

Mazingira Bora



www.tist.org

English Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Cluster Representatives:

A Group photo of Cluster Leaders during a recent seminar held at Gitoro Conference Center

Inside this Newsletter....

The Early warning system. Page 2

Save a tree for safer life, Plant more trees for better and longer life. Page 3

Tree growth - Take care of your Trees. Page 3

Fast growing indigenous trees. Page 4

We are grateful to TIST Kenya, says Igembe TSE. Page 5

TIST farmers rehabilitate rivers. Page 5

Kigucwa Cluster - TIST benefits are many - Keep the trees growing! Page 6



The Early warning system.

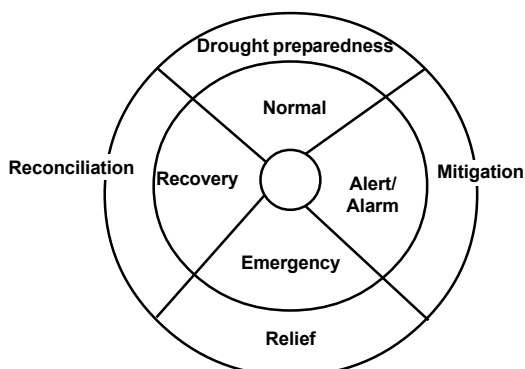
By Wilson Mutai

Often, the meteorological department advises farmers and the general public of weather changes. In most cases, the department releases weather forecasts 3 months in advance. For instance, before the onset of the dry season, weathermen and women usually indicate the likelihood of drought in coming months to come.

There are farmers who take the meteorological weather forecast seriously and use this forecast to help mitigate against the adverse effects of dry weather when it sets in. They devise clever ways of harvesting water, and use this saved water to irrigate their trees and crops when there is drought. On the other hand, there are some who don't heed such advice because when the forecast is released, the weather situation appears normal. In the end, they lose their trees, crops and livestock.

Often, we forget that drought doesn't come knocking on our door and start affecting the environment immediately. No, it comes slowly, and with signs that can be hard to read. Farmers can be best prepared for success when guided by a simple system that gives some important steps and precautionary measures to follow when there is probability of drought. This is called the early system.

Here below is an illustration of the system



Drought Preparedness.

- When choosing what to plant on your farm, choose crops and trees that can survive and produce useful yields in drought. Sorghum, millet, cassava, and pawpaw all can produce food even with little rain. Mangoes, acacias, and markhamia are among many tree species that can survive many droughts when well established. Every farm should incorporate some of these crops and trees to be prepared.

Practice CF, don't burn residue and mulch your fields: this will help your crops grow with less water.

- You are informed of upcoming drought by the weathermen.
- At this time, everything is normal and in plenty.
- Rains are enough for our trees and livestock. Croplands are healthy.
- This is the time we are supposed to plan and take necessary precautions.
- Start harvesting and storing water. This will help you water your tree nurseries, crops and trees during drought season.

Alert /Alarm - Mitigation.

- Early signs of drought start showing.
- Days of no rain, and trees start wilting.
- People start going far to fetch water from rivers.
- Animals start emaciating - becoming thin.
- At this point, you can still take necessary steps like selling some of your cattle, looking for means of getting water - for domestic and to water trees especially in nurseries, shading nurseries, etc. It is an especially important time to conserve and recycle water and prioritize how to use your limited supply for most impact.

Emergencies - Relief

- Here is the extreme of drought. Its effects are now felt strongly.
- Trees are drying up and livestock is dying in some areas.
- Government and non-government organizations start interventions.
- Relief food is distributed and people move livestock to other places, but some die on the way since they are not strong.

Recovery / reconciliation

- It is the onset of rains.
- Trees that survived start growing again.
- Livestock and crops begin getting water.
- If you sold your livestock, it is time to restock.
- Replace trees that died. Plant more trees, especially of varieties that did well during drought.

As we continue planting on our farms, let's be aware of such weather variation and take necessary actions to be ready for drought.



Mutamaiyu TIST Small Groups A and B:

We work together to improve our lives. This is the time for tree planting hence people are requested to plant more trees.



Members of Mutamaiyu A and B of Wiyuminirie Cluster

Save a tree for safer life, Plant more trees for better and longer life

*By Johnstone Gacheru, Kiriogo Cluster
Accountabilty person*

In the beginning, God created the universe
Trees were created many to support life
Without trees, no fresh air
Without trees, no water
Save a tree for safer life
Plant more trees for better and longer life

Every living creature is dependent on trees
without trees, no rain
without rain, no food
Save a tree for safer life
Plant more trees for better and longer life

Trees provide us with materials for our shelter
without trees no shelter
without shelter, no safety
Save a tree for safer life
Plant more trees for better and longer life

Trees are health and wealth
Without health, no wealth
Without wealth, no happiness
Save a tree for safer life
Plant more trees for better and longer life

Tree growth - Take care of your Trees.

*Prepared by Eunice Wambui, Narumoru
Field Office TIST Quantifier and Auditor*

Trees manufacture their food through a process known as photosynthesis. This process is carried out in the leaves of the tree.

So, when the tree has more leaves it will be able to manufacture more food.

This, together with water and minerals in the soil, will determine the growth rate of the tree.

Pruning

Pruning is removing some of the branches from the mother tree. Note that by pruning we remove the branches that have the leaves which the trees need for their growth.

When to prune

Prune trees when you find out that there are big branches which give the tree an undesirable shape. For timber trees, you may wish to prune low branches that make the trunk crooked or that may leave knot holes in the wood. Make sure to leave plenty of leaves for good growth.

Prune the trees during the rainy season to avoid tree dehydration. This still is the time that trees are more leafy.

How to prune

Use a clean pruning saw. Dirty equipment can spread plant disease.

Start cutting from bottom to top to avoid hurting the tree.

Why to prune

- To get big and healthy trees for carbon credit.
- To get quality trees for timber.
- To get firewood, poles, or fodder for the household.

Effects of early, overly aggressive pruning

- Trees become thin.
- Retarded growth
- Delayed / low income

Fast growing indigenous trees.

By Christine Yankel

Indigenous trees provide many different benefits. This month, we focus on some indigenous trees that are especially useful because they are fast growing. In the wild, often these species are pioneer species, growing first and fast when space is opened by fire or cutting. Talk to trainers and other Small Groups in your cluster and discuss together which species are best in your area.

Hagenia abyssinica, African redwood, muhooru



With its beautiful red timber, and growing quickly up to 20 m, *Hagenia abyssinica* is a good tree to grow in high elevations that receive 1,000 to 1,500 mm of rainfall each year. It has many benefits: its leaves enrich soil, and make it a good tree for planting in farm fields for agroforestry. It is a medicinal tree, and can help preserve the soil. Its wood is valuable timber and also makes good firewood or charcoal.

The tree grows easily from seed. Pretreatment is not necessary and seeds germinate within 10-20 days of planting with a germination rate of 40-60%.

If planted in together with crops, plant at a low density. Prune branches to encourage straight growth of the trunk.

Macaranga kilimandscharica, mukuhakuha/mukura



Macaranga is a fast-growing tree that is a good choice for growing together with coffee or bananas.. It grows best with 1,500 to 2,500 mm of rainfall each year. It is a good barrier tree, and because of its fast growth, can protect soils from eroding. Its wood is good for firewood and is used in making boxes or fencing. An extract of its roots is useful medicine.

Grow macaranga from seed. The tree grows well and with minimal care once well established



We are grateful to TIST Kenya, says Igembe TSE.

Written by William Mwito and Agatha M. Franklin during a cluster meeting at Kanthiari

Not long before 2008, Mary Wanyoike, our then TSE, started telling residents of Igembe assembling at Kanthiari coffee factory grounds about TIST. Since then, the information has reached uncountable villages, including Athiru Gaiti, Mutuati, Kawiru, Kiengu, Kiegori, Athi & Mutiokiamia. These groups organized into two clusters: Antubochiu and Kawiru, and are multiplying to others like Mutuati, Maua, Kiengu, Athiru Gaiti and Athi.

Servant leaders who have supported the TIST clusters in the area include Josephine, who trained our quantifiers, Martin Weru, who informs us of TIST in other areas, Charles Ibeere, who makes sure our clusters

are well informed, Allan, who responds to technical problems wherever informed, Dorothy, who is the C.F. Champion and many others who have contributed to our success. Long live TIST.

We therefore await tree count for not less than 100 SGS who have responded to TIST values. Combined with Kimeru saying "Muti ni gantu ka goro gaturanacia na muntu kuuma guciarwa mwanka gukua kwawe". A tree is a valuable thing living friendly to human from birth to death.

Conclusively we unite to make every resident in our area to be a TIST farmer.

TIST farmers rehabilitate rivers.

Prepared by Julius Manga, Lamuria Field Office TIST Quantifier and Auditor

Simon Mwangi is a member of Stone Matanya group which is in Lamuria, Matanya cluster. Simon has been a very active member and has been attending every cluster meeting. Following the trainings given in cluster meetings, he has decided to take a step forward and now has a nursery of indigenous seedlings such: Podo, Mukurwe, Mukoe and many others.

Moreover, he has taken another step of encouraging other members to start nurseries so that they can reduce the short rotation trees, especially eucalyptus. He says, "It's only through having nurseries that we will be able to plant more trees, since buying seedlings is costly."

In addition, Simon has been getting cash through selling of seedlings to SG members who are along the Tigithi and Burguret rivers.

His vision, below, is an inspiration, and we hope many groups and clusters will follow the example of Simon.

1. Rehabilitate Tigithi and Burguret rivers.
2. Raise 40,000 seedlings by end of this year.
3. Turn Matanya to a green world.



Figure 2 Simon in his tree nursery

Kigucwa Cluster - TIST benefits are many Keep the trees growing!

Prepared by Aaron Kaindio, Kinyaritha Field Office TIST Quantifier

Since the TIST program started in Kigucwa cluster, many farmers have witnessed for themselves that TIST is a beneficial program. Within a short time, they have experienced many benefits that continue to increase.

Among these benefits are,

1. **Conservation farming 'CF'** where by farmers are now planting their crops without using chemical fertilizers which are acidic to soil. With CF, farmers are improving their crop yield.
2. **Conserving our rivers.** This means planting indigenous trees along the riverbanks. TIST program will pay 2.50 shs per indigenous tree for the SG members who follow TIST best practices in qualifying groves bordering selected rivers, within 100 meters of the river. To qualify, the grove must have at least 30% of trees in a grove planted as indigenous trees. They must also have no more than 5% eucalyptus trees, and no eucalyptus within 100 meters of the river. The farmer must not cultivate within 30 meters of the river. In our area, the Thananttu river is one of the selected rivers in Mt Kenya region. This river is between the following clusters: Kiguwa, Kitheo, Mikinduri, Kagaene, and Kibulini. Many

farmers from these clusters whose groves border this river will benefit a lot. They will earn an extra incentive, and make the water cleaner and better for all users.

3. **Building and growth opportunities** are also big benefits from TIST.



4. **Stipend payments for the trees.** As we all know, trees have so many benefits, but apart from all these benefits, TIST now has introduced a new business known as the carbon credit business. As your trees grow bigger, they sequester more carbon from the atmosphere into their wood, roots, and leaves. Quantifiers can measure these trees, to know how much carbon dioxide the trees sequestered, and with good data quality, and good tree growth, the carbon sequestered can be sold as tonnes offset. Sale of these carbon offsets is where the money for the tree payments, for the *Mazingira Bora*, quantification, and TIST activities comes from.

The more trees we plant, the more carbon tonnes we can sell, and the cleaner the air becomes. So, let us plant trees, but remember to plant with good spacing of at least 2 to 3 metres, so trees grow faster and healthier.

Mazingira Bora



www.tist.org

Kimereu Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Arungamiri ba cluster:

Mbicha ya atongerira ba cluster bari mucemanione jwa ruua naria Gitoro Conference centre

Inside this Newsletter....

Njira ya kumenya jaria jejite igita ririo. Page 2

Ika muti kenda uturo bwaku bwithirwa bukaritue nkuruki, Anda miti ingi kenda uturo bwaku
buthongoma nabureea nkuruki. Page 3

Gukuura kwa miti- Menyeera miti yaku. Page 3

Miti ya gintwire iria ikurangaga. Page 4

Turi na nkatho kiri TIST Kenya, ni TSE ya Igembe ikuuga. Page 5

Amemba ba TIST baria bacokaniritie miuro ya nduuji. Page 5

Cluster ya Kigucwa- Mwanka au tukinyite ni mantu jamega aki. Page 6



Njira ya kumenya jaria jejite igita ririo.

Ni Wilson Mutai

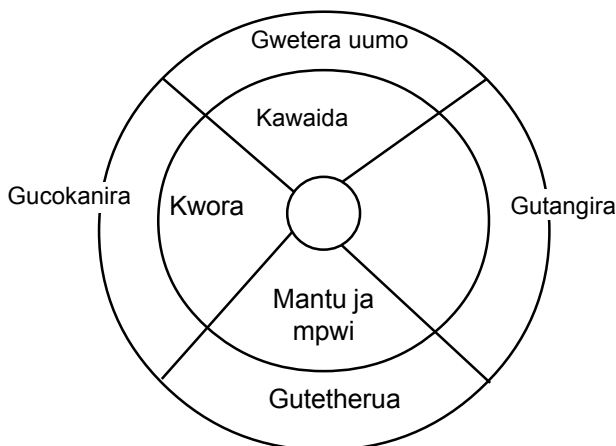
Magita ni jamaingi riria antu bakumenya mantu jegie rera beeraga arimi na antu bangi bonthe kwegie uria rera ikagaruka. Jaria maingi, niberanaga rera ya mwanka mieri ithatu mbele. Mung'uanano, mbele ya kwaara, nibaugaga ati kwomba kwithira kuri na uumo ndene ya mieri iria iijite.

Kuri na arimi baria bajukagia mantu ja na urito na jakabatethia gukabana na mantu jaria jathingataga uumo riria bwijaga. Nibacwaga njira imbume cia kugwatia ruuji, na kurutumira kumenyeera miti na imera biao riria guti na ngai. Njarene ingi, kuri baria batithikagira mantu jaja beragwa ja kubatethia nontu mantu jaja jeranagwa uumo butira, mbiria na mantu jonthe jabui. Muthiene miti, imera na ndithia ciao cigakua.

Jaria maingi uumo butijaga kuringa ringa mieri yetu na bwambiria kuthuukia naria gututhiurukite orio. Aari, bwijaga mpari bukionanagia mantu mana

Arimi nobathingate njira imbuthu iria iejanaga matagaria na mantu jaria jomba kuthithua riria gukwonania jaka gukaagia uumo. Njira iji itagwa njira ya kurio

Nthiguru aja nigukwonania njira iji



Kwithuranira gukabana na uumo

- Ukerwa uria rera ikagaruka nibaaria bakumenya kwegie rera

- Thaa iji mantu jonthe jari uria jabati na into ni bibingi
- Ngai nikung'ana kiri miti yetu na ndithia. Imera birina inya
- Thaa iji nitubati kubanga na kuthithia mantu jaria tubati
- Ambiria kugwatia na gwika ruuji. Bubu bugagutethua gwikira minanda, imera na miti yaku igita ria uumo

Mantu ja kwonania uumo - Gutangira

- Uumo nibwambagiria kwonania
- Ntuku citina mbura na miti ikambiria kunyaara
- Antu bakambiria gwita kuraja gucwaa ruuji kiri miuro iminene
- Ndithia ikambiria guceng'a
- Nandi, no ujukie matagaria jaria ubati ja kwendia ndithia imwe, gucwaa njira cia gucwaa ruuji- rwa ndithia na rwa miti mono iria iri minandene na iria ikunikagira minanda na mantu jangi jamaingi

Mantu ja kwijira na mpwi- Gutetherua

- Aja nio aria kuthuuku buru igita ria uumo. Nandi irio uthuuku bwa uumo bwonagwa
- Miti nikuuma na ndithia kinya cio nicigukua
- Thirikari na kamboni ingi iti cia thirikari ikambiria gutetherua
- Irio bikambiria kuejanwa na antu bakathamiria ndithia ciao naangi indi imwe igakura njirene nontu itina inya.

Gucokanira

- Ni igita ria mbura kwambiria
- Miti iria itakuire ikambiria gukura kairi
- Ndithia na imera bikambiria kwona ruuji
- If you had sold your livestock, it is time to restock
- Anda miti antu a iria yakuire
- Kugwatana kwa uumo na ngai gukeja
- O uria tukuanda miti nitumenye kurina kugaruka kwa rera na tujukie matagaria jaria tubati mono mbele ya uumo butonya.



Ikundi bibinini bia Mutamaiyu TIST Small Group A na B:

Nituritanaria ngugi amwe kuthongomia miturire yetu. Riri ni igita ria kuanda miti n kwo antu ni bakuurua kuanda miti ingi



Amemba ba Mutamaiyu A na B ba cluster ya Wiyumiririe

Ika muti kenda uturo bwaku bwithirwa bukaritue nkuruki, Anda miti ingi kenda uturo bwaku buthongoma nabureea nkuruki.

Ni Johnstone Gacheru, Mwiki rekondi cia Kiriogo Cluster

Kabele Ngai nombire nthiguru
Miti niyombirwe imingi nikenda itetheria utuuro
Guti miti, guti ruugo rurwega
Guti miti, guti ruuji
Aria muti kenda uturo bwaku bukarua nkuruki
Anda miti ingi kenda utuuro bwaku buthongoma
nabureea nkuruki

O kiumbe kionthe kiria kiri moyo nikenda
kiendaga muti nikenda gituura
Miti iti, guti ngai
Ngai itio, guti irio
Aria muti kenda uturo bwaku bukarua nkuruki
Anda miti ingi kenda utuuro bwaku buthongoma
nabureea nkuruki

Miti nituejaga into bia gwaka nyomba cietu
Guti na miti, guti nyomba
Guti nyomba, guti gukarua
Aria muti kenda uturo bwaku bukarua nkuruki
Anda miti ingi kenda utuuro bwaku buthongoma
nabureea nkuruki

Miti ni thiria na utonga
Guti thiria, guti utongaguti utonga, guti kugwirua
Aria muti kenda uturo bwaku bukarua nkuruki
Anda miti ingi kenda utuuro bwaku buthongoma
nabureea nkuruki

Gukuura kwa miti- Menyeera miti yaku.

*Ni Eunice Wambui, Mutari miti ndene ya ofisi
ya Narumoru na mutegi ngugi wa TIST*

Miti ithithagia irio biayo yongwa gukurukira njira itagwa Photosynthesis. Untu bubu buthithagirua mathangune ja muti. Kwou riria muti jurina mathangu jamaingi nou jukomba kuthithia irio jungwa. Bubu amwe na ruuji na minerals ndene ya muthetu, nibu buugaga uria muti jugakuranga

Pruning

Guku ni kurita mathangu jamwe kuuma kiri biang'i bia muti junga. Menya ati twathithia uju nituritaga biang'i biria birina mathangu jaria muti jukwenda kenda jumba gukura

Niri ubati kugita mathangu jaja?

Kuura mathangu riria wethira biang'i bibinene biria bitumaga muti jukara bubui. Riria ukwenda mpao, giita biang'i biria biri nthiguru biria bigutuma muti jukaara jaka jukomboki kana biria bikatiga gikutho kiri muti. Menyeera ati ugutiga mathangu jang'ani ja gukuura bwega
Rita mathangu ja miti igita ria mbura nikenda muti jutikaage ruuji. Ririo norio igita riria mathangu jaingii mutine.

Njira ya kurita mathangu

Tuumira musumeno jumutheru. Juri na ruuko nojutume mirimo ya imera gutambua
Ambiria kugita kuuma nthiguru gwitia iguru nikenda utiragite muti bubuthuku

Niki ubati gwita mathangu jamwe?

- Nikenda wona miti iminene na irina inya ya kwendia ruugo
- Nikenda wona miti imiega ya mpao injega
- Nikenda wona nkuu, ikingi kana iria ria ndithia cia njaa yaku

Mantu jaria jakarikaga riria wagita mathangu kurio kana riria wagita bubui

- Miti igacekea
- Miti ikaremwa gukuura bwega
- Igita ria mbele ya kugwata mbeca rikareuwa kana mbeca ikanyia

Miti ya gintwire iria ikurangaga.

Ni Christine Yankel

Miti ya gintwire nithagirwa iri na baita inyingi mwanya. Mweri juju, tugategera miti ya gintwire imwe mono iria itethagia nontu nikurangaga. Nau mwitune, jaria maingi mithemba iji ni mithemba ya kwambia, ikuraga mbele na ikurangaga riria kanya kathithua gukurukira kuithia kana kugiita. Uria aritani na ikundi bingi bibinini ndene ya cluster yaku mithemba iria iri imiega ntuurene yaku

Hagenia abyssinica, African redwood, muhooru



Na mbao ciaju intune inthongi, na jugikurangaga mwanka uraja bwa 20m, muhooru ni muti jumwega jwa kuanda guntu kuria kuri iguru kuria kwithagirwa kuri na ngai inyingi (1000 gwita 1500mm ya ngai o mwaka). Muti juju jurina baita inyingi: mathangu jaju nijanoragia muthetu, na bubu nibujuthithagia muti jumwega jwa kuanda miundene ya imera amwe na imera riria ukwenda kuungania. Ni muti jurina ndawa, na jumba gutethia gukaria

muthetu. Mbao ciaju ni injega mono cia gwaka na kinya niithithagia nkuu injega kana makara

Muti juju nijukuraga jutina thina kuuma kiri mbira. Ti lazima mbegu iji cithuranirwa nontu mbira niciumaga ndene ya ntuku ikumi gwita mirongo iiri na niikurangaga (na rate ya 40 gwita 60%).

Jukaandwa amwe na imera, ukaanda imingi. Gita mathangu nikenda muti jukuura jurungami bwega

Macaranga kilimandscharica, mukuhakuha/ mukura



Mukura ni muti jukurangaga na ni muti jumwega riria ukujuandaniria na kauwa kana marigu. Nijukuraga bwega buru guntu kuri kuri na mbura inyingi ya kuuma 1500 gwita 2500mm omwaka. Ni muti jumwega jwa kunyiyia ruugo na niuntu nijukurangaga, jwomba kumenyeera muthetu kuumania na gukamatwa. Miiri yaju nithithagia ndawa iria itethagia mono.

Anda mukura kuuma kiri mbira. Muti juju nijukuraga bwega na kumenyeerwa gukai riria jwagata.



Turi na nkatho kiri TIST Kenya, ni TSE ya Igembe ikuuga.

Ni William Mwito and Agatha M. Franklin igitene ria mucemano jwa cluster Kanthiari

Ti igita mbele ya 2008, Mary Wanyoike, TSE wetu igitene riu, nambiririe kwira antu ba Igembe bothurani Factory ya kauwa ya Kanthiari kwegie TIST. Kuuma riu, untu bou nibukinyirite ntuura ititarika, amwe na Athiru Gaiti, Mutuati, Kawiru, Kiengu, Kiegoi, Athi na Mutiokiama. Ikundi bibi nibiabangire cluster ijiiri: Antubochiu na Kawiru na nandi niguciarana cikathithia ingi ta Mutuati, Maua, Kiengu, Athiru Gaiti na Athi.

Atongerira ba uthumba baria batetheretie cluster ndene ya ntuura iji ni amwe na Josephine, uria uri mutari miti uritani, Martin Weru uria utwejaga mantu ja TIST ntuurene ingi, Charles Ibeere, uria

umenyagira ati cluster cietu nicigukinyirwa ni mantu jaria jario, Allan, uria utethagia riria kurina thina cia into biria bitumagirwa riria aretagirwa, Dorothy, uria uri na umenyo bwa urimi bubwega na bangi babaingi baria batutetheretie gukinya au. TIST nituure igita ririraja

Kwou nitweterete gutarirwa miti ya ikundi bibinini bitinyii nkuruki ya ikundi igana baria bathingatite jaria TIST ikirite. Amwe na kiugo gia Kimeru, "Muti ni gantu ka goro gaturanagia na muntu kuuma guciarwa mwanka gukua kwawe"

Kuthiria nitukugwatanira gutuma o muntu wa ntuura yetu kua mumba wa TIST

Amemba ba TIST baria bacokaniritie miuro ya nduuji.

Ni Julius Manga, Mutari miti ndene ya ofisi ya Lamuria na mutegi ngugi wa TIST

Simon Mwangi ni mumemba wa gikundi kia Stone Matanya kiria kiri Lamuria ndene ya cluster ya Lamuria. Simon nethiritwe ari mumemba uria uritaga ngugi cia TIST rionthe na nethirite agitaga micemano ya cluster rionthe. Gukurukira mooritani jaria jaejanagwa ndene ya micemano ya cluster, nagitite igamba kujukia itagarira mbele na nandi arina munanda jwa miti ya gintwire ta: Podo, Mukurwe, Mukoe na ingi imingi.

Amwe na bou, najukitie itagarira ringi gwikira antu moyo jwa kwambiria minanda yao nikenda bomba kunyiyia miti iria ijukagia igita ririnini gukuura na mono mubau. Akauga, "Ni aki gukurukira kwambiria minanda tumba kuanda miti ingi, nontu kuguura nikwendaga mbeba inyingi"

Kwongera, Simon nethiritwe akionaga mbeba gukurukira kwendia miti iminini kiri amemba ba ikundi bibinini baria barina miunda ruterene rwa nduuji cia Tigithi na Burguret

Bioneki biawe, bibi biri aja ni untu bubunene na nitugwiciria ikundi bibingi na cluster ikathingata mung'uanano jwa Simon

1. Gucokaniria nduuji cia Tigithi na Burguret
2. Gukuuria miti ngiri mirongo inna ya kuanda mbele ya muthia jwa mwaka juu Kugarura Matanya ya nthiguru inthongi



Mbicha 2: Simon ya munanda jwawe jwa miti

Cluster ya Kigucwa- Mwanka au tukinyite ni mantu jamega aki.

Ni Aaron Kaindio, Mutari miti ndene ya ofisi ya Kinyaritha

Kuuma murandi jwa TIST jukwambirua ndene ya cluster ya Kigucwa, arimi babaingi nibonete bongwa ati murandijwa TIST jurina baita. Nibawitikania na bubu niuntu baita inyingi cia murandi junthe niciingiite ndene ya kagiita gakanini

Amwe na baita iji ni;

1. **Urimi bubwega 'CF'** aria arimi nandi bakuanda imera biao batigutumira fertilizer iria cithukagia muthetu. Na urimi bubwega, arimi nibakuingiyya maciara jao.
2. **Kumenyeera miuro yetu ya nduuji.** Guku nikuuga kuanda miti ya gintwire miankene ya nduuji. Murandi jwa TIST jukaria shilingi ijiiri na cumuni kiri o muti jwa gintwire kiri mumemba wonthe wa gikundi gikinini gia TIST nab aria bakathingata mitire iria TIST iikagira nabaria bari akui na nduuji iria itari na ti nkuruki ya 100m kuuma kiri nduuji iji. Nikenda munda jumba kuriwa uju, munda jou no mwanka jwithirwe juri na nkuruki ya miti ya gintwire mirongo ithatu kiri o miti igana iria iri muundene jou. No mwanka kinya jwitirwe juri na nthiguru ya mibau itano kiri o miti igana na gukethirwa kuri na mubao mwanka 100m kuuma kiri ruuji. Murimi akaanda imera mwanka 30m kuuma kiri ruuji. Ndene ya ntuura yetu, ruui rwa Thanantu ni ruuji rumwe ruria rutari ndene ya ntuura ya Mt Kenya. Ruuji ruru ruri gatigati ga

cluster iji: Kigucwa, Kitheo, Mikinduri, Kagaene na Kibuline. Arimi babaingi kuuma cluster iji baria miunda yao iri miankene ya ruuji ruru bakona baita mono. Bakona mbea ciongeri na batume ruuji rue rurutheru na rurwega nkuruki kiri baria barutumagira.

3. **Kanya ga gwakana** kinyako ni baita inene kuuma kiri TIST

4. **Mbea iria ciriagairwa miti** O uria twiji twinthe, miti irina baita inyingi mono, indi baita ii cionthe cirri oo, TIST nandi niretete thoko injeru iria igwitwa thoko ya ruugo. O uria miti yaku ikunenea, nou ithithagia carbon inyingi nkuruki kuuma kiri ruugo na ikamitonyithia mutiine, mirine na mathangune. Atari miti no bathime miti iji na bakamenya ni ruugo rung'ana ruruthuku miti iji iritite ruugone, na rekondi injega na miti igikuraga bwega, no bendie carbon iji iiki ta ruugo ruruthuku ruria ruriti kiri ruugo. Kwendia ruugo ruru niku kuretaga mbea cia kuria arim nontu bwa miti iria batariri, kuriira gatheti ya Mazingira Bora, uteri miti na mantu ja TIST jangi



O uria tukaanda miti imingi nou ruugo ruria tukendia rukaingia, na nou ruugo ruria rututhiurukite rukathera. Kwou, tuandeni miti, indi rikana kuanda miti itariene bwega na nkuruki ya 2m gwita 3m, nikenda miti ikuranga na ikura iri imithongi

Mazingira Bora



www.tist.org

Kikuyu Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Cluster Representatives:

A Group photo of Cluster Leaders during a recent seminar held at Gitoro Conference Center

Inside this Newsletter....

The Early warning system. Page 2

Honokia muti niguo ugie na muturire mwega, handa miti ingi miingi niguo ugie na muturire mwega makiria. Page 3

Gukura kwa miti-Menyerera miti yaku. Page 3

Miti ya ki-nduire iria ikuraga naihenya. Page 4

Nitukenete ni TIST Kenya, Igembe TSE. Page 6

Arimi a TIST kugitira njuui. Page 5

Kigucwa Cluster- mawega magukuria miti. Page 6

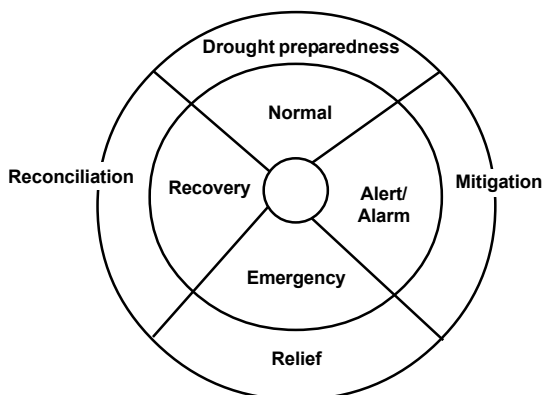


The Early warning system.

Mwandiki: Wilson Mutai.

Mahinda maingi athimi a riera nimataaraga arimi na andu angu uhoru wigii riera. Mahinda maingi nimaheanaga uhoru wa riera mbere na mieri 3. Kwa muhiano, mbere ya kimera kia riuu kiambiriirie na makeranira nigukugua na mahinda ma ng'aragu hari mieri iguuka. Kuri arimi manyitaga ithimi ici na hinya na magacihuthira kwihariria hari mahinda ma riuu, nimaigaga maai na makaahuthira kuhe miti na mirera ingi mahinda ma riuu makinya. Ona kuri o uguo nikuri angu matanyitaga ithimi ici na hinya na thuthaini magakorwo na hathara ya kurwo ni miti, mimera na mahiu maa. niundu wa Mahinda maingi nituriganagirwo ati mahinda ma riuu matiukaga makiaanagirira niguo mathukie maria maturigiciirie, no mokaga kahora na mari na cionereria iria ikoragwo na hinya kumenyeka na ihenya. Arimi no mahote kwihariria wega mangikorwo na mutaratara mwega wa kumamenyithia na kumahe ithinmi cikinyaniire. Ici nicio ciitagwo mutaratara wa kabere.

Mutaratara uyu uhana ta uu.



ukuhemagetha mega. Muhia, mwere, mianga na mababai nicirutaga magetha ona kuri na riuu. maembe na mugaa ni miti iria ingikura ona kuri na riuu ihanditwo wega. Migunda yothe niyagiriirwo kuhandwo imwe ya miti ino niguo kwigitira. Huthira urimi wa Kilimo

Hai na ndugacine mahuti ma mugunda tondu nomateithie mimera yaku gukura na riuu na riria kuri na maai manini.

- Niumenyithitio uria riera rigaikara ni athimi a riera.
- Gwa kahinda gaka maundu nimarungiriru.
- Mbura niiganite miti na mimera na mahiu na migunda nimiega.
- Maya nimo mahinda maria magiriire kubanga na kwimenyerera.
- Ambiriria kuiga maai na nimaguteithia tuta na migunda ya miti mahinda ma riuu.

Imenyithia

- Imenyithia cia mahinda mariua kwonania.
- Mbura ikambiriria kwaga kuura.
- Andu makambiriria gutaha maai ruui.
- Mahiu makambiriria kuhinja.
- Kahinda gaka nowoe makinya ta ma kwendia mahiu mamwe, gweha njira cia kugia na maai ma mahiu na makuhuthira mucii na makuhe miti na mimera ingi. Nimahida ma bata kumenyerera maai maria uri namo na kumahuthira ringi.

Emergencies.

- Ni mahinda ma riuu inene na niriraiguika na hinya.
- Miti ni kuma iroma na mahiu magakua.
- Thirikari an ikundi itari cia gi-thirikari nicingiriire.
- Thirikari ikaheana irio na andu magathamia mahiu no mangi magakua magithamio nikwaga hinya.

Gucokereria.

- Mbura niyambiriria kuura.
- Miti iria itomire biu niyambiriria gukura ringi.
- Mahiu na mimera niciagia na maai.
- Angikorwo niwendetie mahiu, nimahinda ma kugura mangi.
- Cokereria miti iria yomire na uhande ingi miingi ya muthemba uria utomire.

O tugithiaga na mbere kuhandu migunda iitu, reke twimenyerere mahinda ta maya ma riuu na twoe makinya maria magiriire.



Ikundi nini cia Mutamaiyu A na B:

Turutaga wira turi hamwe niguo twagirithie miturire iitu. Nimahinda makuhanda miti na andu nimarahinyiririo mahande miti miingi.



1Members of Mutamaiyu A and B of Wiyumiririe Cluster

Honokia muti niguo ugie na muturire mwega, handa miti ingi miingi niguo ugie na muturire mwega makiria.

*Mwandiki: Johnstone Gacheru, Kiriogo
Cluster Accountability person.*

Kiambiriria Ngai akumba thi na iguru,
Miti ikuumbwo miingi inyitirire miturire,
Gutari na miti gutiri na riera itheru.
Gutari na miti gutiri na maai.
Honokia muti niguo ugie na muturire mwega
Handa miti miingi ugie na muturire mwega
makiria.

Kiumbe o giothe kihokete miti.
Gutari miti gutiri mbura.
Gutari miti gutiri irio.
Honokia muti niguo ugie na muturire mwega
Handa miti miingi ugie na muturire mwega
makiria.

Miti niituheaga gwa gukoma.
Gutari miti gutiri nyumba.
Gutari miti gutiri na ugitiri.
Honokia muti niguo ugie na muturire mwega
Handa miti miingi ugie na muturire mwega
makiria.

Miti ni ugima mwega wa mwiri na utonga.
Gutari na ugima mwega wa mwiri gutiri utonga.
Gutari utonga gutiri gikeno..
Honokia muti niguo ugie na muturire mwega
Handa miti miingi ugie na muturire mwega
makiria.

Gukura kwa miti- Menyerera miti yaku.

*Mwandiki: Eunice Wambui, Narumoru Field
Office TIST quantifier and Auditor.*

Miti ithondekaga irio cioyo kuhitukira mutaratara witagwo photosynthesis. Mutaratara uyu wikagirwo mahuti-ini, kwa uguo riria muti uri na mahuti maingi noguo uthondekaga irio nyingi na hamwe na maai na indo ingi tiiri-ini nicihotithagia gukura kwa miti.

Guceha

Guceha ni nikuruta mahuti mamwe kuma muti-ini, riria waceha niuteithagiriria muti gukura. Riria wagiriirwo ni guceha Ceha miti riria wona iri na mahuti matarareka iikare wega. Hari miti ya mbau, no ucehe honge cia na-thi. Tigia mahuti maingi niguo muti ukure.

Ceha miti kimera kia mbura niguo muti ukure na maai na nirio ikoragwo na mahuti maingi.

Uria wagiriirwo ni guceha.

Huthira thoo theru ya guceha, indo ciri na giko nocitheremie mirimu ya miti.

Ambiriria gutinia kuma thi niguo ndugathukie muti.

Gitumi gia guceha

- Kugia na miti minene niundu wa carbon credit nyingi.
- Kugia na miti miega ya mbau.
- Kugia na ngu na ikingi kana irio cia mahiu.

Mathina maguceha mahinda matari makinyu.

- Miti ikanyiha
- Miti ikaga gukura
- Marihi makanyiha kana magacererwo

Miti ya ki-nduire iria ikuraga naihenya.

Mwandiki Christine Yankel

Miti ya ki-nduire niikoragwo na mawega maingi. Mweri uyu tukurora miti ingi ya kinduire iria ihuthikaga tondu ikuraga na ihenya. Ithaka-ini, mahinda maingi miti ino ikoragwo iri ya kiambiriria na ikuraga naihenya riria yatemwo kana yacinwo ni mwaki. Ariria athomithania na ikundi ingi thiini wa cluster yanyu na mwariririe ni mithemba iriku miega.

Hagenia abyssinica, African redwood, muhooru



Uri na mbau thaka na ndune, na ugikura na ihenya nginya uraihu wa 20m Hagenia abyssinica ni muti mweka ungikurio kundu kwamukagira githimi kia mbura kia 1.000-1,500mm o mwaka. niukoragwo namawega maingi, mahuti maguo nimega na tiiri na kwa uguo ugakorwo uri mweka kuhanda kundu kuri na irio. Niukoragwo na dawa na nouhuthike

kumenyerera tiiri. Niukoragwo na mbau njega muno na ngu njega ohamwe na makara.

Muti uyu ukuraga kuma mbegu-ini. Guthondeka mbegu mbere ya uhandite nikwagiriire na imeraga na thiku 10-29 na kumera na gicunji kia 40-60%.

Ungihandanirio hamwe na irio cia mugunda ceha mahuti niguo mimera ikure wega.

Macaranga kilimandscharica, mukuhakuha/ mukura



Macakanga ni muti ukuraga na-ihenya hamwe na kahua kana marigu. Ukuraga wega na githimi kia mbura kia 1,000-1,500mm hari mwaka. Niundu wa gukura na-ihenya, niugitagira tiiri kumana na kiguu. Nimweka na mbau na ngu hamwe na kuiriga na ugakorwo na dawa.

Kuria macakaranga kuma mbegu-ini. Muti uyu ukuraga wega na mubacirire munini.



Nitukenete ni TIST Kenya, Igembe TSE.

Mwandiki: William Mwito na Agatha M. Franklin hindi ya mucemano wa cluster Kanthiari.

Kahinda kanini mbere ya 2008, Mary Wanyoike TSE wiitu kahinda kau niambiriire kwira aikari a Igembe mari Kanthiari Coffee Factory uhoru wigii TIST. Kuma kahinda kau, uhoru niukinyiire matura matangitarika hamwe na Athiru, Gaiti, Mutuati, Kawiru, Kiengu, Kiegoi Athi na Mutiokiamu. Ikundi ici niciathondekire cluster igiri; Antubochiu na Kawiru na igitheremakuri Mutuati, Maua, Kiengu, Athiru, Gaiti na Athi.

Atungati aria manyitiriire cluster cia TIST guku ni Josephine, uria wathomithirie

quantifiers, Martin Weru uria utuheaga uhoru wa TIST, Charles Ibeere uria utuheaga uhoru na Allan uriauthondekaga mitambo, Dorothy uria uthomithanagia Kilimo Hai na angi aingi. TIST irotura.

Nitwetereire gutarirwo miti ikundi-ini itanyihire 100 aria marumiriire TIST. Ta uria Kimeru kiugaga "Muti ni gantu ka goro gaturanacia na muntu kuuma guciarwa mwanka gukua kwawe.

Ithuothe tunyitanite gutigirira muikari wotho wa guku niaingira TIST.

Arimi a TIST kugitira njuui.

Mwandiki: Jullius Manga, Lamuria Field Office TIST quantifier and auditor.

Simon Mwangi ni memba wa stone Matanya iria iri Lamuria, Matanya cluster. Simon akoretwo ari mumemba mukaru na akoretwo agithii micemano ya cluster. Kurumirira githomo kia mucemano wa cluster, niakinyite ikinya ringi na riu ari na tuta ya miti ya kinduire ta podo, Mukurwe, Mukoe na ingi miingi.

Na ningi nioete ikinya ringi ria gwikira hinya amemba kwambiriria tuta niguo minyihie miti ta Eucalyptus. Augaga "notukorirwo na tuta ciitu niguo tugie na miti tondu mimera iri na goro"

Na ningi Simon niakoretwo akiamukira mbeca kumana na kwendia miti kuri ikundi ingi aria mari hakuhi na Tigithi na Burguret.

Kioneki giake ni giagwikira hinya na turehoka

ikundi ingi na cluster nicikurumirira kionereria giki.

1. Menyerera ruui rwa Tigithi na Burguret.
2. Ungania mbegu 40,000 mbere ya muico wa mwaka.
3. Garura Matanya kugie na miti



Figure 2 Simon in his tree nursery

Kigucwa Cluster- mawega magukuria miti.

Mwandiki; Aaron Kaindio, Kinyaritha Field Office TIST Quantifier.

Na tondu TIST yambiriirie cluster ya Kigucwa, arimi aingi nimeyoneire mawega ma TIST. Gwa kahinda kanini nimonete mawega maingi.

Mawega maya nimo;

1. **Kilimo Hai-** kuria arimi mararima matakuhuthira Fertilizer na dawa ingi na makagia na mageha maingi.
2. **Kumenyerera njuui ciitu-**kuhanda miti ya ki-nduire ruteere-ini rwa njuui. TIST niiririhaga 2.50shs hari muti wa Ki-nduire kuri arimi aria marumirira mutaratara uyu hari njuui iria ithuritwo, na hakuhi na 100m kuma ruui-ini. Niguo witikirike, githaka kiagiriirwo gukorwo na muigana wa gicunji kia 30% ya miti ya ki-nduire. Na gitigakorwo na makiria ma muigana wa gicunji kia 5% kia miti ya Eucalyptus na Eucalyptus ndigakorwo hakuhi na 100m kuma ruui-ini. Arimi matikarime 30m kuma ruui. Guku gwisu, ruui rwa Thanatu ni rumwe rwa njuui iria ithuritwo gitaru-ini kia Mt. Kenya. Nduui ici iri cluster cia Kiguwa, Kitheo, Mikinduri, Kagaene na Kibuline. arimi ang

aria cluster ciao ikuhaniriirie na njuui ici nimaguteithika muno na magie na maai matheru makuhuthira.

3. **Gwaka na Gukura-** maya ni mawega kuma TIST.

4. **Marihi kuma miti-ini.** Ota uria tuui miti niikoragwo na mawega maingi na tiga maya mothe TIST niyukite na biashara njeru itagwo carbon credit business. O miti yaku igikuraga niihotaga kugucia carbon kuma rieraini nginya mahuti-ini mayo. Atari a miti nomahote guthima miti ino niguo kumenya carbon dioxide iria igucitio ni muti ucio na kuhitukira maumirira ma kwihokeka na gukura kwegu kwa miti carbon ino no yendio. Marihi ma miti maumanaga na biashara ino hamwe na gucabithio kwa Mazingira Bora.



O uria twahanda miti miingi noguo tukwendia carbon credits nyingi na tugie na riera itheru, kwa uguo reke tuhande mitimiingi na utaganu mwega wa 2-3m niguo miti ikure na-ihanya na ina hinya.

Mazingira Bora



www.tist.org

Kikamba Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Cluster Representatives:

A Group photo of Cluster Leaders during a recent seminar held at Gitoro Conference Center

Inside this Newsletter....

Kimanyithya kya vata. Page 2

Muungamii Ninyie. Page 3

Uvandi wa miti - kuSuvia miti yaku. Page 3

Miti ya kithio ila imeaa mituki. Page 4

Igembe TSE etungia muvea TIST Kenya. Page 5

Aimi ma TIST Usuviini wa mbusi. Page 5

Kinundi kya kigucwa. Page 6



Kimanyithya kya vata.

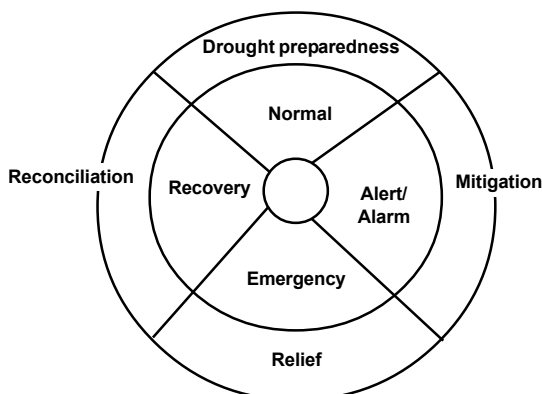
By Wilson Mutai

Mavinda maingi muvia wa kumanyithya uvinduku wa nzeve numamanyithasya aimi na andu onthe iulu wa uvindukuwa nzeve. Kaingi muvia usu nutangasaa uvinduku wa nzeve ta mweyi itatu yukite. Kwa ngelekanio , mbee wa munyaoutanavika amanyithya ma uvinduku wa nzeve ni matangasaa kutonyeka kwa kuka munyao mweyi yiana una mbee.

Kwi aimi ala mosaa motangasi ma uvinduku wa nzeve kwa uito na na kwivanga undu meiyumbanisya muyao utanavika. Nimavangaa nzia sya kutea kiwu kwoondwa wa kungithya miti na maliu mo ila kwi muyao. Andu anga mayosaa motangasi asu kwa uito nundu yila motangasi asu mauma uvinduku wa nzeve ndwithiawa uyoneka wi muthuku. Indi itina nimaasya miti yoo liu na indo.

Mavinda maingi muyao ndukunaa oti uyuka na kwambiia kwananga mali yitu. Aiee ,mawonanio ma uvinduku wa nzeve mokaa ombola

Aimi nimatonya kutawa kwa nzia syi mwanya undu matonya kwika ethiwa munyao niwukite. Kiu kitawa kimanyithya kya mbee kya vata. Ekai twone muvango wa kimanyithya kiu kya vata



Kwiymbanisya munyao

- Tumanyithawa muyao ni atangasi ma uvinduku wa nzeve.
- Ivinda yii maundu onthe monekaa memase.
- Mbua yonekaa yi mbianu kwa miti na Indo. Miunda yithiawa yi miseo.

- Yii niyo ivinda ya kwivanga undu tutonya kwika.
- Ambiiia kutea kiwu. Kikautonyethya kungithya miti yaku ivuioni na muundani ivinda ya munyao.

Kwimanyiliila / kuambu-nakwisuvia

- Mawonanio ma muayao nimabiia kwoneka.
- Mbua niyaa na miti iyambiia kuma.
- Andu nimabiia kuuta kiwu mbusini sya kuasa.
- Indo nisyambiia kumosa.
- Kuvikiia vau nitutonya kwosa matambia ta kuola indo na kuthoosya, kwambiia umantha kiwu kwoondwa wa mavata ma musyi , kungithya miti,na munomuno ila yi ivuioni, na kwakia ivuio muunyi na maudu ta asu.

Miisyo- utethyo

- Muyao munene ni muviku. Na wanangi wa wowo muendee.
- Miti niendee kuma na indo niendee kukwa nduani imwe.
- Silikali na mivia ingi ite ya Silikali ni yambiie kutetheesya.
- Liu wa mwolyo nuendee kunenganwa na andu nimambiie kuthamiisya indo syoo kundu kula kuseo indi mbingi syikwiia nziani nundu iina vinya.

Mumo / kusyoka kwa muuo

- Mbua ni yambiie kua.
- Miti ila inavitie niyambiie kumea ingi.
- Indo na maliu miundani niyambiie ukwata kiwu
- Ula unthooetye indo yu no ambiie kuthooa ingi.
- Tungia miti ila unoomie na uyongela kuvanda ingi
- Kwitungiania kwa ivinda ithuku ya yua na ivinda iseo ya mbua nikuviku,
- Otuendee na kuvanda miti tuikolwe ni kulilikana mauvinduku ma nzeve na munomuno kwivanga mbee wa munyao utanavika.



Mutamiyu TIST ikundi ila nini A & B;

Tuthukumaa twingwtanio kukilya maendeeo maitu. Yii niyo ivinda ya kuvanda miti na twikulya kila umwe ongole uvandi wa miti. Suvia miti kwwondu wa thayu. Vanda miti mingi nikana andu mekale thayu ivinda yiasa.



Members of Mutamayu A and B of Wiyumiririe Cluster

Muungamii Ninyie.

Johnson Gacheru, Kikundini kya .

Mwambiliilyo Ngai niwoombie Matu.

Miti niyoombiwe mingi kwoondu wa kusuvia mathayu.

Kute miti kui nzeve nzeo.

Kute miti kui kiwu.

Suvia muti usuvie thayu.

Vanda miti mingi twithwe na mathayu maeso ivinda yiasa.

Ni tutumiaa miti kwoondu wa kwaka myumba situ.

Kute miti kui miako.

Kute miako kui muuo.

Suvia muti usuvie thayu.

Vanda miti mingi twithwe na mathayu maseo ivinda yiasa.

Uvandi wa miti - kuSuvia miti yaku.

*Muandiki ni Eunice Wambui, Narumolu,
mutembezi wa ikundi wa TIST na mutali*

Miti niseuvasya liu wayo kwisila nziani ya Sua. Useuvya uu wa liu wikiawa katika matu ma muti. Kwoou muti wi matu maingi nuseuvasya liu mwingi, sua vamwe na kiwu na mbolea ila yi muthangani nisyu ituma muti umea nesa.

Kusea.

Kusea ni kuolanga mbonge sya muti, ndukolwe kan ila tuusea muti tumasya mbonge ila syi na matu na syithiawa iyindeka kwa wiani wa muti.

Ila waile kusea.

Sea miti yila woona yina mbonge nene iteumyailya .Kwa miti ya mbwau kusea mbonge sya nthi nikulungalasya muthamba na kwithwa utenamakuku, lilikana kutia matu meanie kwoondu wa wiani wa muti. Sea miti ivinda ya mbua nikana muti ndukasye kiwu, nundu ivinda yii niwo miti yithiawa na matu maingi

Undu waile kusea.

Tumia musumeno mutheu wa kusea.

Ambiia kutila kuma ngaliko ya nthi ndukakaasue muti.

Niki miti iseawa?

Nikana twithiwe na miti minene yina vinya na nzeve nzeo.

Nikana twithiwe na miti miseo ya mbwau.

Nikana tukwate ngu sya mwaki , itui sya mwako na uithyo wa indo.

Uthuku wa kusea miti tene kana nai.

Miti yambiiaa kuthekeva.

Miti yianaa mbola.

Miti niseleasya uthoosya.

Miti ya kithio ila imeaa mituki.

Na Christine Yankel

Miti ya kithio nitunengae moseo mainngi me kivathukanyo. Mwai uu twikunikila miti mina ya kithio ila yi vata muno nundu niyianaa mituki .Kithekani mbai sya miti ino nisyo mbai sya tene na nisyo imeaa mbee na mituki yila sya temwa kana kuvya ni mwaki. Ta amanyiwa na ikundi ingi nini nduani yaku ni miti yiva ila yikaa nesa nduani yenyu ?.

Hagenia abyssinica, African red wood, muhooru.



Kwoondu wa mbwau syayo ndune, na kwiana kwa wo kwa mituki kuvia mita ta miongo ili Hagenia abyssinica ni muti museo uivandwa nthi ila mbukilu na ikwataa mbua ya mm katikati wa 1000 na 1500 kila mwaka. Wi mavata maingi, matu mawo ni manoasya muthanga, na ni muti museo uivandwa kula kwi mititu. Ni muti museo kwa uiiti na nusiiiaa muthanga kutwawa, ni muti museo wa mbwau na na ngu na makaa.

Muti uu numeaa mituki kuma mbeuni yawo. Tilasima ukunwe ndawa na mbeu yayo nimeaa katikati wa matuku 10 na 20 itina wa kuvandwa na niwianaa na mituki na uasa 40-60% itna wa mumea

Ethiwa miti uu nuuvandwa muundani vanda wimutaaniu. Sea mbonge nikana wiane win a muthamba mulungalu.

Macaranga kilimandscharica, mukuhakuha / mukura.



Makaranga ni muti umeaa mitiki na museo uivandaniwa vamwe na kaawa na maiu.

Umeaa nesa kula kwi mbua ya katikati wa mm1500 na 2500 kila mwaka. Ni muti museo kwa wiio na nundu wakumea mituki nusiiiaa kutwawa kwa muthanga. Muti uu ni museo kwa ngu, kuseuvya masanduku na kwa kwiiia wiio. Mii yawo nitumika kwa uiiti. Vanda ngii sya makaranga na muti uu ndwendaa usuvii mwinga wa mina kumea.



Igembe TSE etungia muvea TIST Kenya.

Muandiki ni William Mwito ena Agastha M.Franklin ivnda ya wumbano wa kanthiari

Kavinda kanini mbee wa mwaka wa 2008, Mary Wanyoike, ula wai TSE, witu, niwambiie kutavya atui ma Igembe ala moombaniite kithiini kya kaawa kya Kathiari uvoo wa TIST, kuma ivinda yiu uvoo usu nuvikite nduani mbingi muno, ila ni vamwe na Athiru Gaiti, Mutuaiti, Kawiru, Kiengu, Kiegori, Athi na Mutiokiamu. Ikundi ii ni sya vangiwe ivalo ili. Antubochiu na Kawiru, na ni siendee na kunyaiika kundu kungi ta, Mutuati, Maua, Kiengu, Athiru Gaiti na Athi. Athukumi na atongoi ala methiitwe makwatiie ivalo sya TIST. Kisioni ni vamwe na Josephine, ula uvundiitye amanyiwa ta Martin Weru, ula utavanasya uvoo wa TIST Isioni

ila ingi, Chales Ibeere, ula usyaasya kana ivalo syonthe ni syakwata uvoo, Allan nake niwe utetheesya kula kwi na thina wa umanyi, Dorothy nake niwe muungamii wa C.F na angi aingi ala maetete maendeeo. TIST niyikale ivinda yiasa.

Twinawikwatyo kana tuyiithiwa na miti mingi kuma ikundini ite itheo wa 100 ila syithiitwe siatiie utao wa TIST. Kimeru aisye atii; Muti wivata muno na ni munyanyae wa mundu kuma kusyawa kuvika kukwa.

Kuvika vau tukwatane vamwe nikana kila mundu nduani yitu ethwe e muimi wa TIST.

Aimi ma TIST Usuviini wa mbusi.

Muandiki ni Julius Munga, Lamuria, mutembezi wa ikundi wa TIST; nanowe mutai na mutali

Simon Mwangi ni memba wa Kikundi kya Stone Matanya kila ki Lamuria nduani ya Matanya. Simon ethiitwe e memba wi kithito na niwithiitwe ayienda momanyithyoni kila ivinda. Itina wa maumanyithyo ala ukwatite mbumbanoni, niwavangie kwosa itambya na kwithiwa na kivuio kya miti ya kithio ta, Podo, Mukurwe, Mukoe na ingi mingi. Naye niwosete itambya yingi ya kutetheesya memba angi kuvanda ivuio ni kana miti ila yianaa mbola yongeleke na munomuno ta eucalyptus. Aasya atii; Tukavanda miti mingi eethiwa tukethwa na ivuio, nundu kuua mbeu kwi ngalama. Na kwongeleela nikana Simon nukwataa mbesa kwisila kuta mbeu ikundini ila syi vakuvi na mbusi sya Tigithi na Burguret. Ena ndoto ya kutwikia uthangaau, na twina

wikwatyo kan ikundi mbingi na ivalo ingi ikaatiia ngelekanio ino ya simon.

1. Kusuvia mbusi sya Tigithi na Burguret.
2. Kuvuua mbeu ite itheo wa 40,000 mbee wa muthya wa mwaka.
3. Kuvindua matanya yithwe yi nthi ya ngilini.



Simon in his tree nursery

Kinundi kya kigucwa.

Mwandiki ni Aaron Kaudio, Kinyaruthia Field Office TIST Quantifier

Kuma ila muvango wa TIST wambiie Kigucwa aimi aingi nimetikilite kana TIST ni muvango wina mauseo. Nimetikilanite na wo nundu wa moseo maingi ala muvango usu uetete itina wa kavinda kanini

Kitheo, Mikanduri, Kagaene, na kibuline. Aimi anga kuma isioni ii ala ikundi syoo ithengeanie na usi uu makatetheka muno. Makakwata mithinzio na makaailya kiwu kwa utumii wa andu onthe.

Mauseo amwe nita aa ;

1. kusuvia miunda CF kula aimi yu maendee na kuvanda mateutumia mbolea ila niyanangaa muthanga nundu wa ndaya syayo. Kwa CF aimi nimaendee kwongeleela ngetha syoo.
2. Kusuvia mbusi. Nomuvaka tuvande miti ya kithio nguumoni sya mbusi. Muvango wa TIST ukaiva silingi 2.50 kwa kila muti wa kithio kwa mamemba ma ikundi ala maatii muvango wa TIST na ikundi ila iusinda kwailya mbusi na ila ithengeanie nasyo. Ta uasa wa mita 100 kuma usini. Na nikana metikilike kikundi ni lasima kithiwe na miti ya kithio ta miongo 30 kwa kila 100 Na nilasima methiwe na miti 5 kwa kila 100 ya eucalyptus na miti ino iyithiwa uasa wa mita ta 100 kuma usini. Aimi nilasima matie mita 30 kuma usini yila mekuima. Kati ka kisio kitu, Usi wa Thanatu ni umwea wa ila nyuve Ngalokoni ya Mt Kenya, Usi uu wi katikati ka ndua ii ;Kiguwa



3. Kuendee na kwika maundu ma wikwatyo ni useo mune kuma kula kwi TIST.
4. Uivi wa kila ivinda wa miti. Ithyonthe nitwisi kana miti yi mavata maingi maseo. Indi vamwe na moseo aa onthe TIST niseuvisye utandihtya ungi wa kuthoosya nzeve yitaa corbon. Oundu miti yaku yiendee na kuneneva, nowo ikusasya nzeve mbingi ya corbon muma matuni ikalika matuni, mbongeni, na miini. Atalamu nimathimaa miti na kumanya miti isu ikusasya nzeve ya corbon dioxide yiana ata. Na useo wayo wianu wayo, na nzeve ino nithooaswa kwa wingi. Uthoosya uu wa nzeve nivo vaumaa mbesa sya kuiva miti, kuseuvya mawikalo maseo, kusuvia miti na ngalama sya utongosya wa TIST

Undu tuuvanda miti yiana nowo tuuthoosya nzeve ya corbon yiana na nowo nzeve yitu iendee na kuthea, kwoou tuvande miti na uililikana kuvanda miti yina utaaniu wa mita 2 kuvika 3 nikana miti yiane mituki na yinavinya.

Mazingira Bora



www.tist.org

Kipsigis Version

An Environmental, Sustainable
Development and Community Forestry
Program.



TIST Cluster Representatives:

A Group photo of Cluster Leaders during a recent seminar held at Gitoro Conference Center

Inside this Newsletter....

Koborunoik cheta en kemeushiek. Page 2

Sorun ketit en sobet nemie, omin ketik che chang en sobet ne mie ak negoi. Page 3

Rutunetab ketik - orib ketikwok. Page 3

Ketikab gaa cherutu kochogu. Page 4

Kiboiboechini TIST Kenya, mwoe Igembe TSE. Page 5

Temikab TIST cheribe ainoshek. Page 5

Kigucwa Cluster - borotet yon echegitu ketik. Page 6



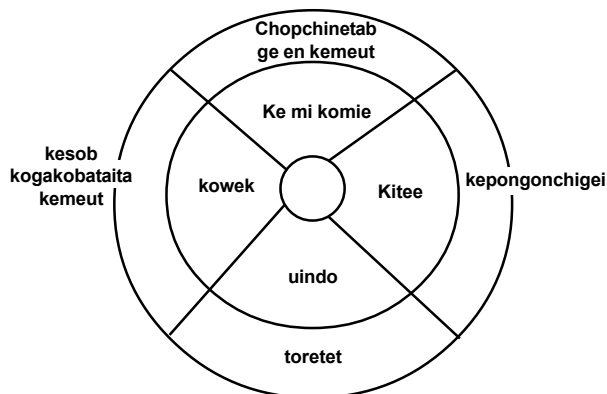
Koborunoik cheta en kemeushiek.

Kosire Wilson Mutai

Abogora kotongosoni kebebertab meteorological department akobo wolutikab itonuekab emet. Abokora koboru wolutichu en kasartab arewek somok chebwone. Kou koborunoik kotomo konam kemeut. Moibe kobunchi komonut temik ng'alechu.

Noton anyun kosiche asenet neo temik amun moib kokwoutik chenyolu. Nyolu koib kobo komonut kabarastaet nebo Meteorological ak kochopchigei agobo ortinwek chebo komonut en kasartab kemeut. Nyolu konetgei oratinwek chegikonoren bek ak koboishen en kasartab kemeut koretechu mbarenik ak ketik. En oret age, komi chemoimuche kosib kouni amun ngemwa agobo wolutikab barak kogere kou kila. En let kobet ketikwak, minutik ak kiagik.

Abogora, keutien kele kemeut komonyone safarit agenge ak koib wolutik cheyach nguno. Achicha nyone mutyo ak koborunoik chekigose ak chegikere. Temik konyolu kopangan gei sigosich borotet kotoreti panganet ak koborunoik cheta chenyolu kisib yon nyone kemeut. Inoni keguren koborunoik chetai en kemeushiek. Mi yu koborunet.



Chobetab ge en kemeut

Yon ileweni kit ne imine en mbarengung, icheng minutik ak ketik cheimuche kosobcho ak koiyo en kemeut: mosong'ik, beek, baibai ak alak komuche kogon omitwogik en robta nemingin,. Maembe, katok ak markamia ko agenge en ketik che imuche kosobcho en kemeut yon kagimin ko mie. Mbaret agetugul konyolu kotesta alak en minutichu ak ketichu. Onetgei temishetab ribetab ng'ung'unyek, matobel katuganikab mbar ak otuch imbarenik. Niton kotoreti minutik kobwa yon mo o ropta.

- Yon kogimwoun akobo kemeut bikab meteorological department

- En kasari, komi komie ki agetugul ag en chongindo
- Ropta koyamat en minutik ak kiyagik. Mbarenik ko mi komie
- En kasari konyolu kebangan keib kokwoutik.
- Inam itach ak ikonor beek. Toretin en koretoetab mbarenik ak ketik en kemeut

Koteunet -ibetab kokwoutik

- Koborunoik cheta chebo kemeut koboruge
- Kosorwek chemomi ropta ak konam koyomnyo minutik
- Bendi biik ole loo kocheng' bek en oinoshek
- Inome kosogitos
- En yuton, imuchi iteib oratinwek cheu aldaetab tuguk, ichenge oratikwek che isigen bek- chebo gaa ak che itumchini ketik missing chemi kap betisie, uretab kap betishek ak alak.bo komonut en kasari irib ak iwal bek ak icheg eleimuche iboishen bek chemi komie.

Kasartab uindo - olegimuche keistoito

- En yu kogakoet kemeut. Kaginam keger uinwekab kemeut.
- Ketik konome koyomdos ak ko meitos kiyagik en komoswek alak.
- Inome serikali ak kip agengeishek chemobo serikali panganoshek chegitoreten bik en kemeut
- Kigochiik bik omitwogik ak kireito kiyagik koba oldage, meitos alek en oret amun motinye kimnotet.

Wegetabke nebo ropta/wegetabke en uinwek chegosirto.

- Ni koganametak ropta
- Ketik chegikomeyo konome korutu.
- Kiyagik ak minutik konome kosiche beek.
- Ngot ko kiikealde kiyagik kokasarte ne iole.
- Wekyin ketik chegikomeyo. Min ketik chehcang' mising' ketik chegikosopcho en kemeut

Yon kiteseta keminsei en imbarenikyok konyolu kenai wolutikab barak ak keib kokwoutik che choton en chobetabke nebo kemeut



Mutamaiyu TIST small group A and B:

kiboishei kipagenge kewal sobenyon ko
kararanit. Inoni ko kasarta ne kimine ketik
ak kesome biik komin ketik che chang'



Members of Mutamayu A and B of Wiyumiririe cluster.

Sorun ketit en sobet nemie, omin ketik che chang en sobet ne mie ak negoi.

*Kosire Johnstone Gacheru, Kiriogo cluster
accountability person.*

En tounet ko kiyai Jehovah ng'woindet
Ketik kogikiyai che chang' kotoret sobet
Yon momi ketik, ko momi sobet ne mie
Yon momi ketik, komomi beek
Sorun ketik si ko kararanit sobet
Min ketik chechang' si kenyorun sobet nemie ak
negoi

Ki agetugul nesobe kotienge ketik
Yon momi ketik, komomi ropta
Yon momi ketik, ko momi omitwogik
Sorun ketik si kokararanit sobet
Min ketik chechang' si kenyorun sobet nemie ak
negoi

Ketik kotoretech bokoinik che kitechen korik
Yon momi ketik, ko momi korik
Yon momi korik, ko momi kalyet
Sorun ketik si kokararanit sobet
Min ketik che chang' si kenyorun sobet ne mie
ak ne goi

Ketik ko afya ak borotet
Yon momi afya ko momi borotet
Yon momi borotet, ko momi boiboiley
Sorun ketik si kokararanit sobet
Min ketik che chang' si kenyorun sobet ne mie
ak ne goi.

Rutunetab ketik - orib ketikwok.

Kosire Eunice Wambui, Naromoru field
office TIST quantifier and Auditor.

Chobe ketik omitwogikkwak koyob oret
negikuren photosynthesis. Orani koyoyoksei
en sogekab ketit. Noton anyun, yon tinye
ketit sogek che chang' kochobe omitwogik
che chang'. Niton, koboto beek ak omitwogik
che mii ngu'ngu'nyek koboru ole etundo ketit.
Tiletab temenik.

Istoetab temenik en ketit ne o. nai ile koyob
tiletab temenik keistoi temenik che tinye
sogek che toreti ketit en etunet.
Ou ole ketile temenik.

Til temenik yon keger ile cheng' temenik che
igochin ketit koyait. Kou ketikab bogoinik
imuiche itil temenik chemi ng'wony che yoe
ketit kosich temenik che uen. Keer ile ketuch
sogek che yomotin che toreti ketit koet. Till
ketik en kasartab ropata sikomayam.
Kasariton kotinye ketit sogek chechag'.
Ole kitildoit temenik.

Boishen panget netilil. Panget ne mur
komuche koreito miondo. Inam itil kong'eten
ng'wony inyon barak asigomeng'em ketit.
Amune sigetil temenik.

- Si kesich ketit neo ak ne kararan negonu
carbourn cedit.
- Si kesich ketit ne kararan nebo bogoinik
- Si kesich kwenik, postisie anan ko
omitwogikab tuga.
- Ng'emutikab tiletab ketik
kotagomengech ana ketil temenik mising
- Tendenegitu ketik.
- Igoegei en rutunet.
- Chelewanetab keljin/keljinet ne mi
ng'weny.

Ketikab gaa cherutu kochogu.

Kosire Christine Yankel

Ketikab gaa kotinye boishonik chechang che ter. En arawani, kegere alak en ketikab kaa chebo komonut ak kochogu. En timwek mising' ko ketichuton ko che tai, che rutu kochokyin ak kochogu mising' ko ole momi ketik. Ng'ololchin konetik ak groupiskek alak en cluster ing'ung' akobo ketikab kaa en kebebertang'uong'.

Hagenia abyssinica, African redwood, muhooru



Tinye bogoinik chebiriren ak korutu en chokyinet agoi mitaishek tibtem. *Hagenia abyssinica* ko ketit ne kararan negimuche kemin en ole tulwet ole siche milimitaishek 1000 agoi 1500 nebo ropta kila kenyan tinye boishonik che chang': sogek chik kotoldole ng'ng'unyek ak koyai ketit ne kararan ne kimine en imbarenik en minsetab minutik ak ketik. Keti kobo kerichek ak komuche kotoret koter ng'ngu'unyek. Bogoinik kyik

kobo olyet nemi barak ak en kwenik ak makaa keti kemine koyop tenderek. Robsetab tenderek ko mobokomonut ak rutunet koen egosyek 10 agoi 20 ak rutunetab 40-60%.

Ngemin koboto minutik kotinye nyigisindo nebo ng'wony til ketik si kotoret koteta.

Macaranga kilimandscharica, mukuhakuha/mukura



Macaranga ko ketit nerutu kochogu nemie kemin koboto ndisinik ana ko kahaawek. Rutu komie yon kosich roptab milimitaishek 1500 agoi 2500 en kenyt. Kararan en teretab koristo ak amun en rutunetab chokyinet komuche koter ngu' ngunyek en ibet. Bogoinik kyig ko kororon ago tinye kwenik che kororon ak kimuche keboishen en ng'otishet. Tigityondonyin ko kerichek. Kimine *Macaranga* keboishen tenderek.

Keti ko chogu mising' ko yon kagimin komye ko momoche robet ne o.



Kiboiboechini TIST Kenya, mwoe Igembe TSE.

Kosire William Mwito ak Agatha M Franklin en tuyetab cluster en Kanthiari

Komo loo koit kenytat 2008, ko kiinam komwochi Mary wanyoike negii TSE biikab Igembe akobo TIST ak koyum icheg en Kanthiari coffee factory. Kong'eten yoton kogiikoityi kokwotinwek che chang' cheboto Athiru Gaithi, Mutuati, Kawiru, Kiengu, Kiegi, Athi ak Mutiokiam. Kurubishechu ko kibangan gee oig cluster ishek oeng': Antubochiu ak Kawiru ak kitesak alak cheu Mutuati, Maua, Kiengu, Athiru Gaithi ak Athi. Kondoik che kitoret this clusters en oloton koboto Josphene negiinet quantifiers Martin Weru negimwochi agobo TIST en komoswek alak, Charles Ibeere negiger kole

kanai tuguk che chang' cluster inyon, Allan negotorech en konetishetab moshinishek ak Dorothy negitoret en C.F ak alak chechang chekitorettech kebor. Sobet negoi TIST.

Kichopchinigei koitishetab ketik chemoregunen 100 chegikosib tolochikab TIST. Kipagenge ak mwaetab Meru kele: "muti ni gantu ka goro gaturanacia na muntu kuuma guciarwa mwanka gukua kwawe" -ketit kobo komonut ak kotepche ak chito kong'eten siget agoi meet. En kipagenge koyoe chi tugul en kokwenyon koik agenge en temikab TIST.

Temikab TIST cheribe ainoshek.

Kosire Julius Manga, Lamuria field office TIST quantifier ak Auditor.

Saimon mwangi ko membayatab Stone Matanya Group ne miten Lamuria, Matanya Cluster. Simon kogileke ak kowendi tuyetab cluster kila kosibi konetishoshek en tuyetab cluster, kogikoib kokwoutiet kwo tai ak konam kapetit nebo ketikab gaa cheu: podo, Mukrwe, Mukoe ak alak

Nesire ko gigotesta kogimit membaek alak konam kap betishek asikobos ketik chebo kasarta ne nuach ak che ng'eme mbar mising' Kiplugam. Mwoe kole koyob kap betishek kimuche kemin ketik che chang' amun aletab ketik ko mi barak.

En kora Simon kogikonyor rabinik koyob aldaetab ketik che kimine che oldechin membaek alak che miten olenegityin ak oinoshekab Tigithi ak Burguret. Kerenyin

kogimotet ak kiyoni kele gurubishek alak ak clustaishek komuche kosib koborunetab Simom.

1. Ribetab aionoshekab Tigithi ak Burguret
2. Komin keswek 40000 en mwisho nebo kenyini
3. Kowal matanya koig emet ne nyalil.



Simon in his tree nursery

Kigucwa Cluster - borotet yon echegitu ketik.

Kosire Aaron Kaindio, Kinyaritha field office TIST quantifier

Kong'eten ngonam panganetab TIST en Kigucwa cluster, temik che chang' ko kinyor ak koger borotetab TIST. En kasarta ne nwach ko kigonyor borotosiek chetesetai koechegitu.

Alak en borotosiechu ko:

1. Temishetab ribetb ngu'ngu'nyek ole ngunon temik ko tesetai kominsei komoboishen mbolea chebo kerichiek che weche ng'ng'unyek. Koyob temishoni ko kinyor borotet neo.
2. Ribetab oinoshek. Inoni ko minsetab ketikab gaa en ole negityin oinoshek. Panganatab TIST kowendi ko liponi ksh 2.50 en ketit agetugul nebo kipgaa en membaek che ko isib pongonutik che miach en imbarenik che negityin oinoshek che kigelewen, che mi mitaishek 100 kong'ten oinet. Si iinyoru, konyolu ko imbarek ko mongwony en 30% chebo ketikab kipgaa. Monyolu kora kosire 5% chebo kiplugam ak ko momi kiplugam em mitaishek 100 kong'eten oinet. Temindet ko monyolu kotem kong'eten mitaishek 30 kong'eten oinet. En olinyinyon ko kigilewen oinetab Thanantu en kebebertab Mt.Kenya. oinoni komi kwenutab clastaishechu: Kiguwa, Kitheo, Mikinduri, Kagaene, ak Kibuline. Temik

che chang' koyob clastaishechuton kirikta oinoshechuton konyoru kelchin neo mising'. Nyoru kelchinet nemi barak ak koyai bechoton kotililegitun ak kogororenegitun en chitugul ne boishen.

3. Tegset ak kasarta nebo tesetab tai ko kelchinet neo kot nekichoru en TIST.

4. Libanet nekararan nebo ketik . kou yegingen kele ketik kotinye keljin neo, kobaten en kelchinoniton, ko kitoi TIST mung'aret nelel nekiguren Carbon credit business. Yon echegitu ketik, kochutu koristab carboren en soet ak konde temenik, sogek ak tigitikchwak. Imuchi kobiman quantifiers ak konai kit neteno carbondioxide en ketit. Ak ko yon kakinyor kororon ak koechegitu komie ketik , kimuchi kiealda en bimanetab tannishek. Yon kakyalda chuton, keboishen rabishek kelibanen ketik chebo Mazingira Bora qualification ak boishonik chebo TIST.



Yon kagimin ketik chechang' kenyonu tanishek chebo carbone che chang' ak kotestai kotililit koristo. Noton anyun ongemin ketik ak kibwat kemin en kokwochinet nenegit mitaishek 2 -3 asikurut ketik en cheokyinet ak chametab ke.