene ya miunda yao. Murungu aro rathima TIST inene ee n nkinya arima ba baingi batuike ba kugwata baita iji."

Ja kiririkania, CAAC yumba kuuga baita na arimi yendia tani jia ruugo (Verified tonnes), yarita mbeca iria arimi bathagwa bariitwe ja pre-payments, yarita marihi ja obisi, micara na ngarama cia arihi ngugi, mbeca cia mazingira bora, seminas na ithomo na ngarama jingi inyingi. Vocha jia 70% iritagw kuringana na baita na ti uria carbon yendagua. Nitwiji ati baita yonekaga riria twarita uria gintu kiendua na uria kiaguritwe (Selling price-cost price = profit)

Gikundi nakio kiria kigitite miti, kana kigaita tumiunda (grove) kuuma kiri TIST, bati umb kuga baita nkinya riria bagacoki tani iria ciurite. Ndeene ya utari bwa baita nonkinya kumenyekane miunda iria yurite ya ikundi. Iji nijio tani iria jiuurite "Total Tonnes Lost"

Ti bwega amemba ba ikundi baria bamenyerete miti gutwike nobo bakarungamira miti iria itemi ni amemba bangi. Indi ugu nibu gwikaraga. Ja TIST, nitugugwikira inya wite amemba baria bagitite miti, bwikare amwe ubamenyithie uria kwina ngarama nontu bwa kugita miti ucoke ubamenyithie ati nib bwiri gucokia mbec iri bajukie ja pre-payments n bacoke baande miti ingi i mieru. Kuthithi uu kugatuma ikundi imemenye TIST Values jia gutwika Accountable na Honest.

Natia Ikundi ikathithia iria igitite miti gucokia tani iria ciurite?

- Tani iria ciurite igacoka ikundi jia aanda miti ingi i mingi i mieru.
- Ikundi ingi ikamenyeera miti iria bari nayo n kurekeria inene ee na ikurukie tani iria ciurite. Kiri ikundi imwe bubu bukathithika bungwa (naturaly) nuntu tani iria ciurite ni inini muno na miti yao ni imiega.
- Nitukwirigira kiri verification iria tuthithitie riu, ikundi inyingi iria iratete tani, igatuika jia kwithirwa icoketia tani iria cia urite verification iji yarika.

Natia kugakara riria gikundi kiagita mita?

- Nonkinya amemba bonthe bamenye riria umwe wao agita miti, mumemba wonthe akagwata acara.
- Tist ni itejaga tani ji carbon iria yendetie na kagita ga kugaa baita, TIST nonkinya ikamba kuria tani iria itete mbere ya kwona baita.
- Tibwega verifiers kwona miti ya groves (tumiunda) itemi. Buu nobutume bakamaka ni arimi bangi ba Tist ona nkinya nau mbere.

Kiri contract ya GreenHouse gatigati ka gikundi na CAAC miti nonkinya imenyere gwa kagita ka miaka 30 na kwenderea kuanda na gucokeria iria ikoma. Guckura miti ni njira imbega, no ugwate nkuu, mbao etc. Miaka 10 yakuruka gakundi noo gakethe 5% ya miti yao oo mwaka. Kugita miti yonte ti njira imbega-ni ithukagia muthetu, nduuji on nkinya utuuro.

Nitugwatanire amwe twone tumiunda twetu twa miiti na miunda yeetu ni igwita mbere bwega!



Mbura inene kwoneka East Afrika. Njira imwe jia kunyiyia kwagaga kwa miguuu na kwomoka kwa mithetu.

Kagita kathiru ka mbura (Octoba-Decemba 2019) Nteere inyingi jia East Afrika na Southern Afrika niciombire kugwata mbura inyingi iria yari na baita nteere imwe na yacoka yathithia mawinyangia kungi ja kuomoka kwa mithetu na nkinya nduuji kuujura amwe.

Kuujura kwa nduuji amwe kuretagwa ni mbura inene gwa kagita, kwaga dams, kana guntu nduuji iji jiita. Periodic floods jionekaga kiri miuro ikina thondeka (flood plain) antu ruuji ruujurite.

Kagita ka Mbura, nduuji imwe ni ciikaraga kiri mitheru kana irinya, nduuji imwe ikajukua ni nyaki na imera, ingi igacoka bwa ruguru riria kwarite, na ruungi rugetiira mithetune jayo surface runoff. Kuujura kwa nduuji gwikarikaga riria Marinya, Maria, miuro, mithetu na imera jia remwa kujukia nduuji jionthe. Nduuji icokaga igetiira mithetune iria ciaga gw gwitiira kiri miuro, Marinya, maria ona kana matangi jaria jathithagua ni antu. Kuujura kwa miuro kuoneka riria kwina mbura. Nduuji iria ciujuragangaga jitagwa Flash floods. Iji najio jionekaga riria kwaga mbura inene kiri antu anini kana gukethirwa nikuraurite kairi.

Kwomoka kwa mithetu naku(Landslides)

kwonekaga riria mithetu aria kurin slope inainukaga. Guku kwonekaga riria muthetu juinainuki jukaremwa kwigwatithania bweega. Kwinainuka guku nu kuretwe ni itumi inyingi. Imwe ni jia kinduire (naturaal) mbura kwij inyingi nkuruki kna muthetu kwaga nutrients iria igwatithagia kana mithetu ikagia na miatuka aria kwina slope.

Kwomoka kwa mithetu kuretagw muno ni ngugi ci antu ja: kugita miti, kurima, gwaka nyomba, kwinainua ni machines kana traffic, kwinj benji kiri slopes kana on nkinya gwaka naria nduuji ciitagira, winji bw maiga na ngugi ingi iria tuthithagia kiri mithetu i mioro nkinya gwita imera iria ciithagwa na miiri imiraja mithetune.

Njira cia Kumenyera Kuujura kw nduuji.

Njira imwe ni itumiritwe gw kagita. Njira iji ni kund imera, kwinja benji na nkiny kwinj nkira njiingi ji nduuji. Njira ingi ni gwaka maria, dams, mariny ja gwik nduuji, kumenyeera marimba n kuand miti.

kunyiyia thina-strategic retreat.

Njira imwe ya kunyiyia thina ya kuujura kwa nduuji ni gwita nyomba kuria nduuji jiuuraga na gutiga guntu kuu j parks kana kugutua ndwanda.

Njira ya kumenyeera kwomoka kwa mithetu.

- Gwaka bweega kwa baranda na ndingo kiri nyomba.
- Kuthondeka bweega naria nduuji jia mbuura igetiira.
- Kuanda miti bweega iria ikagwata muthetu kiri slopes na naria kurina thina.

Uria wagirite kurutha riria kwina kwomoka

- Ikara wi ritho na utikamame.
- Kethirwa wi antu aria ijikene na womoki, noo uthame kethirwa nikwona kuri weega.
- Thikiriria migambo iria ukwigua iti ya kawaida ja kuunika kwa miti kana gukobok kwa mithetu.



Arimi ba TIST ba Kenya kugwatanira kiri mambura ja Taylors Tea Rulaya (UK- United Kingdom).

Mwaka Muthiru, Novemba, atongeria 5 ba TIST n be arimi ni betire UK gukunguira ngugi imbega ya muradi wa TIST amwe na Taylors Tea, bacemania na ma university na gutambia ntumiri ya TIST. Nibacerire London, amwe na tauni ya Exeter, York, na Harrogate

Antu ba UK nibagire na inya muno niuntu bwa wira wa arimi ba TIST. Kwaria na British companies na Organization, atongeria ba TIST Kenya nibombire kweleza uria muradi wa TIST ugarurite miturire yao na nkiny kuret utethio kiri ntura ciao Guku nigutuma TIST kugwata arata bangi kiri thoko ya carbon.

Miti ya gintwire: Nimbi, na niki irina bata?

Arimo ndene ya TIST nibaandaga mithemba ya miti Magana, amwe na mitunda na miti ya nkandi, miti ya irio bia ndithia, miti iria yongagira unoru bwa muthetu na mithemba iria yumba kugitwa niuntu bwa mpau. Arimi bangi na bangi nibakuthuura kuanda miti ya mithemba ya gintwire niuntu bwa baita ciayo inyingi.

Muti jwa gintwire ni juriku?

Muti jwa gintwire ni juria jumenyaniritie naantu ana nontu nijukurite na jwaciarana jungwa au ndene ya igita ririraja. Ti mithemba yonthe iria twiji iri ya gintwire. Imingi nireti ni antu kuuma ntuura cia kuraja. Kurina mithemba ya miti ya gintwire nkuruki ya magana janana ndene ya Kenya.

Niki miti ya gintwire irina bata?

Niuntu miti ya gintwire nigarukanitie na rera ya antu au, nyomoo, imera na into bingi biri moyo biria bimithiurukite, na niithagirwa ing'anirite antu au. Jaria maingi, bubu nitakuuga ati noikure bwega kwinya gutina into bia kwongera ja ndawa cia

tunyomoo na fertilizer. Jaria maingi niitagia kumenyerwa kugukai nkuruki ya mithemba iria ireti. Niaramagia miunda mwanka kwithirukua gwa kuumbuka gwa tunyomoo turia tuthukagia imera gukanyia.

Niejaga nyomoo cia kithaka gikaro na irio na gutua baita inyingi ja matunda, mpao, mathangu na ndawa cia gintwire. Miti iria ireti kinyayo no itweae baita inyingi, indi imwe niejaga iria na kuumba miti kana imera.

Riria twaanda miti ya gintwire miundene yetu, nitugutethia kumenyeera mithemba iria ithiritwe igitumagirwa ni mami na baba betu, juju betu na kiri antu na nyomoo cia kithaka cia Kenya niuntu bwa nthuki inyingi. Notukuthoma kwegie baita cia mithemba imingi iria ituthiurukite. Riria tuandaga mithemba ya gintwire, notutethie kumenyeera ati miti iu na baita ciayo irio niuntu bwa aana betu.



Ndene ya TIST kurina motisha ingi niuntu bwa uandi bwa miti mithemba ya gintwire. Ikundi akui na nduji biria bithingataga mitire imiega nkuruki ya TIST kiri ntuura iria iri akui na nduujini a bikaanda miti ya gintwire nibiumbaga kuewa motisha iji gukurukira mubango juria jwitagwa TIST Riparian Initiative. Ikundi bibinini bia TIST akui na miitu biria biandaga miti ya gintwire nobitonye kiri CFA nikenda bianda mti ya gintwire na bikoona mbeba kuumania na kwendia kaboni iria ijukagua ni miitu iji. Kwambira igitene riri ria kuria, ukoona ati kurina motisha ya kwongera niuntu bwa miti ya gintwire kiri vucha yaku. O muti jumwe jwa gintwire juria jutaragwa ndene ya munda jwaku jwa TIST ni juumbaga kuriwa motisha iu njeru ya shilingi imwe kiri o muti omwaka. Burina bata kumenya ati motisha iji irio niuntu bwa utethio bwa USAID. Mwanya na mbeba ingi, iria cionekaga gukurukira kwendia kaboni na kwou igakara miaka nkuruki ya mirongo ithatu, motisha iji ya miti ya gintwire niya igitu ririkai, na ikaringana na utethio bwa kimbeba kuuma oome. Thaa iji, turina mbeba cia motisha iji iria igatukinyia mwishi jwa mwaka jwa 2013. Tukarita ngugi kugeria kwona mbeba ingi nikenda tuumba kuejana motisha iji igitu ririraja nkuruki.

Ni mithemba iriku ya miti iri ya gintwire?

Kurina miti mithemba ya gintwire Magana ndene ya Kenya, na imingi iria ijite kinyayo nituejaga baita injega. Aja ni mithemba imikai:

Miti ya gintwire Kenya.

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Miti ingi nikarite Kenya igitu ririraja na irina utumiri bubwingi, indi tiya gintwire. Miti imwe ya iji nita miembe, mibukandu, casuarina, mikiribiria, bottlebrush na Mexican Green ash.

Geria kuanda miti imwe ya gintwire muundene jwaku narua! Tega akui nagwe na umenye ni mithemba iriku igukura ndene ya miitu iria iri akui nagwe. Uria aturi baku na amemba ba cluster miti iria baandite na miti iria iri miitune ibaejaga baita. Tukarita ngugi amwe, notumenyeere gintu giki gikinene kia miitu irina mithemba ya miti imingi niuntu bwa aana betu na nthuki inyingi iria ikeeja. Ringira Jennifer Kithure wenda kumenya untu kinya buriku kwegie miti ya gintwire kana mubango jwa motisha kiri miunda iria iri ntereene cia nduujini na namba iji 0726319539.



Niatia tuumba kuthithia? Ugiti miti na uthukia bwa miunda ya miitu ni thiina inene.

Ugiti miti ni amwe na uriti bwa miti na imera bingi biria bikunikirite nthe.

Miitu na ithaka nibikunikagira gicunci kimwe kiri bithatu kia nthe yonthe. Niithongomagia rera, igakaria nduui, ikaejana into kuumania na miitu (ta mpao, ndawa, matunda na bingi) bia mbeca inyingi na ikagwatira imera na nyomoo cia mithemba imingi. Na gintu gia kurigaria no ikuthukua miitu iri miundene ya hectare milioni mirongo iiri o mwaka. Nusu ya antu ndene ya nthiguru yonthe nibatumagira miitu ta nkuu nakurigaria akui antu milioni igana batina nkuu ing'ani cia utumiri bwa nthiguru buru.

Itumi biria binene bia kugiita miti:

- Ugiti miti bukarikaga riria imera bigitagwa nikenda miunda irugurwa gutumirwa mantune jangi ta kurima kana kurithia na mootumiri jangi ta: nkuu, kuthithia maiga ja gwaka, gutogia makuyu, kuithia mbaki, kunyaria majani, gwaka na mpao.
- Uthukia bwa miunda ya miitu ni riria mwitu junyagia mithemba ya imera na nyomoo na uumiria bwaju niuntu bwa utumiri na umenyeeri bubuthuku (mung'uanano, riria miti imikuru yagitwa yonthe gugatigwa na miti iminini aki, kana riria muthemba jurina bata jwagitwa junthe mwanka jukathira mwitune, kana riria mwitu jwarithua nainya mwanka miti ikaremwa kuuma antua iu ikuite).
- Ugiti miti na uthukia bwa miunda ya miitu buria bwingi buumanagia na kwaga umenyo kwegie bata ya miti.
- Rimwe na rimwe, bata ya miti noithirwe iijikene indi ukia na kwithirwa gutina kingi gia gutuumira nigutumaga antu bakagiita miti.

Mantu jaria jaumanagia na ugiti miti:

- **Gukamatwa kwa muthetu:** kwaga miti ya gukunikira na kugwata muthetu nigutumaga muthetu jugakamatwa.

- **Kwaga into biria biumanagia na miitu:** Kurita miti nikwinyangagia ikaro, gukanyia gukaranira kwa nyomoo na imera bia mithemba imingi mwanya, gukarita biumo bia irio na ndawa na gukaingiyia gushindanirwa kwa into bia gwaka. Antu bakaa bageeta kuraaja nkuruki gucua nkuu na kethira into bia kuumania na miitu kabikugurwa, uguri bugaitia.
- **Kugiita miti kinya ni kuuga tukaaga baita ingi cia miti:** Miti niritaga ngugi ya kunyiyia ruugo, gwika ruuji, kwongera ruugo rurwega, na kwongera irio bibiega muthetune. Kwou gutina miti rera ikooma nkuruki na kuumbika gwa kuigara kwa ruuji, gukamatwa kwa muthetu ni ruugo, kunyia kwa unoru bwa muthetu na kunyia kwa utheru bwa ruugo ruria tugukucia gukongereka.

Niatia tuumba kuthithia nikenda tutigithia ugiti miti na uthukia bwa miunda ya miitu?

- Ambia minanda ya miti na wenderie miti ntuura yaku.
- Tuumira mariko ja nkuu kana makara jamakai.
- Tuumira into bingi riria gukuumbika(ta mwanki jwa riuu, sawdust, mati ja kauwa na muchele, maria, matigari ja imera na ja nyomoo)
- Andeni miti. Eeni gikundi gia TIST gigwita ngugi na gikumbana! Ikira moyo aturi na acore baku gutonya kiri TIST.
- Ukarima muunda juankene na ruuji kana irimba. Tigana na miti na imera biume bimenyeere nduui iji.
- Menyeera utikarithie nkuruki ya uria ubati. Ukenda nyomoo ikuiiria miti iminini ciija kuthukia kana gwata mwitu kanya ga gukuura kairi.
- Ikira moyo antu kurima imera amwe na miti kana kuanda miti ithiurukirite miunda. Kwithirwa urina miti muundene jwaku nigukuejaga into bionthe kuumania na mwitu na gugatethia kumenyeera miitu iria iri akui.

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.



Wakulima wa TIST wakiwa UK katika party ya campuni ya Majani chai ya Taylor mwezi uliopita

Inside: Arimaa TIST Kenya, Uganda na India Guthii Na Mbeere na Kwamukira marihi ma faidaya 70% profit kumanagia na wonjoria wa Carbon Credits. *Page 2*

Mbura nene kuura gicigo kia East Africa. Meciria ma kwigitira na miiyurwo na matwika. *Page 3*

Arimi a TIST Kenya Kunyitanira na kambuni ya Taylors igongona bururini wa Ngeretha. *Page 4*

Miti ya Ki-nduire: Ni iriku, niya bata niki? *Page 4*

Utemi wa miti na uthukangia wa migunda ya mititu ni thina munene, tungika atia? *Page 6*



Arimiaa TIST Kenya, Uganda na India Guthii Na Mbeere na Kwamukira marihi ma faidaya 70% profit kumanagia na wonjoria wa Carbon Credits.

Kambuniya Clean Air Action Corporation (CAAC) kuhitukira program ya TIST niihingitie ciraniro cia kuriha faida ya carbon. CAAC na Arimi a TIST nimakoragwo na ngirimiti ya guthondeka na kwendia riera ria carbon na kugayana faida. Kuuma mwaka wa 1999 riria TIST yambiriirio bururi wa Tanzania, rugendo rwa guthondeka njira njeru ya kuhe arimi mbece riu niigite na maciaro.

Kwambiriria mweri wa November 2019, marihi ma faidaya carbon nimambiriirio gutumirwo arimi. Gukinyagia muthenya wa Christmas (25/12/2019), ikundi 135 kuuma Uganda nimamukirite marihi mao. Kenya niikundi makiria ya 300 nakuria India makiria ya mbece USED 26,000 nicirihitwo arimi.

Thiini wa mabururi macio matatu arimi ni makenete ni marihi maya. Mena mwihoko ati thoko ya carbon niiguthii na mbere na kugacira mwaka-ini uyu na mataukumaroka. Jane Nduta Karugu (Muthaifa (F) 2008KE2715) kuuma Cluster ya Kwa-jebiekugauu, “Umuthi ndina ngatho nyingi ngiamukira faida ya marihi ma carbon. Riu ndimuhe hinya waguthii na mbere na kuhanda miti na kwendethia amemba aagikundi giakwa na Cluster mathii na mbere na kuongerera miti. Mwathani arathime TIST ihote gutherema makiria na guteithia arimi aingi makiria.”

Niwega turirikane ati CAAC ingihota tukugayana faida ya carbon kuri arimi thutha wa kwendia tani cia carbon iria thuthurie, thutha wakuruta marufanji iria arimi makoretwo makiamukira, thutha wakuruta ngarama ya wabici, kuriha michara, ngarama ya kuchabithia ngathiti, ngaramaya seminars na ngarama oingi ooyothe. Koguo, voucher ya 70% niya faida no tithogora wa kwendia. Nitui wega ati faida yonekaga thutha wakurutithania mbece iria twona thutha wakwendia na ngarama iritwinayo.. (Selling Price - Cost Price = Profit)

Gikundi kiria gitemete miti, kana gikeheria grove ooyothe kuuma program ya TIST, matigukorwo makiamukira marihi nginyagia riria tani iria matete magacokia. Riria tugwika mathabu ma faida, no nginyagia tukeheria tani iria ciurite.

Niundu wa kieha ati arimi aria members a ikundi ciao magethete miti, arimi acio nonginya moyeuigiriki wa miti iria miteme ona angikorwo tio kiumbe matemete. No uguo ni guo guthiaga. Ithuituri TIST, nitugukwendekithia wite giikaro na arimi aria maragetha miti na umataririe ugwati wakugetha miti, na nimagiriirwo macokie marufaji uria makoretwo makiamukira, na mahande miti ingi. Undu uyu ni uguteithia ikundi ikorwo na uuma na uigiririki.

Niatia Gikundi kingiikariria matemete miti yao na nimarenda gucokia ta nicio ciurite.

- Ta niiria ciurite igucokia naniria ya kuhanda miti ingi miero.
- Undu ungi ni guthii na mbere na kumenyerera miti iria menayo tondu ouria irathii nambere na gukura na kuneneha noguo irathii nambere na kuongerera tani.
- Twina mwihoko ati tugiika uthuthuria ungi (verification) ikundi iria itete tani cia cio, niikahota gucokia tani iriai tete.

Guthiagaatariria Gikundikiagethamitiyao?

- Nitwagiriirwo ni kumenya ati riria umwe witu agetha miti yake, hathara iyo ni iitu ithuothe.
- TIST ingikorwo yendetie tani ya miti icookete igatemwo, TIST nonginya irihe tani icio ciurite mbere ya kwendia ingi.
- Ti undumwega riria Verifier ona murimi atemete miti yake. Undu uyu utumaga eyurie ciuria nyingi ati ona arimi angi no makorwo magitema miti.

Ngirimiti ya Greenhouse sale agreement contract gatagati ka Small Groups na CAAC yendekithagia murimi wa TIST atungate miti yake gwakahinda kamiaka 30 nakuhanda miti iria yakua, Thutha wa Miaka ikumi, gikundigia TIST nigitikiritie a memba kugetha 5% ya miti yao oomwaka. No kugetha miti yothe orimwe tinjira njega – niithukagiatiri, njui na nyamu na mimera ingi.

Rekei tunyitanire, turute wira hamwe gutungata miti na migunda iitu.



Mbura nene kuura gicigo kia East Africa. Meciria ma kwigitira na miiyurwo na matwika.

Kimera githiru kia mbura ya mweri wa Ikumi – dithemba 2019, icigo nyingi gitaroini kia Africa yairathiro onana ya muhuro, nikwagiire na mbura nene iria yari na uteithio miena imwe no nikwari na guthukangia kuhitukira miiyurwo na matwika.

Miiyurwo kaingi irehagwo ni mbura inene yurite gichigo-ini kimwe, kuiyura kwademu. Miiyurwo ya mahinda kwa mahinda itumaga kugie na runyanjara rwa kiguo.

Hindi iria kuraura, maai ma mwena maingagira demu, kana tiri-ini, namangi makahuthirwo no ninyeki na miti, mangi makanyuo ni riuu na maria mangi magatherera. Muiyurwo uyu riria maai maingi kana matherera makiria. Muiyurwo ungi ukaute haririrwo witagwo muiyurwo wa naihenya.

Matuika namo marehagwo ni riria mugunda uinamite watuika na wonje wamuthemba. Wonje uyu no urehwo ni maai gukira muno na gutuma tiri uhuthe makiria. Kana maai maria mena guukuthi mambie gukunuka. Kana mwaki wa kahinda karaya ugatuma tiri uhuthe muno. Kana kiguo kinene mugundaini.

Matuika nimarehagwo ni maundu ta gutema miti, kurima harurukaini, miako, kuhuthira mbaruti, kwenja mahiga, kumunya miti, na maundu maingi maingi.

Uria tungithema na miiyurwo.

Njira imwe cia kwigitira na miiyurwo no kuhanda miti na mimemra ,kwenja benji, na gwaka indo cia kunyihia ihenya ria kiguo ta demu kana gabions.

Kwigitira na ugwati.

Njira imwe ya kwigitira niguthama kundu kuria kungikorwo na miiyurwo.

Kwigitira na Matuika.

- Gwaka thingo ya kunyitira tiiri na miako iria iri ho.
- Gwikira mibere thi ya gute maai.
- Kuhanda miti iharuruka-ini.

Uria wagiriirwo ni gwika hindi ya matuika.

- Ikara wihugite.
- Thama kundu kuria kungikorwo na ugwati wa matuika.
- Ikara ugithikagiria kana kwina undu urenyenya tiri na miri ya miti.



Arimi a TIST Kenya Kunyitanira na kambuni ya Taylors igongona bururini wa Ngeretha.

Mwaka muthiru mweriwa November, arimi atano a TIST nimathire bururi wa Ngeretha igongona riagu kunguira uhotani wa kambuniya Taylors. Arimi acio nimathire na magicemania na universities oomakihunjagia uhoro wa TIST. Nimacokire magicera micii ya London, Exeter, York, na Harrogate.

Andu a Ngeretha ni makenirio niwira mwega wa TIST. Kwaraniria na kambuni cia Ngeretha, arimi acio ni mahotire kumaiguthia uria TIST ikoretwo ikigaciria miturire ya andu aaingi. TIST niiguthie na mbere na gwetha kambuni na andu manginyitanira hari wonjorithia wa carbon.

Miti ya Ki-nduire: Ni iriku, niya bata niki?

Arimi thiini wa TIST nimahandaga magana maingi ma mithemba ya miti, hamwe na miti ya matunda na nuts, miti ya kurio ni mahiu, miti ya kwongerera unoru wa tiiri na mithemba ingi ya gwaturwo mbau. Arimi makiria nimaracagura miti ya ki-nduire niundu wa mawega mayo.

Muti wa ki-nduire ni uriku?

Muti wa ki-nduire ni muti uria ukurite na njira cia ki-nduire gwa kahinda karaihu. Ti mithemba yothe iria tuui ikoragwo iri ya ki-nduire. Ingi irehetwo ni andu kuma kundu kuraihu. Kuri na makiria ma mithemba 800 iria niya ki-nduire guku Kenya.

Miti ya ki-nduire niya bata niki?

Na tondu miti ya ki-nduire niikuraniirie na maria maturigiciirie, nyamu, mitera na indo ingi nyingi, niikoragwo yagiriire. Maita maingi, uu nikuga ati

ndibataraga gutungatwo muno na niikuraga itara na umenyereeri munene ta miti ya guuka. Niitumaga migunda iitu ikure indo nyingi na ugwati wa tutambi ukanyiha. Niithondekaga ituuro na irio kuri nyamu cia githaka ohamwe na kuruta matunda, mbau, mahuti na dawa cia ki-nduire. Miti ya guuka noikorwo na mawega no ingi noikorwo na riia riingi na ihumbire miti iria ingi.

Riria twahanda miti ya ki-nduire migunda iitu, niturateithiriria kugitira mithemba iria ikoretwo iri na bata kuri aciari aitu, kuria aciari a aciari aitu na andu angi an nyamu cia githak. Noturathoma mawega ma mithemba miingi ya miti iria iturigiciirie. Riria twahanda miti ya ki-nduire, niturateithia gutigirira miti na mawega mayo nikuri ciana ciitu.



Thiini wa TIST, turi na njohherera kuri aria mahanda miti ya ki-nduire. Ikundi iria ciri hankuhi na ruui iria cirumagirira mitaratara ya TIST ya kuria kwaraga na niirahanda miti ya kinduire. Ikundi cia TIST iria irihakuhi na mititu ya thirikari iria ciahanda miti ya ki-nduire nociitikirike kuingira CFA niguu magia na mbeba kumana na wendia wa carbon. Kwambiriria marihi maya, niukuona njohherera makiria cia miti ya kinduire thiini wa voucher cianyu. O muti wa ki-nduire watarwo mugunda-ini waku niundu wa njohherera ino ni 1 shilling hari o mwaka. Niwega kumenya ati njohherera ciri ho niundu wa USAID. Tiga uria miti irahagwo, kuhitukira wendia wa carbon credits na guthii uguo nginya miaka 30, njohherera cia miti ya ki-nduire ni cia kahinda kanini na nicia uteithio kuma nja. Gwa kahinda gaka, turi na uteithio kuma nja niguu gutuhotithia kuheana njohherera.

Ni miti iriku ya ki-nduire?

Kuri na miti magana maingi iria niy ki-nduire thiini wa Kenya, na ingi yakurehwo iria irehaga mawega maingi. Ino ni imwe yayo:

Miti ya kinduire thiini wa Kenya

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Miti ingi niikoretwo Kenya gwa kahinda karaihu na niya bata, no tiya ki-nduire. Ino nita maembe, macadamia, causuarina, gravellia, bottle brush na mexican gren.

Geria kuhanda miti ya kinduire migunda-ini yanyu! Rora na wone ni miti iriku ya ki-nduire ingikura kwanyu. Uria aria muriganitie na cluster cianyu miti iria makuragia, na miti iria ikoragwo na mawega maingi kuri o. riria twaruta wira turi hamwe, notugitire maundu maya ma mititu niundu wa ciana ciitu. Hurira Jeniffer Kithure kwa uhoro makiria wa miti ya kinduire kana maundu ma uhandi wa miti kuria kwaraga kuhitukira 0726319539



Utemi wa miti na uthukangia wa migunda ya mititu ni thina munene, tungika atia?

Mititu ikoragwo ihumbirite gicunji kia imwe hari ithatu gia thi. Niyo inyitagirira riera, kugitira ihumo cia maai, gutuhe mbau, dawa na matunda iria ni cia goro muno na gutuma nyamu na andu maturue. Na noirathii nambere na guthukangiona njira nene muno. Nuthu ya muingi wa thi ukoragwo wihokete mititu, na andu ta 100 milion matiri na ngu ciakuigana.

Itumi nene cia utemi wa miti:

- Utemi wa miti wonekaga riria kwoneka nokurimike kana kuriithio mahiu na njira ingi ta gutema ngu, ucini wa maturubari, utegi ucini wa thamaki, ucini wa mbaki, umithia wa macani waki na waturi wa mbau.
- Uthukangia wa mititu ni riria mititu yanyiha niundu wa kuhuthirwo uuru na kwaga kumenyererwo(muhiano ta riria miti minene yatemwo gwatigara miti itari miraihu kana miti ya bata riria yatemwo ona kana kuriithio mahiu)
- Uthukangia na nutemi wa mititu muingi umanaga na kwaga umenyo wa bata munene wa miti.
- Njira-ini ingi, bata wa miti noumenyeke no ukia na andu gwiciria gutiri na njira ingi nigueumaga mititu ithire.

Maciaro ma uthukangia wa mititu.

- Gukuuo gwa tiiri ni maai: kwaga kindu kihumbirite tiiri

- Kwaga mawega maria maumanaga na miti ta nyamu,dawa irio, andu mathiaga kundu kuraihu gucietha.
- Kwaga mawega maria marehagwo ni miti: miti niihuthikaga kunyihanyihia ruhuho, kuiga ugunyu na gutheria riera o hamwe na kwongerera tiiri hinya. Tutari na miti riera riitu niriguthuka na tukorwo ugwati-ini wa wa ng'aragu.

Niatia tungika kugitira uthukangia wa mititu?

- Ambiriria tuta na uheane kana wendie mimera ya miti.
- Huthira riiko ritarahuthira ngu nyingi.huthinra njira ingi ya kuruga na kuhiuhia maai(ta kuhiuhia maai na riuu, mhanda mitiura, makoni ma kahua nyeki na mai ma ng'ombe).
- Handa miti kwa uingi,ingira TIST na uingiria angi.
- Ndukarime mugunda hakuhi na ruui. Reke miti na mimera ingi cikure na ugitire maai.
- Ndukariithie mahiu mugunda muno. Ndukareke ng'omb irie kuria kuri na mimera ya miti.
- Handa miti mugunda-ini uria uria urahanda irio. Riria wahanda miti mugunda niuhotaga kwigwatira mawega ma mutitu.

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
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Kiswahili Version

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



Wakulima wa TIST wakiwa UK katika party ya campuni ya Majani chai ya Taylor mwezi uliopita

Inside: Wakulima wa TIST nchini Kenya, Uganda na India wanaendelea kupata faida ya 70% kutoka kwa mapato ya Carbon Credits. Uk. 2

Mvua kubwa iliyonyesha Afrika Mashariki. Baadhi ya maoni ya kudhibiti mafuriko na maporomoko ya ardhi. Uk. 3

Wakulima wa TIST Kenya wanashiriki katika chama cha chai cha Taylors nchini Uingereza. Uk. 4

Miti ya kiasili: Ni ipi, na ni kwa nini ina umuhimu? Uk. 4

Ukataji miti na kuzorota kwa mashamba yenye misitu ni shida kubwa sana. Tunaweza kufanyeje? Uk. 6



Wakulima wa TIST nchini Kenya, Uganda na India wanaendelea kupata faida ya 70% kutoka kwa mapato ya Carbon Credits.

Shirika la Action hewa Safi (CAAC) kupitia Programu ya TIST inatimiza majukumu yake ya kushiriki faida kutoka mapato ya Carbon. Wakulima wa TIST wana makubaliano ya kimkataba na Shirika la Safi ya Hewa safi ili kuunda pamoja sifa za kaboni na faida za kushiriki. Tangu 1999 wakati TIST ilipoanzishwa nchini Tanzania, safari ya kuunda mito mpya ya mapato kwa wakulima wa miti ya TIST hatimaye imezaa matunda.

Kuanzia Novemba 2019, pesa za hisa za faida zilianza kusambazwa kwa wakulima. Kufikia siku ya Krismasi (25/12/2019), Vikundi 135 nchini Uganda vilikuwa vimepokea sehemu yao ya faida. Huko Kenya zaidi ya Vikundi vidogo 300 pia vilipata hisa yao ya faida ya 70% wakati zaidi ya dola 26,000 zilikuwa zimetolewa kwa wakulima wa TIST nchini India.

Katika nchi zote tatu (3), wakulima wameelezea msisimko wao. Pia wana matumaini soko la Carbon litaenda kuboresha mwaka huu na siku zijazo. Jane Nduta Karugu (MUTHAIGA (F) 2008KE2715) kutoka Cluster ya Kwa jebi nchini Kenya alikuwa na haya ya kusema, “Leo nashukuru sana kwa kupokea sehemu yangu ya faida ya kaboni. faida. Nimehamasika zaidi kuendelea kupanda miti, nikiwahimiza washiriki wa Kikundi Changu na Kikundi kuongeza miti zaidi katika shamba zao. Mungu ibariki TIST kupanua zaidi na kufaidi wakulima wengi zaidi.”

Kama ukumbusho, CAAC ina uwezo wa kushiriki faida za kaboni kwa wakulima wake, baada ya kuuza tani za kaboni zilizothibitishwa, kulipa pesa ambazo wakulima wamekuwa wakiingia katika malipo ya awali, kukutana na gharama za ofisi, mishahara ya wafanyikazi na ulipaji, gharama za majarida. semina na mafunzo na gharama nyingine nyingi zaidi. Vocha za kushiriki 70% za faida zinategemea faida na sio bei ya kuuza. Tunajua kuwa faida inafika wakati tuna bei ya kuuza chini ya bei ya gharama. (Bei ya kuuza - gharama = Faida)

Kwa kila Kikundi Kidogo kinachokata miti, au kuondoa baadhi ya miti yao kutoka TIST, hazistahili kushiriki faida hadi tani zilizopotea zimeundwa. Katika hesabu yetu ya kushiriki faida, lazima tuzingatie misitu yoyote inayokosekana kwa kila Kikundi Kidogo. Hizo ni “Jumla ya Tani Zilizopotea”. Sio haki kwamba wanachama wa Kikundi Kidogo ambao wametunza miti yao wanapaswa

kutengeneza juu ya miti iliyovunwa na washiriki wengine. Lakini ndivyo inavyotokea. Kama TIST, tunakutia moyo kuwaalika washiriki ambao hukata miti, kaa nao na uwasaidie kuelewa ni jinsi gani itawagharimu kwa sababu wanakata miti, waombe warudishe mapema, na upe miti mpya. Hii itasaidia Vikundi vidogo kujifunza maadili ya TIST ya kuwajibika na kuwa waaminifu.

Vipi Vikundi vidogo ambavyo vimekata miti vinaweza kutengeneza tani zilizopotea?

- Tani zilizopotea zitatengenezwa na Kikundi kidogo kwa kupanda miti mingi zaidi.
- Wengine kwa kutunza miti iliyopo na kuruhusu ukuaji wao kuzidi tani zilizopotea. Kwa wengine, hii itatokea kwa kawaida kwa sababu. Tani zilizopotea ni sehemu ndogo na miti yao ina afya.
- Tunatarajia kwamba katika uhakiki huu tumefanya hivi karibuni, Vikundi vingi vidogo ambavyo vimepoteza tani, tani zao zitathibitishwa, na tani zilizopotea zitatengenezwa.

Ni nini kinatokea wakati Vikundi vidogo vinapokata miti?

- Inastahili kueleweka kwa washiriki wote kwamba wakati mtu atakata miti yao, kila mtu huathiriwa na upotezaji.
- TIST inapoteza tani za kaboni ambazo tayari zimeshauzwa na wakati wa kushiriki faida, TIST lazima kwanza ilipe kwa tani zilizopotea kabla ya faida kufanywa?
- Sio vizuri wakati viboreshaji wanaona vijiti vimekatwa. Hii inaweza kuwafanya kuwa na wasiwasi juu ya washiriki wengine wa TIST, na hatua zao katika siku zijazo.

Mkataba wa makubaliano ya uuzaji wa Greenhouse kati ya Vikundi vidogo na CAAC inatoa wito wa kutunza miti ya miti kwa miaka 30 na kuchukua miti yoyote inayokufa. Kukata miti ya miti ni mazoezi bora, na inaweza kutoa kuni, mbao, nk Baada ya miaka 10, kila Kikundi Kidogo kinaweza kuvuna hadi 5% ya miti yao kila mwaka. Kukata wazi kamwe sio mazoezi bora - huumiza udongo, vijito, na bioanuwai.

Wacha tufanye kazi kwa pamoja kuhakikisha kuwa miti yetu ya miti na shamba zetu zinaendelea kuboreka!



Mvua kubwa iliyonyesha Afrika Mashariki. Baadhi ya maoni ya kudhibiti mafuriko na maporomoko ya ardhi.

Msimu wa mvua uliopita (Oktoba - Desemba 2019), maeneo mengi ya Afrika Mashariki na Kusini mwa Kusini walipata mvua kubwa ambayo ilikuwa na faida katika maeneo mengine lakini bado ilisababisha uharibifu kupitia mafuriko na maporomoko ya ardhi.

Mafuriko husababishwa na sababu nyingi kwa muda mrefu huonyesha mvua kubwa (ndani ya eneo au kwa eneo lote la maji), kushindwa kwa mabwawa, au miundo mingine inayohifadhi maji. Mafuriko ya mara kwa mara hufanyika kwenye mito mingi, na kutengeneza mkoa unaozunguka unaojulikana kama bonde la mafuriko.

Wakati wa mvua, maji mengine huhifadhiwa kwenye mabwawa au mchanga, baadhi huingizwa na nyasi na mimea, zingine huvukiza, na zingine husafiri juu ya ardhi kama uso wa maji. Mafuriko hufanyika wakati mabwawa, maziwa, mito, mchanga, na mimea haiwezi kuchukua maji yote. Maji basi hutiririka kwa ardhi ambayo haiwezi kubeba katika njia za mkondo au iliyohifadhiwa katika mabwawa ya asili, maziwa, na mabwawa ya mwanadamu. Mafuriko ya mto mara nyingi husababishwa na mvua nzito. Mafuriko ambayo huongezeka haraka, bila onyo kidogo au hakuna, huitwa mafuriko. Mafuriko ya joto kawaida hutokana na mvua kubwa juu ya eneo ndogo, au ikiwa eneo hilo tayari lilikuwa limejaa kutokana na mvua uliopita.

Kwa upande mwingine, maporomoko ya ardhi hufanyika wakati mteremko (au sehemu yake) unapitia michakato kadhaa ambayo hubadilisha hali yake kutoka kwa utulivu kuwa mbaya. Kwa kweli hii ni kwa sababu ya kupungua kwa nguvu ya shear ya nyenzo za mteremko, kuongezeka kwa msongo wa shear na nyenzo, au mchanganyiko wa hizo mbili. Mabadiliko katika utulivu wa mteremko yanaweza kusababishwa na sababu kadhaa, kutenda kwa pamoja au peke yako. Sababu za asili za maporomoko ya maji ni pamoja na, kuenezwa na uhamishaji wa maji ya mvua; kuongezeka kwa maji ya ardhi au kuongezeka kwa shinikizo la maji ya pore (k.k. kwa sababu ya recharge ya maji katika misimu ya mvua, au kwa kuingia kwa maji ya mvua); kuongezeka kwa shinikizo la hydrostatic katika nyufa na fractures; kupotea au kutokuwepo kwa muundo wa mimea wima, virutubisho vya mchanga, na muundo wa udongo (k.m. baada ya moto wa mwituni - moto katika misitu wa kudumu kwa siku 3-4); mmomonyoko wa toe ya mteremko na mito kati ya wengine

Njia za kutuliza ardhi zinazidishwa na shughuli za kibinadamu, kama: ukataji miti, kilimo na ujenzi; vibiri kutoka kwa mashine au trafiki; ulipuaji na madini; kazi ya ardhi (k.m. kwa kubadilisha sura ya mteremko, au kuweka mzigo mpya); katika mchanga usio na kina, uondoaji wa mimea yenye mizizi mirefu ambayo hufunga colluvium kwa kitanda; shughuli za kilimo au misitu (ukataji miti), na ujanibishaji wa miji, ambayo hubadilisha kiwango cha maji kuingia ardhi.

Njia za usimamizi wa mafuriko. Njia zingine za kudhibiti mafuriko zimekuwa zikitekelezwa kwa miaka mingi. Njia hizi ni pamoja na kupanda mimea ili kuhifadhi maji zaidi, vilima vyenye kutetemeshwa kushuka kwa kasi, na ujenzi wa njia za mafuriko (njia za mwanadamu za kupotosha maji ya mafuriko). [1] Mbinu zingine ni pamoja na ujenzi wa mabunga, maziwa, mabwawa, mabwawa, [1] mabwawa ya kuhifadhi maji ili kushikilia maji ya ziada wakati wa mafuriko, kulinda maeneo ya mvua na kuanzisha miti ya mmea kwa njia nzuri.

Kupunguza hatari kwa njia ya mkakati. Njia moja ya kupunguza uharibifu unaosababishwa na mafuriko ni kuondoa majengo kwenye maeneo yanayokabiliwa na mafuriko, na kuyaacha kama mbuga au kuwarudisha nyikani.

Hatua dhidi ya maporomoko ya ardhi.

- Uimarishaji wa slabs za sakafu na ukuta wa nje katika majengo yaliyopo.
- Ufungaji wa bomba la maji kwa maji ya mvua, mifereji ya maji.
- Kupanda kwa mteremko ambao uko katika mazingira magumu kwa maporomoko ya miti na miti yenye miti yenye miti na vichaka.

Nini cha kufanya Wakati wa Mtaa wa Landslide.

- Kaa macho na macho. ...
- Ikiwa uko katika maeneo yanayoshikiliwa na maporomoko ya ardhi na mtiririko wa uchafu, fikiria kuondoka ikiwa ni salama kufanya hivyo.
- Sikiza sauti yoyote isiyo ya kawaida ambayo inaweza kuonyesha uchafu unaohama, kama vile miti inayopunguka au miamba ikigonga pamoja.



Wakulima wa TIST Kenya wanashiriki katika chama cha chai cha Taylors nchini Uingereza.

Mwaka jana, Novemba, viongozi watano wa TIST pia wakulima walitembelea Uingereza kusherehekea mafanikio ya mpango huu na chai ya Taylors, kukutana na vyuo vikuu, na kueneza neno la TIST. Walitembelea London, na pia miji ya Exeter, York, na Harrogate.

Watu nchini Uingereza walihamasishwa na kazi ya wakulima wa TIST. Kwa kuongea moja kwa moja na kampuni na shirika la Uingereza, viongozi wa TIST Kenya waliweza kuelezea jinsi mpango huo ulivyobadilisha maisha yao na kuleta fursa mpya kwa jamii zao. Hii inasaidia TIST kupata washirika wazuri katika soko la kaboni.

Miti ya kiasili: Ni ipi, na ni kwa nini ina umuhimu?

Wakulima katika TIST hupanda aina mamia za miti, panoja na mitunda na miti ya mafuta, miti ya kulisha mifugo, miti ya kurutubisha udongo, na aina zinazovunwa ili kupata mbao. Wakulima wengi wanachagua kupanda miti ya kiasili kwa sababu ya faida zake nyingi.

Mti wa kiasili ni upi?

Mti wa kiasili ni ambao umezoeana vizuri na mahali Fulani ambapo umekua na umezalisha kwa njia ya kiasili kwa muda mrefu. Si ain azote tunazojua ni za kiasili. Mingi imeletwa na watu wa kutoka mbali sana. Kuna zaidi ya aina mia nane za miti ya kiasili katika Kenya.

Ni kwa nini miti ya kiasili ni muhimu?

Kwa sababu miti ya kiasili imebadilika pamoja na mazingira hayo, wanyama, mimea na viumbehai vilivyoizunguka, imefaana na mahali hapo. Mara

nyingi, hili humaanisha kuwa yaweza kukua vizuri bila ya vitu nyongeza kama dawa za wadudu na mbolea za viwanda. Mara nyingi haihitaji kuchungwa kama aina zilizoletwa. Inaongeza viumbe hai katika mashamba yetu hadi uwezekano wa wadudu kuzuka unapungua. Inawapa wanyama pori makazi na chakula na kutupa faida kadha kama matunda, mbao, majani na dawa za kiasili. Aina zilizoletwa pia zaweza kutupa faida, lakini baadhi yazo hukua kama magugu na kumaliza aina zingine.

Tunapopanda miti ya kiasili katika mashamba yetu, tunasaidia kulinda aina zilizotumika na wazazi, mababu, na kwa watu na wanyama wa Kenya kwa vizazi vingi. Bado tunasoma kuhusu faida za aina nyingi zinazotuzunguka. Tunapopanda aina ya kiasili, tusaidia kuhakikisha kuwa miti na faida zake zitakuweka kwa watoto wetu.



Katika TIST, tuna pesa nyongeza kwa wanaopanda miti ya aina ya kiasili. Vikundi karibuna mito vinavyofuatilia mienendo bora ya kufanya mambo ya TIST katika maeneo yaliyo karibu na mito na kupanda miti ya kiasili vyaweza kuhitimu kupata motisha hii nyongeza kupitia mradi wa TIST Riparian Initiative. Vikundi vidogo vya TIST karibu na misitu ya serikali vinavyopanda miti vyaweza kuhitimu kuingia CFA ili kupanda miti ya kiasili na kupata pesa kutokana na mauzo ya kaboni katika misitu hii. Kuanzia malipo haya, utaweza kuona kuwa kuna nyongeza ya kupanda miti ya kiasili katika vocha zenu. Kila mti wa kiasili unaohesabiwa unahitimu kupata nyongeza hii ya shilingi moja kwa kila mti wa kiasili kila mwaka. Ni muhimu kukumbuka kuwa nyongeza hii imewezekana kwa sababu ya usaidizi wa USAID. Tofauti na malipo ya miti, ambayo hutokana na mauzo ya kaboni na kwa hivyo yatakaa miaka thelathini na zaidi, , motisha hii ni ya muda mfupi, na inalingana na usaidizi wa kipesa kutoka nje. Kwa wakati huu, tuna pesa za nyongeza hii zitakazotufikisha mwisho wa mwaka wa 2013. Tutatia bidii kutafuta usaidizi nyongeza ili tuweze kuwapa nyongeza hii kwa muda mrefu zaidi.

Ni miti ipi iliyo ya kiasili?

Kuna mamia ya aina za miti ya kiasili zilizo Kenya na aina nyingi zilizoletwa ambazo pia hutupa faida nzuri. Hapa ni mifano ya kila mojawapo:

Miti ya kiasili ya Kenya.

Cordia africana

Meru oak, muhuru, (*Vitex keniensis*)

Mugumo, Mirumba, (*Ficus thonningii*)

Podo, Muthengera (*Podocarpus falcatus*)

Mwiria, (*Prunus africana*)

Mutoo, mukeu, *Dombeya rotundifolia*

Murubati, Muuti, (*Erythrina abyssinica*)

Sesibania, (*Sesbania sesban*)

Muuuku (*Terminalia brownii*)

Mikongoro, (*Acacia albida*)

Mihogoro, (*Acacia abyssinica*)

Miti mingine imekuwa Kenya kwa muda mrefu sana na ina matumizi mengi, lakini si ya kiasili. Baadhi yah ii ni miembe, macadamia, casuarina, bottlebrush na Mexican green ash.

Jaribu kupanda baadhi ya miti ya kiasili katika shamba lako leo! Angalia karibu nawe ili uone ni aina zipi zinakua katika misitu iliyo karibu nawe. Uliza majirani na wanacluster yako miti wanayokuza, nan i miti ipi katika misitu huwapa faida. Tukifanya kazi pamoja, twaweza kulinda rasilimali ya misitu yenye aina kadhaa za miti kwa watoto wetu na vizazi vijavyo. Piga Jeniffer Kithure ili kupaata taarifa zaidi kuhusu miti ya kiasili au mpango wa Riparian Initiative kwa nambari hii 0726319539.



Ukataji miti na kuzorota kwa mashamba yenye misitu ni shida kubwa sana. Tunaweza kufanyeje?

Ukataji misitu ni kutolewa kwa miti na mimea mingine yenye mbao.

Misitu na vichaka hufunika sehemu moja juu ya tatu ya ardhi. Miti hubadilisha tabianchi, hulinda maji, hutupa vitu vinavyotokana na misitu (kwa mfano, mbao, dawa, matunda na vingine) vinavyo ughali mkubwa na huruhusu mimea na wanyama wengi tofauti kuishi. Hata hivyo inakatwa kwa mwendo kasi; hectare milioni ishirini kila mwaka. Nusu ya wanaoishi kwa hii dunia hutumia misitu kama nishati, hata hivyo watu kama milioni mia moja hawana nishati tosha kutumia kwa matumizi madogo madogo.

Sababu za ukataji misitu

- Ukataji miti hufanyika wakati mimea inakatwa ili kufungua shamba kutumika kwa njia nyingine kama kufungua shamba ili liweze kulimwa au kwa matumizi mengine kama kutumika kama kuni, kutengeneza matofali, kukausha samaki, kukausha majani chai, kujenga na kama mbao.
- Kuzoroteka kwa shamba lenye msitu ni wakati msitu unakuwa na miti ya aina chache na unashindwa kuyavumilia mabadiliko yanayokuja kwa sababu ya utumizi na usimamizi mbaya (kwa mfano, miti mizee inapokatwa, ikiachwa midogo, ama aina fulani ikikatwa yote, hadi inapotea kutoka msituni, ama msitu unalishwa wanyama zaidi ya inavyoruhusiwa, hadi miti inashindwa kukua badala ya iliyokufa).
- Ukataji miti na uharibifu wa shamba lenye msitu mwingi hutokana na kutokuwepo kwa ujuzi kuhusu thamani kamili ya miti.
- Wakati mwingine, thamani ya miti yaweza kuwa inajulikana lakini umaskini na kutambulika kusio sahihi kuhusu ukosefu wa lingine la kufanya hulazimisha watu kukata miti.

Shida zinazojitokeza kufuatilia ukataji wa misitu.

- **Mmomonyoko wa Udongo:** Ukosefu wa miti ya kufunika ardhi na mizizi huacha udongo hatarini na huruhusu mmomonyoko wa udongo.
- **Ukosefu wa rasili mali ya msitu**

tunayohitaji: kukata miti hugaribu mahali pa wanyama pa kuishi, hupunguza viumbe hai/bioanuwai, hutoa rasili mali ya chakula na dawa na huongeza ushindani ili kupata vifaa vya ujenzi. Watu wanahitajika kutembea mbali zaidi ili kupata kuni, na bei za bidhaa zinazotoka misituni zinapanda juu sana.

- **Ukataji misitu unamaanisha ukosefu wa faida nyinginezo za miti:** miti hupunguza upepo, uhifadhi unyevu, huongeza hewa safi hewani, na huongeza virutubisho udongoni. Kwa hivyo bila miti hali ya anga ya mahali hapo itakuwa kavu zaidi na kuongeza hatari ya mafuriko, mmonyoko wa udongo unaosababishwa na upepo, kupunguzwa kwa rutuba ya udongo na kupunguzika kwa usafi wa hewa.

Tunaweza kufanyeje ili kuzuia ukataji wa miti?

- Kuanzisha vitalu vya miti na kukuza miti ya kupanda na kupeana au kuuza miti kwa wanajamii. Twafaa kutia moyo wengine kupanda miti pia, na kujiunga na TIST!
- Tumia meko ya kuokoa nishati, ambayo hutumia kuni na makaa chache
- Tumia nishati badala inapowezekana (kwa mfano, joto la jua, machujo ya mbao, maganda ya kahawa, nyasi, magugu, mabaki ya mimea, taka za wanyama).
- Kujihusisha na shughuli za upandaji miti za jamii. Kuweni kikundi kizuri cha TIST chenye mafanikio!
- Himiza majirani na marafiki yako pia kuingia katika TIST
- Usilime shamba lililopakana na mto. lache miti na mimea kumea ili kulinda maji haya
- Kuwa mwenye macho usije ukalisha mifugo shamba kuliko inavyoruhusiwa. Usitake mifugo ikaribie miche isije ikaharibu na kunyimu msitu nafasi ya kukua mara ya pili.
- Himiza kilimo mseto na matumizi ya mashamba madogo ya miti. Kuwa na miti shambani mwako hukupa vitu vinavyotokana na msitu na husaidia kulinda msitu ulio karibu.

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
W W W . t i s t . o r g

Kikamba Version

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



Aimi ma TIST me UK kutana na Taylor Tea Mwai Muthelu (Nov.)

Inside: Aimi Ma TIST Kenya, Uganda Na India Kuendee Ukwata Vaita Wa 70% Kuma Kwa Carbon Credits. *Page 2*

Mavuliko na mbua mbingi ila ikusiwe isioni sya Africa ya wumiloni wa syua. Nzia imwe sya kusiiia mitiuuko ya muthanga na kiw'u kingi. *Page 3*

Aimi ma TIST kenya kwithiwa me amwe mai utanuni wa Taylors Teaula wai United Kingdom. *Page 4*

Miti ya Kiene: Yo nimyau, na niki yavata? *Page 4*

Kwanangwa kwa mititu na kwanangika kwa itheka sya mititu ni withiitwe wi thina munene. Nata tutonya kwika? *Page 6*



Aimi Ma TIST Kenya, Uganda Na India Kuendee Ukwata Vaita Wa 70% Kuma Kwa Carbon Credits.

Clear Air Action Corporation (CAAC) kwisila kwa waliano wa Tist nimaendee na kwianisya muvango woo wa kuaa vaita kuma kwa carbon. Aimi ma TIST methiawa na wiw'ano na Clean Air Action Corporation kwa vamwe maseuvye nzeve itavisaa ya utandithya (carbon credits) na mayiaana vaita. Kuma mwaka wa 1999 yila TIST yambiie Tanzania, kyalo kiu no kiendee na kusyaa tulusi twa kuete ueti na kusyaa matunda kwisila uvandini wa miti wa aimi ma TIST.

Kwambiaa Nov. 2019, vaita wa mbesa niwambiie uyaiikiw'a aimi. Tuivika muthenya wa sikuku (25/12/19) tukundi 135 kuma Uganda ni tunakwatite vaita woo. Nthini wa Kenya tukundi mbee wa 300 onamo nimanakwatite vaita woo wa 70% vala mbee wa dola (USD) 26,000 nisyo aimi ka TIST kuma India manakwatie.

Nthini wa wanhi ithi syi itatu, aimi nimaaleisye utanu woo. Ingi maina wikwatyo kana soko wa nzeve itavisaa nikwaila mwaka uyu na ivindani yukite. Jane Nduta Karugu (Muthaiga (F) 2008KE2715) kuma ngwatanioni ya Kwajebi Kenya aina uu wa kwasya "Umunthi nina muvea nundu wa kuaiwa vaita wa nzeve itavisaa. niw'a nina uthuthio ona wa kuendee kuvanda miti kwa wingi, kuthuthya kakundi na ngwatanio niyu kwongelelela miti miundani kwoo. Ngai athime TIST iendee na uthataa na kunenga aimi aingi vaita."

Ta ulilikanio, CAAC yina utonyi wa kuaia vaita wa carbon Credits aimi moo, itina wa kuikiithya tani sya carbon, kuiva imi na kumane aluvasi, kuiva mauvisi, misaala ya athukumi, kuiva useuvya wa ithangi yoo (Newsletters, Seminar, momanyisyo na mavata ang. Vaita wa 70% ula uaawa kuatania na vaita ula ukwatitwe indi ti kuatia thooa a uta. Nitwisi kana vaita ukatikanaa itina wa kumania kila utee na kila unauite (Thooa ula utee - Thooa ula unauite = Vaita).

Kwa kila kakundi katema miti yako kana kwenga kula TIST mavandite maitonya kuaiwa vaita nginya yila asala ila maete kwa kutema miti isu yisyoka. Tuyika masavu ma kuaana vaita, nonginya tutale kila twaitye kwisila kwa kakundi kala katemete miti yake. Isu nisyo syithiawa tani sya wasyo.

Vai wiananu kwa amemba ma kakundi ala maete miti yoo na kumisuvia kumia nundu wa amwe kana umwe woo umikethete kana kumitemanga. Indi uu niw'o kuendeeaa. Ta TIST nituthuthasya na kumwita ula utemete miti yake na kumwikaly'a nthi na kumuelesya kana niwasyo wiana ata nakumwia atunge kila waivitwe mbee na maivanda miti ingi. Kii kitetheesya tukundi kuelewa maundu ma TIST na kwithiwa utonya umya utalo na uikiiku.

Tukundi tula tutemete miti yoo tutoya kwika ata undu wa tani ila mbau?

- Matonya utungia wasyo uyu kwa kuvanda miti ningi mingi
- Angi kwa kwikalya ila yivo na kumisuvia. Kii kiithiwa ethiwa ila yatiala nimiseo na niaendee kwikala iteukethwa.
- Twiikwatya kana tuyika uvitukithya tukundi tunini tula twaitye tani, tani ila iuvitukithwa ni syikwithiwa inavikia kuvwika ila mbau.

Kwithiwa ata yila tukundi twatema miti yoo?

- A memba nimaile kuelewa kana yila umwe watema miti yake kila umwe nukukwata wasyo.
- TIST niyaasya tani sya carbon ila itete na ivindani ya kuaana vaita, TIST niyaile kuivia tani ila mbau mbee wa kuseuvya vaita.
- Ona ti useo yila athiani mooni miti na mititu yi ndemange. Kii kitumaa memakia nundu wa aimi ala angi ma TIST na meko moo kwa ivinda yukie.

Wiw'ano wa Greenhouse Sale natikati wa ikundi na CAAAC yiitya kwikala kwa miti na mititu kwa miaka 30 na kuvanda ingi ila yooma. Kusea nikw'o kwaile kwa miti ya mititu ta nzia nzeo ya kukwata ngu kana mbwau. Itina wa myaka 10, kila kikundi nikyaile uketha 5% ya miti yoo kila mwaka. Kwenga miti kuyaile nundu nikuumiasya muthanga, mbusi na mikao na mawithyululuko.

Eka tuthukume vamwe kuikiithya miti na miunda yitu niyaaila.



Mavuliko na mbua mbingi ila ikusiwe isioni sya Africa ya wumiloni wa syua. Nzia imwe sya kusiiia mitiuuko ya muthanga na kiw'u kingi.

Mbua thelu ya Thwa (Oct-Dec 2019), kundu kwingi nthini wa nthi ysa africa sya wumiloni wa syua (EA) na Africa ya ltheo (SA) kwaina mbua mbingi ila kwa isio imwe yaina vaita na kwa ingi yaetia wasyo na mitiuuko ya muthanga.

Mavuliko methiawa yila mbua mbingi yaetikia nzookea, (kiw'u kutindia kitena kwauthi) masilanga kwithiwa matemasevye, na kula kungi kiw'u kivingiawa kwaua. Nzookea sya kavinda kaingi nisyithiwa na mbusi mbingi nisyivaniia ivinda ya mbua mbingi na kiw'u kutindi a kula kitaile.

Ivindani ya mbua kiw'u nokitiawa muthangani kana ndia itanaivo kana kikalika nyekini na miti na kingi kikang'ala, na kiingi kiinyululuka iulu wanthi. Kwithiawa na mavuliko yila kiw'u kyausuania kila vandu na na weethia kula kisiiawa ona muthangani, mbusini, mitini vaii vandu kithi, Kaingi mbusi nivingaa yila kwina mbua mbingi. Mavuliko ala methiawa na kiw'u kingi kaingi nimaetae wasyo vate uvano wa kana mavuliko nimatonya ithiwa kisioni yila mbua mbingi yakusiwa kwa ivinda inini kwa kiso kinini vate mwanya wa kiw'u kunthi na kiny'aa.

Ngaliko ila ingi na mutuuuko wa muthanga. withiawa vala vena kitheeo na kiw'u nikyanywa kya angaa weethia vaina kindu kilulumiiya muthanga niwatwika ta usuu na muthanga ula wi itheo waw'o ndutonya kukwatiia usu ungi nundu onaw'o ni mwololo. Mutiuuko nutonya kuetwe ni mbua mbingi kana kiw'u kila ki ungu wa muthanga kwambata kana myalika yumanite na ivinda iasa yila kwaua na munthanga unai ulekanitye na kiw'u kiyingiva muthanga usu nutiuukaa nakuthi kula kwi mbusi kana matwika ala kiw'u kyeesevisya nundu wa muthanga kulekania. Ingi ethiwa kiima kana kitiuuko kiina miti withiia muthanga wakyo ni mituki kukuwa ni kiw'u nundu nivatheeu.

Mutiuko wa muthanga niwongeelawa ni mawiko ma mundu ta kutema miti na kwenga, kuiuma na kwaka, kuthungithwa nthi ni masine kana ngali kana yila kukwiswa kwoou kwananga muvangle wa muthanga. Kungi kula miti ila yina mii miasa yesiwa na kumwa nithingithasya mavia ala menthi na myako ya mataoni nitumaa kiw'u kyasya nzia na kula kiw'u kinyusaa muthanga ukethia kiw'u kiilika na kiithi na kusuania vangi.

Nzia sya kwisania na mitiuuko na mavuliko.

Nzia imwe ila itumiitwe myaka mingi. Nzia isu nivamwe na kuvanda miti kinyw'e kiw'u, kutema mitau iimani, kwaka nzia sya kiw'u. Nzia ii vamwe na kwakia kiw'u nzia, kusevya maia, masilanga na ndia sya kwia kiw'u kyaingiva na kusuvia isio ila syithwaa na kiw'u na kuete nziani sya kiw'u.

Nzia sya kuola wanangiku ula uetawe ni mavuliko na mbua mbingi.

Kuveta nyumba ila syi nziani sya kiw'u na kula kiw'u kitwiikanaa na kueka kumesye mititu.

Nzia sya usiia Mitiuuko.

- Lulumiiya Nguta na mutandasyo wa nyumba ila mbake kula kwi itiuuko.
- Ikiya miveleki ya kumya kiw'u na kukisevisya nzia.
- Vanda miti ila yithiawa na mii miliku na miti kwa wingi isioni ila ikothete utiuuka.

Undu wa kwikana kwisuvia iulu wa mitiuuko.

- Ikala wi tuie na wimetho.
- Kethiwa vala utwie ni nzia ya kiw'u na vandu mutuuko wisilaa kava kuthama nakwikala vaasa navo.
- Ikala withukiisye kana nukwi'a wasya wa mavuti kana muthanga utheete kana miti kwatuka na kuuma na kukunangana kwa vamwe.



Aimi ma TIST kenya kwithiwa me amwe mai utanuni wa Taylors Teaula wai United Kingdom.

Mwaka Muthelu, Mwai wa Nov. atongoi atano (5) ma TIST kuma Kenya nimatembeie UK kutania wailu wa walanio wa TIST na Taylors Tea, kukomana na Universities na kutangaasa uvoa wa TIST. Nimatembeie London na misyi ya taoni sya Exeter, York na Harrogate.

Andu ma UK nimeekiwe vinya ni wia wa Aimi ma TIST. Nima neenie na kambuni sya British na Organization, Atongoi ma TIST Kenya nimeethiwe matonya kwinyielesya utu walanio uyuuvinduite mwikalile woo na kunenga mbai nzia nzau sya kwitethya. Kii nikyatetheesye TIST kukwata endi ma ngoo nzeo sya kumatetheesya nthini wa soko wa carbon.

Miti ya Kiene: Yo nimyau, na niki yavata?

Aimi nthini wa TIST nimavandaa mithemba mingi ya miti ila ni mithemba ta miti ya matunda, uithyo,

kwongela muunda unou, mbwau na ngu. Aimi aingi nimaendee na usakua kuvanda miti ya kiene kwoondu wa vaita kwoo.

Muti wa kiene niwiva?

Miti ya kiene ni miti ila yithiitwe iimeea vandu kwa ivinda iasa vate kusuviwa ni mundu na niyikaa nesa kisioni kiu. Ti mithemba yonthe tumisi na tumyonaane ya kiene, mbingi niyaetiwe na kuvandwa ni andu kuma isioni ingi. Ve mithemba ya miti mbee wa 800 ila ni ya kiene na wumo wayo ni Kenya.

Niki miti ya kiene ne yavata?

Nundu miti ino niyithiitwe iialyuka na mawithyululuko makisio kiu, nyamu, mimea na tusamu tula twikalaa muthangani na yithiawa

yimianie. Kaingi kii kyonanasya noyimesye na kwika nesa utekwongela ngalama ya ndawa sya kuaa mitutu kana vatalisa. Kaingi iyendaa kusuviwa muno na miti yakuka. Nithathaasya wumi wa miunda yitu nundu imwe nilungasya tusamu tula twanangaa mimea. Kaingi mithemba ino ya miti nitunengae mawikalo ma nyamu, matunda, mbwau, matu na liu wa indo, ndawa na ngu. miti ya kuka imwe noyithiwe na moseo maingi indi itina wa ivinda nitonya utwika yiia na kuete wasyo. yila twavanda miti ya kiene miundani kwitu nitwasuvia muthemba usu wa muti kwaa iulu wanthi nundu yaiya vata kwa asyai na aamae maitu na kwa andu ma kenya na nyamu situ. Notuendee na ivundisya iulu wa mithemba ila itwithyululukite. Yila twavanda miti ya kiene tuikiithasya kana syana situ ikeethia mithemba ino ya miti na kukwata vaita yayo.

Nthini wa TIST nitunenganae ndivi ya uthuthio kwa ala mavanda miti ya kiene Ikundi ila



syivakuvi na mbusi na maatii mawalany'o ma Tist ma kuvanda miti nguumoni sya mbusi munamuno miti ya kiene nimekwithiwa na ivuso ya ukwata ndivi ya uthuthio. Ingi ikundi ila syivakuvi na mititu ya silikali na nimavandaa miti ya kiene nimaile ukwatana na CFAs kuvanda miti ino ya kiene ithekani sya mititu ya silikali nikana makwate ndivi ino ya uthuthio. Kwambiia ndivi ya mwai uyu nukwambiia kwona kivathukany'o kwa ala mavandaa miti ya kiene mathanguni menyu. Kila muti wa kiene uvanditwe nthini wa miti ya TIST ukweethiawa utonya uete silingi imwe ya uthuthio kila mwaka. Ni useo kwona kana uthuthio uyu wivo nikwoondu wa useo wa USAID. Na tita ndivi ya miti ila iivawa kuma kuta nzeve itavisaa na ni ikwikala vandu va ivinda ya myaka 30, mbesa ithi sya uthuthio nisy ivinda ikuvi na yitengemea kukwatwa mbau kuma nthi sya nza. Kwa yu twina ndivi ya uthuthio kuma 2013 . nitukuendee na utata twonme kana nituukwata jwingelwa kukwatwa mbau kimbesa nikana twone kana undu uu nutonya kwikalanga kwa ivinda iasanga.

Ni mithemba yiva ya miti ni yakiene?

Kwi mithemba mingi ya miti Kenya na mithemba ingi yakuka ila yithiawa na moseo. vaa ve ngelekanyo ya imwe

Miti ila wumo wayo ni Kenya

Cardia Africana

Meru Oak, Muhuru (vitex keniensis)

Mugumo, Mirumba (Ficus thonningii)

podo, Muthengera (podocarpus falcatus)

Mwiria (Prunus africana)

Mutoo, Mukeu, Dombeya rotundifolia

Murubati, Muuti, (Erythrina abyssinica)

Sesinbania (Sesbania sesban)

Muuuku (Terminalia brownii)

Mikongoro, (Acacia Albida)

Mihongoro (Acacia abyssinica)

Mithemba imwe ya miti yithiitwe Kenya kwa ivinda iasa na niyavaita muno onakau ti yakiene.

imwe kati wa ino nita:- iembe, makandania, Casuarina, ivela, bottlebrush na Mexican green ash.

Tata uvande miti ya kiene umunthi muundani kwaku. Sisy miti ila ikwithyululukite na uikulya atui maku umanye ni mithemba yiva ya miti ila mavandaa na yikaa nesa na yithiawa na vaita munene kwoo kuma mitituni. Twathukuma vamwe nituusuvia mititu na miti yitu ya kiene kwoondu wa syana situ na syawa ila ikoka. Kwandaia kunia Jeniffer Kithure kwa uvoo iulu wa miti ya kiene nambani ino 0726 319539



Kwanangwa kwa mititu na kwanangika kwa itheka sya mititu ni withiitwe wi thina munene. Nata tutonya kwika?

Mititu yanangawa yila miti yatemwa na ikuthu ila ivwikite kisio kiu kuvetwa. Mititu niwkwite kisio kya ta imwe iulu wa itatu kya nthi yothe. Mititu niyietae uvinduku wa nzeve, ikasuvia w'umo wa kiw'u, ikatune mosyao mayo ta ngu, mbwau, matunda, ndawa na angi maingi maundu aya ni malato munene na nitetheesya mithemba ya miti na nyamu kwithiwa/kwikala. Indi niendee na ngwanangwa kwa kilungu kinene kya milioni miongo ili kwa kila eka umwe kila mwaka. Nyusu ya ekali manthi metethasya kwisila mitituni ino ta kwa mwaki/ngu, navaili oou andu ta milioni iana yimwe mena uvungulu wa mwaki/ngu wa kutuma meka maundu maniini ala maile ika.

Ni itumi syiva ietae Thina wa Mititu munamuno:

- Mititu yanangawa yila andu meenga mayenda kuima, kuithya, na kutumia ngu, kuvivya mavali/matuvali, kutoeesya makuyu, kuthia mbaki, kumya maiani, kwaka na mbwau.
- Kwanangika kwa mititu kwithiawa yila mutitu wavutha na weethia ndutonya kwikala nundu wa kutumiwa nai na vate muvango. Ngelekany'o yila miti mikuu yatemwa na vaitiwa ikuthu syoka, kana yila muthemba muna wa muti niw'o ukutemwa na kuvetwa, kana yila mutitu usu waithw'a muno uteunewa nzeve ukeyaka, na yila mutitu uteuekwa miti ikeana kuvwika kilio kya ila mikw'u.
- Kwanangika kwa mititu na itheka syayo kuetawe ni unyivu wa umanyi iulu wa vata na vaita wa mititu/miti.
- Kundu kungi vata wa mititu nowithiwe wisikie indi nundu wa thina andu mayona titave nzia ingi ya kwikala andu maitema miti na kwananga mititu.

Mathina ala maumanaa na kwanangwa kwa mititu

Kukuwa kwa muthanga:- Yila vate kindu kiwkwite muthanga muthanga niwithiawa ute mulumu

na kwoou kukuwa ni mituki.

Kwaa kwa maueti ma mititu:- Yila miti/mititu yeethiwa itevo vethiawa vate wikalo wa syindu ila syaile ithiwa vo nundu vayithiawa liu, ndawa, naindi kulimana kuyingiva na thoowa wa syindu ta ngu nakila kingi kikwatikanaa mitituni uyithiwa wi iulu muno.

Kwaa kwa vaita ingi sya miti thini wa mawithyululuko:- Miti nisuviaa kiseve kikanange, nitumaa kimeu kikala, niseuvasya seve ya andu kutumia, niyongelaa unou muthangani. Indi vate miti withiaa nzeve ya kisio niyavinduka na kweethiwa na munyao ingi kukethiwa na muthanga kukuwa ni nzeve kana kiw'u, unou wa muthanga kuoleka na nzeve ntheu ya kuveva.

Tutonya kwika ata indi kusiiia kwanangika kwa mititu na itheka syayo?

- Kuseuvya ivuio na kunengane ka kuteea atui na mbaitu miti ino ya kuvanda.
- Kutumia maiko ma usuvia mwaki/ngu ala mendaa makaa kana ngu nini.
- Kutumia nzia ingi sya mwaki (ta kutumia sua, makavo, nyeki, yiia, kyaa kya indo, makoloso)
- Kuvanda miti na kutwika umwe wa nduika sya TIST. kuthuthya atui na anyanya malike ngwatanioni na ikundini sya TIST.
- Ndukaime nguumoni sya mbusi kana vala ve ndia. Eka miti na ikuthu imee isuvie kiw'u kiu.
- Ithiwa wi metho ndukaithye kitheka kikauke vyu. Siia indo kuthi vala ve miti minini iendee kwiana (nundu indo niisaa mithya na kutuma ieka kwiana) nikana yithiwe itonya kuseuvya mutitu.
- Thuthya andu kuvanda miti ona miundani kana kuvanda miti mithei kisioni kinini kithekani kwoo/kwaku. Kwithiwa na miti kithekani kyaku kwitetheesya we kwithiwa utonya ukwata syindu syothe utonya kwithiwa uyenda kuma mutituni na kwoou usuvia ula mutitu wivakuvi

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
W W W . t i s t . o r g

Kipsigis Version

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



Wakulima wa TIST wakiwa UK katika party ya campuni ya Majani chai ya Taylor mwezi uliopita

Inside: Temik ab TIST en Kenya, Uganda ak India ko tesetai konyoru 70% chebo boroteet koyob Melekwek Chebo Koristo (Carbon Credits Revenues) Page 2

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Tiletab ketik ak wechetab imbarenikab osnet ko uinwek che echen. Nee ne kimuche ke yai? Page 6



Temik ab TIST en Kenya, Uganda ak India ko tesetai konyoru 70% chebo boroteet koyob Melekwek Chebo Koristo (Carbon Credits Revenues).

Clear Air Action Corporation (CAAC) kotwoisto boisiyenin kopcheita Melekwek ab Koristo kobunu TIST. Temik ab TIST ko tindo koyonchinet ak Clear Air Action Corporation ko too en kibagenge Koristo ne Kioldo ak konyorchigee melekwek. Kong'eteen kenyitab 1999 kiin ke-too TIST en Tanzania, ko bandab konyor melekwek temik ab ketik ko kokosulda en let.

Kong'eteen Kipsundet Ne Taa (arawetab Taman ak Agenge) en kenyitab 2019, ko kikinaam kerobchi temik rabisiek ab melekwek. Kiin koite Krismas (25/12/2019), ko kikakonyor Kurupisiek Che Mengechen cheite 135 chebo Uganda melekwek. En Kenya, ko kikonyor Kurupisiek Che Mengechen chesire 300 melekwek chebo 70% ako en India ko kikerobchi temik ab TIST rabisiek chesire Dolaisiek 26,000 chebo Amerika. En emotinwechu somok ko koiboor boiboyenywan temik. Imong'u kora kole wendi barak sireet (ndonyo) ne bo Koristo en kenyini ak en betusiek che bwone. Kimwa Jane Nduta Karugu (Muthaiga (F) 2008KE2715) kobunu Kurupitab Jebi en Kenya kole: "Raini ko abaibai anyoor melekwek chebo koristo. Niton ko kikocheran atestai amiin ketik, ako cherutiet en kurupinyun ak bik tugul chebo kurupit kotes ketik en mbarenikchwak. Ngoberur Kiptaiyat TIST kotesak ak koik kelchin en temik che chang'".

En kobwotut, inai ile CAAC kopchechin melekwek temikyik yon kakoalda tanisiek ab koristo, ak koropchi rabisiek chekikakesip keliponchi temik, ak kelipan mileet ab ofis, melekwek ab kiboitiniyik, karamet ab baronok, tuiyosiek ak kanetutik ak kamosiek alak.

Kebebertab 70% che kiliboni ko mo melekwek ako mo oliet. Kingen kele melekto kenyoru yon kakeisto karamet en oliet ab kiy (Oliet – Karamet = Melekwek).

Kurupit age tugul ne tile ketik anan koisto osnet en TIST ko mo nyoru melekwek akoi keweek tanisiek che kobetyo. Asi kenyor melekwek, konyolu kinde komonut osnosiek che betyotik en kurupit age tugul. Choton ko "Tanisiek Tugul Che Betyotik".

Mo kit ne kararan kowolunengee temik cheripe ketikchuak ketik che tile membaek alak en kurupit.

Kobaten nooton ko kit ne kibaorionchin. TIST ko koonok cherseet okur membaek che tile ketik ak oteb ng'wony ak oguyechi asenet ne nyoru yon katil ketik, ak omwochi kolipan rabisiek chekikakosip keliponchi en tai ak komin ketik alak. Niiton ko toreti Kurupisiek Che Mengechen konai komonutiet nebo TIST nebo kenamgee eun ak keyai imanit.

Imuche kowegunto ano Kurupisiek Che Mengechen tanisiek che kikobetyo amun en ketik che kikitil?

- Tanisiek che kikobetyo kimuche keweeg yon kakimin ketik alak.
- Kimuche kora keriiib ketik che sobtos ak kebakach koyegekitu missing asikoweg tanisiek che kikobetyo. En alak, komuche koyaak icheken amun tanisiek che kikobetyo ko tutigin missing ako mi komie ketikchuak.
- Kimong'u kele en chigilisiet, ko ole oo en Kurupisiek Che Mengechen che kikobeet tanisiek ko ta kechigili ako imuche kowegunok tanisiek che kikobetyo.

Nee ne imuche koyaak yon katil ketik Kurupisiek Che Mengechen?

- Nyolu konai membaek tugul kole yon katil chito agenge ketik, konyoru asenet chi tugul.
- Imuche koobeet TIST Tanisiek ab Koristo ne kikakialda, ako tun en kasarta ne kiroptoo melekwek konyolu ketilen TIST rabisiek che kikobetyo en tanisiechoton ko tomo kenyor melekwek.
- Ma kit ne kararan yon kanaibik che chigilisie kole mi osnet ne kikitil. Imuche koimengee icheket membaek alak chebo TIST, ak koimengee boisienyuan en betusiek che bwone.

Koyonchinet ab oliet ne mi en kwenut ab Greenhouse ar Kurupisiek Che Mengech ak CAAC ko konu kurseet eb ribet ab osnosiek en kenysisiek 30 che bwone, koboto minetab ketik en ole kikomeyo alak. Kimuche kichoor temenik che tutigin ako noton ko kararan ako konu kwenik, bakoinik, ak alak. Ye ibata kenysisiek 10, komuche kokess Kurupit Ne Mingin age tugul ketik che ite 5% en kenyit age tugul.

Tilet ab ketik tugul ko mo kit ne kararan. Weche ng'ung'unyeek, ainosiek ak itondab emeet.



En ropta ne kosirto (nebo Kipsundet Ne Tai (Arawet ab Taman ak Agenge) akoi Kipsundet.

Nebo Oeng' (Arawetab Taman ak Oeng') ko kobaorianchi emotinwek ab Afrika Kong'asis ak Afrika Murot Taa ropta ne oo ne kiik kelchinet en komosweek alak, anganda kiimuch koib asenet kobun maaranet ak ng'isigeneet ab ng'wony.

Chang' tuguk che yoe komaaran emeet, kou ropta ne oo en kasarta ne koi (en koreet ne mingin anan ko ole baraa), anan ko silankosiek ak nyanchosiek, ak tuguk alak che tere beek chemaimuch koteer beek. En kasarta ne oo en abokora, kopitu maaranet en ainosiek che chang', ako noton ko yae korotinweek che negiteen kowalak ak koik tiritab maaranet.

En kasartab ropta, kong'etu beek en tabaikwek anan ko ng'ung'nyek, ko alak ko chute susweek ak timweek, anan koyenso kobetyo, ko che kong'et komuche kotenteen en emeet. Bitu maaranet yon maimuch koteer beek nyanchosiek, silankosiek, ainosiek, ng'ung'nyek anan ko timweek. En yoton kotenteene beek en emeet baraken chang'into ne maimuche koteer nyanchosiek ak silankosiek.

Maaranet ab ainosiek koibu ropta ne oo en abokora. Maaranet ne nyone en kasarta ne nwach ne mokisibkenoe kegureen Maaranet ab Nyosut. Maaranet an nyosut koibu ropta ne oo ne nyone en emeet ne kitigin, anan ko yon ki konyi beek ng'wony amun en ropta ne oo.

Ng'isigeneet akinee ko yaagse yon kanyo walet en emeet ne keikei ne yoe emeet kong'asng'asit anan kotangusit. Nitonko amun kaichuchukak kimnatet ab emeet ne keikei kot komekomuche konam tuguk tugul, anan komuche koyai noton tuguchu tugul.

Waletab kimnateet ab emeet ne keikei ko ibu tuguk che chang' che koiyomogee anan ko agenge an tuguchu. Tuguk cheibu ng'isigeneet ab ng'wony en abokora ko ropta ne oo ne chute ng'wony; kutuneet ab beek en ng'wony amun en ropta ne chute ng'wony, anan ko yon kachilge beek en kebenosiek che mi ng'wony, anan ko yon mami ketik anan ko timweek che teleldos, katoldoleiywek ak saratik en ng'ung'nyek anan ko ole katebto ng'ung'nyek (kou yon kalal maat ab osnet ne lole betusiek cheite 3 akoi 4), anan ko yon kikobal beek ab oinet tembwet ab emeet ne keikei, ak alak.

Ng'isigeneet ab emeet ko ibu boisionikab biik en ole oo kou tiletab osnosiek, temisiet, ak tegsosiek; botanosiek che bunu mashinisiek ak bonwek; katiolsosiek ak balunet ab koik; boisionik ab ng'wony (kou walet ab itondab emeet ne keikei, anan ko ibunet ab tuguk che nyigisen). Istoet ab timweek che tinye tigitik che koen en ng'ung'nyek che mo loen en ng'wony che choton ko nyolu konam rwandanet ab koik en ng'wony; temisiet anan ko boisionik ab osnosiek (tiletab ketik); tegsetab nganasosiek/taonisiek/tukosiek, che choton ko wale beek che chute ng'ung'nyek.

Ortinwek che kiripto Maaranet

Mi ortinwek che kikeboisien en kenysisiek che chang' keriben maaranet. Choton ko boton minetab ketik si kokonor beek che chang', tereet ab ole keikei koba mutyo beek koba ng'wony en tulwet, ak tegsetab ole bune beek ab maaranet (bereisisiek che chobe bik si kowis beek ab maaranet). Ortinwek alak ko boton tegsetab silankosiek, nyanchosiek, ak toboikwek che tere beek en kasarta nebo maaranet, ribet ab saosanik ak minset ab ketik che lelach en oret ne bo komonut.

Istoet ab ng'oinwek - Tetutik chebo komonut

Oret agenge ne kimuche keisto en asenet neibu maaranet ko keisto tegsosiek en emeet ne ityin maaranet en abokora, ak kemeto yoton koik timto anan ko turguito.

Ortinwek che kikirindoen ng'isigeneet ab ng'wony

- Kakimitet ab ng'wony en koriik ak inatusiek ab koriik.
- Teregetaet ab paipusiek che ireeto beek ab ropta ak ribet ab koreet ne keikei.
- Minetab ketik che tinye tigitik che loen/koen en emeet ne keikei.

Kiit ne kiyoe en ng'isigeneet ab ng'wony

- Teb ichipilitu ak ikosu.
- Angot imii emeet ne imuche kobiit ng'isigeneet ab ng'wony ak komilge koik, ibwat imande ak iwe ole mie angot komukogsei.
- Yebchiin iit sautisiek che matamikose che imuche koboor kele tururugee/rorogu koik, kou ketik che ildos anan ko koik che milugee.



Kiimuch temik ab TIST koba chaik chebo Taylors en Uingereesa.

En kenyt ni kosirto, arawetab Kipsundet Netai (Taman ak Agenge), ko kiimuch kandoik mutu (5) chebo TIST ako temik korutechi emeet ab Uingereesa koboiboenchi tuneneet ab tetutikchik en Chaik ab Taylors ak kotuiyo ak Sugulisiek ab Barak ak kokoito logoiweek ab TIST. Kirutechi London ak Nganaseetab Exeter, York an Harrogate.

Kiboiboenchi biikab Uingereesa boisiet ab temik ab TIST. Kin kong'ololchin kandoik ab kampunisiek ab Uingereesa, ko kiimuch kandoichoton bo TIST koarorchi akobo ole kikomuch kowal tetutitik ab TISTsobenywan ak koib kelchinoik che lalach kobwa bororienywan. Niton kouchekotore TIST konyor choronok ab mung'aret ab koristo.

Ketikab kipkaa: Oichon, ago amunee asi kobo komonut?

En temikab tist ko chechang ko kigomin ketigab kipkaa cheterchin ak cheterchin kou logoek , chebo tuga, chetoret ngungunyek ak chegitile bogoinik, chechang en temik koleweni chemoche asi konyorunen kelchin.

Ketibo kigaa ko nee?

Asigemwa kouniton koamun kiginorto komiten yoto ago en kasarta negoi kogigonoiyo age yet, moketitugul che kigenaite ko kipkaa, chechang kogigiibu en komosuwek cheloen ago ter, en emenyor bo keneya kotinye terchinosiekab ketik 800 che bo kipkaa.

Amunee asi gobo komonut?

En amunee kogigotebi en kasarta ne goi mising en yoto miten kigonaita tiongik ak anak chemenye yoton rutu komotinye koimut agetugul ago mogitesin kou kotondoleiwek anan konyor koimutik kou susurik, mokingei rebet ne mingin, wole imbarenikyok ak koter komabwa susurik kowech imbarenik, nyo runen omituwogik.

Tiongikab timin ak kenyorunen kelchin kou logoek, bokoinik, bogek ak kerichok anage chemoba kipkaa kenyoru nen agiche kelchin, ye kirib ak ketim ketichuton en chongindo kotoretech asi tun konyor



ibinda ne nyone ak kerib emonyon bo kenya,
oginetgei agobo ketikapkaa amun tinye kotoretech
en tugul chechang.

En TIST anyun temik chetinye kipkaa konyorunen
chepkontet nemi barak, kergei ak chito ne negit
oinet, ak kurubisiek chememenye ole negit timto
nebo emet kotinye chomchinet komin enyet ketik
iyanat niton en cfa, en ngalekab mungaret kotesat
nusut (Ishilingi) en ketitage tugul ne gemin, ybu
anyun toretton asaid, en kenyit agenge.

En kinyingonye 2013 kogonyor biik teset
ago kitesetai kechenge toretet nebo kasarta ne
mitentai.

Oichon ketik kipkaa?

Chang mising kipkaa chemiten kenya ago tugul
Kotinye kelunet ne gararan
Miten korogunet kou;
Meru oak(vitex kenie nsis)

Mungumo, miruba (*ficus thonningii*)

Tenduwet (*prunus africana*)

Podo, muthengera (*podocarpus falcatus*)

Silibwet (*dombeya rotundifolia*)

Murubati, muuti (*erythrina abyssinica*)

Sesibania (*sesbania sesban*)

Muuku (*terminalia brownii*)

Mikogora (*acacia albida*)

Mihogoro (*acacia abyssinica*)

Mogoiwet (*ficus sur*)

Lamaiyat (*syzgium/ guneense*)

Mutereriet (*ocetea / kenyensis*)

Miten ketik chechang kenya ago mobo
kipkaa kou; maembe, macadaimia, chesarur,
sebesebe, bottlebrush ak mexican green ash,
chegingei igole ketikap kipkaa en imbreguk, cheng
ketik chegororon chemiten yeimenye anan ole
negit timto, otebengei en tuiyet ketik che ochome
ago tinye kelut en inye, ye kiyai en kibangenge
konyoru ibinda ne nyone borotet en ehek.



Tiletab ketik ak wechetab imbarenikab osnet ko uinwek che echen. Nee ne kimuche ke yai?

Niton kotiletab ketik eng osnet ak bukonok si ketemis.

Osnosiek ak bukonok koityin agenge eng somok nebo ngwonydet. terei walutikab barakak, ribei ainosiek ak ko konu (pakoinik, kerichek, logoek alak) che konu bilionishek ak kotoreti milionishekab ketik ak tong'ik. ako any weketab chutan komi barak nebo milionisyek tiptem eng kila kenyit. Nusu chebo bik eng ngwony kotiengei eng kwenik, ako bik che negit millionisiek 100 ko ma tinyei ot kwenik tuten che boisen.

Taunetab tiletab ketik:

- Tiletab ketik koname yon kagiisto ketik asi keyai boisionik che bo temisiet anan ko ribsetab kiyagik ak en boisionik che u kwenik, chopetab matubaruk, koyoetab nchirenik, kayamsetb tomotet, kayamsetab majanik, tekset ak bakoinik.
- We getab osnosiek ko yon kainaam osnet ko metinyei ketik ak boisiet ne mie koyob boisiet ne ya ak ribset (ko u yon kakitil ketik tugul che bo keny ak kebakach osnosiek che mengechen anan yon kagitil ketik che eechen keboisien anan yon kaagiboisien osnet en kayagisiet, ago ma imuche kobwa ketik che lelach ne kata che kibek.
- Che chang en tiletab ketik wechetab osnet ko itu yon mamiten naet agobo miendaab osnet.
- En olda age, miendaab ketik ko naat ngandan bananda ak ngalek kele momiten bik che ribe koyaei bik kotil ketik.

Kareunetab tiletab ketik.

- **Ibetab ng'ung'unyek:** yon mamitei ketik che terei ak korat ng'ung'yek kokonu ibetab ng'ung'unyek.

- **Rarunetab borotetab osnet:** Istoetab ketik koweche oleu osnet ak korar karorindap osnet, Istoi amitwogik ak kerichek ak kotes magetab tuguk che kiteksen. Bik kobendi olelo ko cheng kwenik, ak ngot kialdoi tugukab osnet, kobendi barak beit
- **Rarunetab baratetab ketik:** ketik koterei koristo ak koititietab osnet ak kotes koristo ak kotes toldolindap ng'ung'unyek ako yan mamitenketik koyame oleu emet ak komuche kotesak maranet, ibetab ng'ung'unyek koyop koristo, bosetab toltolindap ng'ung'unyek ak wechetab koristo.

Nee ne kimuche keyai kebos tiletab ketik ak wechetab ketik:

Kinam kabetishekab ketik ak kepcheite ketichoton anan kialdechi biikab kokwet.

Boisien jikosiekap ribetap kwenik anan ko makaa.

- Boisien oratinwek che imuche korib mat anan ko kwenik (kou iyoo bek ibaisien asista, murek, kawek, ak suswek, katukanikap minutik).
- Kinam minsetab ketik, keik chito ne borot en kurupitab TIST, igimit choronok ak bikab kokwet ak choronokuk kochut TIST akichek.
- Matitem olerupegei ak ainet, pakach ketik si korip beek.
- Keer ile machanga kiyagik en olndo agenge. Rib kiyagik komawech kabetisiek che katarutu kogeny sikomawech ketik che katarutu en osnet.
- Kigimi minsetab ketik ak amitwogik en imbarenik: Yan itinyei ketik eng imbarenikngu . Imuche inyoru tuguk che katebeichengei en osnet ne negitchin ak kerib osnet.