

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
www.tist.org

English Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Mr. Githiri, the Cooperative Officer from Igembe South Sub-County shown training members of Athi TIST Clusters on operations of a SACCO.

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Blessy TIST Group: Conservation Farming has improved my yields.

By Annet Kaari, Cluster Servant.

We, the members of Blessy TIST Group and Nguruki Cluster, are glad to share with you our progress and achievements since joining TIST in 2011.

Our group has twelve members of whom five are women and seven men. So far, we have planted over 1,200 new trees that have been quantified with a mix of indigenous, exotic and fruit trees.

Since joining TIST, we received a lot of trainings. We have been taught about Conservation Farming, energy saving jikos, tree nursery preparation and management, tree planting, soil erosion control methods and much more.

We are paid tree payments incentives and intend to continue participating in TIST to gain more benefits.



Mr. Fredrick Kithinji, a member of BLESSY TIST Group in Nguruki Cluster practicing conservation farming

Athi TIST Cluster: Moving Forward.

By William Mugambi, Cluster Servant.

We are Growing! Says Athi Cluster.

In October 2011, Athi Cluster became the first TIST Cluster to be officially registered as a Saving and Credit Cooperative Society (SACCO). This follows an intensive commitment by members to help each other. TIST offered us a platform through the Cluster meetings where we meet and share new ideas.

We started as a merry-go-round and then grew into table banking and are now officially a SACCO. Besides other important trainings we

receive monthly from TIST, our members have embraced SACCO as a way of adding more value to benefits we receive from TIST.

We are grateful for the support we received from the Igembe South Sub-County Cooperative officer, Mr. Githiri, who not only facilitated our registration but also trained us on operations of running a SACCO.

With TIST, our horizons are far and wide.

Moving Ever Forward!



Stop Soil Erosion!

Soil erosion is caused by surface running water and mainly affects where the land is bare, with no grass cover and groves with no terraces or little vegetation. Many lands especially in Clusters where the topography is steep have been left with rill erosion, in other areas more serious gully erosion.

Tons of fertilizer has gone to waste through soil erosion and also millions of shillings have been lost to the ocean. Yet our lands have been degraded more and more.

We encourage each and every one of us to make the effort to prevent this disaster by planting indigenous trees in our groves and plant grass and other cover crops. This will add value to dairy

farming and reduce expenditure on animal feed.

Let's embrace protection and conservation ways of covering our streams and rivers with water friendly trees. Also, let's obey the Government laws by avoiding cultivating 30 meters or planting eucalyptus trees 100 meters from these waterways. Importantly, each of us begins to practice Conservation Farming (CF). CF will help reduce the velocity of surface runoff and in case of insufficient rainfall; the CF holes will hold water for a longer time and increase the chances of a good harvest.

By harvesting rainwater from gutters on the roof of our houses, we can collect water that can be used during a dry spell.

TIST Farmers Combat Global Warming and Climate Change.

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

This month's newsletter will share training notes from seminars so that we all can understand global warming and climate change better. We will

begin by defining each term and explaining it further and then learn how your trees play a significant role in mitigating the effects of global warming.

What is Global Warming?

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

Is the Earth getting warmer?

Yes! The Earth has warmed by about 1°C over the past 100 years. Many of the world's leading climate scientists think that things people do are helping to make the Earth warmer, such as burning



of fossil fuels including coal, petrol, and natural gas, and cutting forest and managing land poorly.

What is the Greenhouse Effect?

The greenhouse effect is the rise in temperature that the Earth experiences because certain gases in the atmosphere, called greenhouse gases, like carbon dioxide, nitrous oxide, sulphur dioxide, and methane trap energy from the sun. Major sources of carbon are deforestation, gases emitted from industries, gases emitted from motor vehicles, gases emitted from burn of wood fuel or charcoal and burning of forests.

What are the dangers of Global Warming?

- Severe water stress in the arid and semiarid land areas would result in more areas becoming desert.
- Increased spread of diseases like malaria. As areas become warmer, they become suitable breeding grounds for mosquitoes, and increasing risks of malaria infection. Many families and health institutions can be impacted, average life spans decline, and infant mortality rates rise.
- Decreased agricultural production in many tropical and subtropical countries, especially countries in East Africa. Due to decreased rainfall and increased breeding of pests due to increased warming, the production of food crops may decrease and this results in poverty and hunger among many families and communities.
- Higher worldwide food prices. As more farmers get less yields and food supplies become scarce, the prices increase because the demand is high and supply is low.
- Major changes in the productivity and composition of critical ecological systems particularly forests. Water catchment areas in the mountains and forests continue to dry up.

This will affect the ability to irrigate crops and will reduce stream flows necessary to keep dams and reservoirs replenished. This will reduce generation of hydroelectric power. Our industries, hospitals and other institutions that heavily rely on electricity will be severely affected. The supply of piped water to urban areas as well as rural homes will also be affected.

- Tens of millions of people at risk from flooding and landslides, driven by projected increases in rainfall intensity and in coastal areas, rising sea levels.

How can I prevent Global Warming?

Plant and care for trees!

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

Did you know each tree could create a microclimate?

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

What are carbon credits?

To make a TIST carbon credit requires 3 things:

- 1) A real and additional reduction in the carbon dioxide (CO₂) being emitted to the air;
- 2) A promise to keep the carbon out of the air for many years;
- 3) A Verification by an independent third party that certifies that the actions have taken place according to all the rules.



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

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

Do all trees absorb the same amount of carbon?

No, trees with wider circumference (more biomass) store more carbon than trees that are thin. Taller trees also absorb more carbon than short trees. Therefore, trees that are thick will bring more income from carbon credits. This means trees planted with good spacing have a chance of growing big and tall and earn more carbon income.

They do not compete for soil nutrients and water as much as trees that are closely spaced.

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

Where/who are the buyers of carbon credits?

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

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

TIST has two basic types of buyers:

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

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



Hygiene & Sanitation: Hand washing.

Hand washing with soap is among the most effective and inexpensive ways to prevent diarrheal diseases and pneumonia, which together are responsible for the many child deaths in Kenya.

Hands often act as vectors that carry disease-causing pathogens from person to person, either through direct contact or indirectly via surfaces. Humans can spread bacteria by touching other people's hand, hair, nose, and face. Hands that have been in contact with human or animal feces, bodily fluids like nasal excretions, and contaminated foods or water can transport bacteria, viruses and parasites to unwitting hosts. Hand washing with soap works by interrupting the transmission of disease.

Washing hands with water alone is significantly less effective than washing hands with soap in terms of removing germs. Effective hand-washing with soap takes 8 - 15 seconds, followed by thorough rinsing with running water.

Critical times in hand washing with soap

Here are some critical times to clean your hands:

1. Before and after meals and snacks
2. Before caring for young children
3. After touching a public surface.
4. Before and after preparing food, especially raw meat, poultry, or seafood
5. After using the restroom
6. When hands are dirty
7. After touching animals
8. When you or someone around you is ill

Awareness of hand washing with soap

Hand washing is likely to be especially important where people congregate (schools,

offices, church, meetings), where ill or vulnerable people are concentrated (hospitals, nursing homes), where food is prepared and shared and in homes, especially where there are young children and vulnerable adults.

A simple facility for washing hands after visiting toilet

The simplest facility is just to have a small jerry can filled with water placed outside latrines. Soap should also be provided.

However, this method is not ideal as people have to touch the jerry can before and after washing their hands which can still spread germs. An alternative hand-washing facility can be made like this:

1. Make a simple wooden frame with a nail in the middle for a peg.
2. Make a soak pit for the waste water by digging a hole around the frame and filling it with stones. This will let the waste water drain away into the soil.
3. Get one big open container (a barrel or cut-open jerry-can) and fill it with water.
4. Find a smaller open container, like a cut-open water bottle.
5. Make a small hole in the bottom of this container and fix a handle to it.
6. Dip the small container into the larger one to fill it with water.
7. Hang the small container on the peg so that the water starts to drip through the hole like a tap.
8. Wash your hands with soap.

The advantage of this system is that you only touch the small container once to fill it with water.

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Mukuru Githiri, afisa wa Cooperative kuuma Igembe South Sub-County nakuonanua akiritanaga amemba ba cluster ya TIST ya Athi kwegie uriti ngugi bwa SACCO.

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Gikundi gia TIST kia Blessy: Urimi bubwega nibwongereta iketha riakwa.

Ni Annet Kaari, nthumba ya cluster ikuuga.

Batwi amemba ba gikundi gia TIST gigwitwa Blessy ndene ya cluster ya Nguruki, turina kugwirua tukigaana nabwi witi nambele bwetu na jaria tuumbite kuthithia ndene ya TIST kuuma mwaka jwa 2011.

Gikundi gietu kirina amemba ikumi nabairi, baria batano babo ni aka na arume mugwanja. Gukinyira au, nituandite nkuruki ya miti imieru ngiri na Magana jairi iria itaritwe na iria iungene ya gintwire, migeni na mitunda.

Kuuma tugutonya TIST, nituritenwe jamaingi. Nituritenwe kwegie urimi bubwega, mariko ja gutumira nkuu inkai, uthuraniri bwa minanda na urungamiri bwayo, uandi bwa miti, kunyiyia gukamatwa kwa muthetu na jangi jamaingi.

Nituriagwa motisha ya miti na nitubangite gwita na mbele kuthithia mantu ja TIST nikenda twona baita ingi.



Mukuru Fredrick Kithinji, mumemba wa gikundi kia BLESSY ndene ya cluster ya Nguruki akirimaga na njira ya urimi bubwega

Cluster ya TIST ya Athi: Gwita na mbele.

By William Mugambi, Cluster Servant.

Nitugukura! Niu cluster ya Athi ikuuga.

Mwari jwa ikumi mwaka jwa 2011, cluster ya Athi niyaere cluster ya mbele ya TIST kuandikithua na njira iria ibati ja kiama gia gwika na gukobithania mbeba (SACCO). Untu bubu nibuthingataga guciritaniria gukunene kwa amemba nikenda batethania. TIST niyatuere kanya gukurukira micemano ya cluster aria tutirimanaga na tukagaana mathuganio jameru.

Nitwambiririe ja gakundi ga kuthiuruka tukiriunganagira riu twanenea twambiria kuritaga mbeba na gwika nikenda twona cia gukobithania na nandi turi SACCO iandikithitue. Amwe na

moritani ja bata jangi jaria twonaga kuumania na TIST omwari, amemba betu nibajukitie SACCO ja njira ya kwongera baita iria twonaga kuumania na TIST.

Turina nkatho mono niuntu bwa utethio buria twonere kuumania na ofisa wa Igembe South Sub-County Cooperative, Mukuru Githiri, uria utatutetherie aki kuandikithia indi kinya nature moritani kwegie mantu jaria jathithagua gwitithia SACCO na mbele.

Turina TIST, naria tumba gukinya ni kuraja na gukuarie. Gwita na mbele rionthe!



Tigithia ukamati bwa muthetu!

Ukamati bwa muthetu niburetagwa ni ruuji ruria rugwitira iguru na mono nibwonagwa aria nathi itina gintu, gutina nyaki ikunikirite kana miunda iminene itina benji kana irina imera bibikai. Miunda imingi mono ndene ya cluster cietu naria kurina mabari nitigi irina tumitaro tutwingi naria muthetu jukamati na ntura imwe kurina mitaro iminene mono.

Fertilizer inyingi mono ninyangikite gukurukira gukamatwa kwa muthetu na milioni inyingi cia mbeba nicitei ruujine. Na kuthukia mantu miunda yetu nithukitue nkuruku na nkuruki.

Nitwikanagira moyo kujukia kanya kuebera thina iji gukurukira uandi bwa miti ya gintwire miundene yetu na imera bingi bia gukunikira muthetu. Untu bubu bukathongomia urimi bwetu

bwa ndithia na kinya bunyiyie mbeba iria itumagirwa kunyiria ndithia.

Tugwatireni njira cia umenyeeri na wiki cia gukunikira nduui cietu inini na inene na miti iria ikaranagiria bwega na ruuji. Kairi, tuikireni mawatho ja thirikari na njira ya kuebera urimi bwa mita mirongo ithatu kana uandi bwa mibau mita igana kuuma kiri nduui iji.

Bwa bata, o umwe wetu naambirie urimi bubwega. CF igatethia kunyiyia spidi ya ruuji riria rwaingia na riria kurina ngai iting'ani, marinya ja CF jageeka ruuji igita riraja nkuruki na joongere kuumbikika gwa iketha ririega.

Gukurukira kugwatia ruuji rwa ngai kuumania na mabati ja nyomba cietu, no tugwatie ruuji ruria rumba gutumirwa igitene ria uumo.

Arimi ba TIST nibakurua na Kwongeraka kwa murutira jwa nathi na kugaruka kwa rera.

Arimi ba TIST nibaigitue na bacokia kiriro kia nthiguru gia kurua na murutira jwa nathi na kugaruka kwa rera. Arimi babaingi nibacuite kuelewa gukurukira semina na moritani ja TIST nan dene ya micemanio ya cluster nikenda bathoma na belewa kwegie murutira juju, jaria jwianagia najo, na jaria tuumba kuthithia nikenda tujwebera. Nitwonaga mantu jamaingi jaria jaumanitie na kugaruka kwa rera narua. Kwonia ming'uanano imikai, ngai ya Elnino ya mwaka jwa 1998 iria yathukiria akui nthiguru yonthe na mpara iria yathingatire, na kiurutani kia mwaka jwa 2004 kiria kiongerere murutira juju nainya. Ming'uanano ingi iria ubati kumenya ni kunyia kwa nkamia iria iri mulima Kenya kuria kwonekete, rera itikuumba kubangirwa iria itumite imera bithuuka ndene ya ntuura inyingi, kunyara kwa ithima nan aria kugwatagia ruuji, amwe na mantu jangi jamaingi.

Gatheti ya mweri juju nikugaana moritani kuumania na semina nikenda tuumba kuelewa murutira jwa nthiguru na kugaruka kwa rera bwega

nkuruki. Tukaambiria na kumenya o riitwa ririuga atia na kueleza nkuruki na riu tuthome uria miti yaku iritaga ngugi ikwoneka kiri kunyiyia magitari jaria jaumanagia na kurutira kwa nthiguru.

Kurutira kwa nthiguru nimbi?

Kurutira kwa nthiguru ni kwongereka kwa mwanki ndene ya nthiguru, kuria kuretaga kugaruka kwa rera. Nthiguru irina murutira nkuruki no irete kugaruka kwa mbura, biurutani birina inya nkuruki, kwongereka kwa ruuji iriene, kuthuka kwa imera, na magitaria jamaingi kiri imera, nyomoo cia kithaka na kinya kiri antu. Riria athomi barairia kugaruka kwa rera, wasiwasi yao ni mono kwegie kurutira kwa nathi kuria kuumanagia na mantu jaria jathithagua ni antu na kugaruka gukunene kwa rera kuria kuumanagia na bubu.

Ka Nthiguru igwita na mbele kurutira nkuruki?

li! Nthiguru niongerokete kimwanki nauu 1°C



ndene ya miaka igana iu ikurukite. Babaingi ba Athomi ba science baria batongeretie ndene ya nthiguru nibathuganagia ati mantu jaria antu bathithagia nijatethagia kurutiria nthiguru, ja kuithia into ja makara ja maguta, beteroli, ngasi na kugiita miitu na kumenyeera muunda bubuthuku.

Greenhouse effect nimbi?

Iji ni kwongereka kwa mwanki juria nthiguru igagua niuntu ruugo rumwe, ruria rwitagwa ruugo rwa greenhouse, ja carbon dioxide, nitrous oxide, sulphur dioxide, na methane nirugwatagia mwanki jumwe kuumania na riu. Biumo biria binene bia carboni ni ugiti miitu, ruugo ruria rurekagua kuuma viwandene, ruugo kuumania na ngari, ruugo kuumania na kuithua gwa nkuu kana makara na kuumania na kuithia miitu.

Kurutira kwa nthi kuretaga magitari jariku?

- ♦ Kwaga ruuji ndene ya ntuura injumu (ndwanda) kuria kuumba gutuma ntuura inyingi nkuruki ikaa rwanda.
- ♦ Kwongereka kwa gutamba kwa mirimo ja rwagi. O uria ntuura cirutagira, nou ciejaga injega cia guciarana kwa rwagi na kwongerwa kwa kuumbika gwa kuajua ni rwagi. Nja na cibitari inyingi no citongwe ni jaja, miaka ya gutuura ninyiaga na gukua kwa aana babanini gukongereka.
- ♦ Kunyia kwa maketha kuumania na kulima ndene ya nthiguru iria ciri guntu kurina riu riringi, mono nthiguru iria ciri East Africa. Niuntu bwa kunyia kwa ngai na kwongereka kwa tunyomoo turia tuthukagia imera niuntu bwa kurutira, maketha kuumania na imera bia irio no janyie na bubu bukareta ukia na mpara ndene ya nja na ntuura inyingi.
- ♦ Irio kwongerra goro ndene ya nthiguru yonthe. O uria armi babaingi baguketha maketha jamanini na irio bekanyia, nou ngarama ya irio ikongereka na irio ndene ya thoko bikaa bibikai.

- ♦ Nikugijaga kugaruka gukunene kiri maketha na gukarania kwa imera na nyomoo mono ndene ya miitu. Naria kugwatagia ruuji ndene ya irima na miitu nigwitaga na mbele kunyara. Bubu bukareta thina ya kurima na ruuji na bukanyia ruuji ndene ya miuro ruria rwendekanaga nikenda naria gwaki gwa kugwatia ruuji kuumba kung'ania ruuji. Untu bubu bukanyia kuthithua kwa sitima. Kambuni, cibitari iria citumagira stima na wingi ikagitarua. Ruuji rwa paipu rwa tauni na rwa risabu kinyaru rukagitara.
- ♦ Antu makumi ja mamiloni bakarugurirwa thina cia kuigara kwa ruuji na kugua kwa nthi, kuria gucukumagwa ni kwongereka kwa mbura na nterene cia iria, kwongereka kwa ruuji iriene.

Natia mpumba kueberia kurutira kwa nthi? Anda na umenyeere miti!

Ja ou tuugite au iguru, ruugo rwa carbon dioxide ni rumwe rwa iria iretaga kurutira kwa nthi. Miti nijukagia carbon dioxide kuuma ruugone riria ikuthithia iria na ikamiika ndene ya rubau, miri na muthetune ja kaboni ya cellulose. Indi-ri, riria miti yagitwa na yaithua, kaboni iu ireki nirekagua ruugone kairi.

Nwiji o muti nojuthithie rera ya antu au gukuiritie?

Miti na kithiiki kiayo niioragia nthi. Nwiji kuganirwa kuria kuri kithiikine kia muti. Ona ati muthetu juria juri rungu jurina ruuji nkuruki ya juria juri aria kurina riu na gutina kithiiki. Riria nthi ikaraga na gapio, nthiguru niikaga ruuji igita riraja nkuruki. Guku nita kuugamiti iria iri muundene jwaku nitethagia kwongera ruuji ruria ruri muthetune jwaku, na igatethia kuruika ku igita riraja nkuruki. Bubu bugatethia imera biaku na kinya butethie baria batumagira ruuji ndene ya ntuura yaku.

Krediti cia kaboni nibicio?

Kenda uthithia krediti ya kaboni ya TIST nigwitagia into bithatu:



- 1) Gutaurwa kwa mma na kwongerekete gwa carbon dioxide iria igutonyithua ruugone;
- 2) Ahadi ya gwika kaboni iu kuraja na ruugo ndene ya igita ria miaka imingi;
- 3) Gutegerwa ngugi na gukurukithua ni kiana gitina uthoni na TIST kiria kibati kwona ati mantu nijathithikite kuringana na mawatho jonthe.

Miti nijukagia ruugo rwa kaboni riria ikuthithia irio na kumiika ndene ya rubau, miiri na muthetune. Kaboni iria ijukagua kuuma ruugone na gwikwa noithimwe na igatarwa, na riu, yarikia gukurukithua ati ni yam ma, kujukua guku kwa ruugo rwa kaboni no kwendue ndene ya thoko ya nthiguru yonthe ja krediti cia kaboni. Aguri nobagure krediti iji nikenda bathiria ruugo rwa kaboni ruria bagutonyithia ruugone.

Tist niumbaga kwendia kaboni iria iri kiri miti iji o uria antu bendagia sukari na iria. Indi-ri kiri kaboni, utikagia muti thokone. Antu au, uguri ni kuumania na kaboni iria irititwe ruugone, na yekwa mitine ndene ya munda kana mwitu jwaku, ithimwi na ripoti yaikua. Kwendia na kugurwa kwa krediti iji nikuthithikaga, New York, Chicago, London na tauni ingi ndene ya nthiguru kana gukabangwa gatigati ka antu kana kambuni. No mwanka tukinyire mawatho na jaria jakwendeka ndeme ya thoko. tutiumba kugiita mwitu junthe kana tugiita miti tuanda ingi nontu bobu butibui kiri mazingira. no mwanka tuciitie gwika miti ndene ya miunda moyo ndene ya igita riraja, miaka mirono ithatu kana nkuruki. No mwanka tuuge mantu jongwa jaria jario. Riria miti yaandwa, ithimi na mathabu jamwe nijathithagua kuthima ni kaboni ing'ana miti ya arimi ba TIST ijukitie. Rikana kairi, miti itikagua thokone. Ikaraga miundene na ouria ikaraga igita ririraja iri moyo, nou igita ria kuriwa riongerekaga. Kwou, murimi neekaga muti, irio bia nithia, nkuu na matunda na nkandi. Mbeca iria TIST ithithagia kuumania na kwendia kaboni ni kiumo gikieru kia mbeca na riu ikagaanwa na ikundi bibinini bia TIST na igatumirwa kutirima ngarama cia TIST, iria ciri amwe na moritani, utari miti na urungamiri.

Miti yonthe nijukagia ruugo rung'anene?

Aari, miti iria iri imiarie nkuruki niikaga kaboni inyingi nkuruki ya miti imiceke. Miti imiraja kinyayo nijukagia kaboni inyingi kiri miti imikui. Kwou, miti iria imati niretaga mbeca inyingi kuuma kiri krediti cia kaboni. Guku ni kuuga miti iandi itarenie bwega irina kanya ga kunenea na kurea na kwona mbeca inyingi nkuruki kuumania na kaboni. Iticindanagira irio na ruuji ja miti iria iandi ikuianiritie.

Kwou, nikenda twona mbeca injega kuumania miti yetu, burina bata kumianda itarenie bwega nikenda yumba gukura irina thiria, ia imiraja na imiarie. Gutaura miti imwe nikenda twona nku riu tugeeke iu ingi igikuraga bwega jaria maingi niyo njira iria njega buru ya kumenyeera miti yaku.

Ninaa/Ni bau baguraga krediti cia kaboni?

Nandi, kaboni yendagua thoko cia kwiritira nandene ya thoko cia lazima. Thoko iji citikurukanagia umwe, ojauria kurina mianya na gukurukua kwa into bingi biria uguraga na kwendia. TIST noyendie krediti cia kaboni kiri thoko imwe ya iji nontu krediti iji ni injega mono.

Kurina ithimi mwanya ndene ya thoko iji birina mawatho mwanya na jakaraga jakigarukaga kwegie uandi miti, kumenyeera na kureta ripoti jaria tubati kuujuria nikenda tuumba kwendia ruugo rwa kaboni ruria twitite. Nitutumagira ithimi biria biega buru kiri gutegerwa ngugi na gukurukithua — the Verified Carbon Standard (VCS) na Climate, Community, and Biodiversity Alliance Standards (CCBA).

TIST irina mithemba iiri ya aguri:

Muthemba jwa mbele ni jwa antu baria bakwenda kunenkanira mbeca nikenda bekira antu motisha ya kuanda miti. Ming'uananona ni amwe na kuririra miradi ya uandi miti nikenda batuma muranu kana mucemano jutikongere kaboni ruugone. Muthemba jwa iiri jurina kambuni ndene ya US, Europe, Canada na nthiguru ingi iria ciri mbele mantune ja ibanda baria bakwiritira bongwa kunyiyia kuongerwa kwa ruugo ruruthuku (ruugo ruria ruretaga murutira) nontu bari akaria babega ba mazingira kana niuntu nibakwithuranira niuntu bwa gutirimana na mahitaji manna jaria jakwendeka. TIST nigwiritue mono kwithirua irina krediti cia kaboni cia iguru, na kuumba kuenderia aguri babaingi mwanya.



Utheru: Kuthambia njara.

Kuthambia njara na sabuni ni njira imwe ya iria njega buru na iria itina goroya kuebera miromo ya kuugia na ndimoni, iria amwe citumaga gukua kwa aana babaingi ndene ya Kenya.

Njara jaria maingi niikamataga tuginyo turia tutumaga antu baajua kuuma kiri muntu umwe gwita kiri uungi, rimwe gukurukira gutong'ana na ringi gukurukira gutonga aria bangi batongete. Antu nobatambie mirimo tunginyo tutu batonga njara, mutundu, nyiuru kana uthiu bwa antu bangi. Njara iria itongete kioro kia antu kana nyomoo, nduujia mwiri ta mamira na irio kana ruuji ruri na ruuko no rukamate bacteria, virusi natunginyo. Kuthambia njara na sabuni nikuritaga ngugi ya kunogokeria gukamatwa guku.

Kuthambia njara na ruuji ruunka ni kuritaga ngugi inkai mono nkuruki ya kuthambia na sabuni tugitaraga ngugi ya kurita tunginyo. Kuthambia njara gukwega ni kwa secondi inyanya gukinya ikumi na ithano, kuthingatite kuthamikura na ruuji rugwitika.

Magita jaria ubati kuthambia njara

Aja ni magita jaria ubati kuthambia njara ciaku:

1. Mbele na nyuma ya kuria irio
2. Mbele ya kumenyeera twana tutunini
3. Nyuma ya gutonga antu gugutongangwa ni babaingi.
4. Mbele na nyuma ya kuthuranira irio , mono nyama itirugi, nguku kana irio bia iriene
5. Nyuma ya gutumira kioro
6. Riria njara cirina ruuko.
7. Warikia gutonga nyomoo
8. Riria ugwe kana muntu uri akui nagwe aajitue

Mantu jaria ubati kumega jegie kuthambia njara na sabuni

Kuthambia njara kurina bata mono aria antu batirimanite (cukuru, ofisi, kanisene, micemanione), aria aajie kana baria bagwatangagwa ni mirimo baingei (cibitari, nja cia kumenyeera ajie), aria irio bithuranagirwa, bikagaanwa na nja, mono naria kurina aana babanini na antu babanene baria baajangagua.

Gantu ka kuthithia na uuthu gakuthambiria njara warikia kuuma kioro

Gantu karia koothu buru ni kwithirwa urina kibuyu kiujuritue na ruuji giiki oome ya bioro. Sabuni niibati kwithirwa irio.

Indi-ri, njira iji itibui niuntu antu nibatongaga kibuyu mbele na nyuma ya kuthambia njara, untu buria bado bugatambia tunginyo. Ngantu kangi karia koomba kuthithua nit a uju:

1. Thithia karubao karina mucumari gatigati jwa kugwatia.
2. Thithia kirinya gia kunyua ruuji rwa ruuko, winje kirinya kithiurukirite karubao na ukiujurie na maiga. Bubu bugetikiria ruuji rwa ruuko rutonye muthetune.
3. Cua gikebekimwekiruguri gikinene (mukebe kana kibuyu kigiti) na ukiujurie na ruuji.
4. Cuaa gakebe kangi karuguri gakanini, ta chuba ya ruuji igiti.
5. Tura karinya rutere rwa nthi rwa gakebe gaka na wikira njara ya kugwata.
6. Tonyithia gakebe gakanini kiri gikinene na ukojurie na ruuji.
7. Curia gakebe gakanini mucumarine nikenda ruuji rwaambiria gwitikira karinyene ja tapu.
8. Thambia njara na sabuni.

Wega bwa njira iji ni ati ugatonga gakebe gakanini rimwe aki gukojuria na ruuji.

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
www.tist.org

Kikuyu Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Mr. Githiri, ofisa wa Cooperative thiini wa Sub-County ya Igembe South agithomithia amemba a cluster ya Athi maundu ma SACCO.

Thiini:

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Utheru: Guthambia moko. Page 6



Gikundi kia TIST kia Blessy: Kilimo Hai nikingereire magetha makwa.

Mwandii; Annet Kaari, ndungata ya cluster

Ithui turi amemba a gikundi gia Blessy na cluster ya Nguruki, nitukenete tukiuga ati nitugacirite muno kuma riria twaingirire TIST kuri mwaka wa 2011.

Gikundi giitu kiri na amemba 12 kuria 5 aao ni atu,ia na 7 ni arume. Gukinyiria riu, nituhandite miti makiria ma 1200 miera iria itarituo na ni mutukano wa miti ya kinduire, ya guuka o hamwe nay a matunda.

Kuma riria twaingirire TIST, nitwamukirite githomo kiingi muno. Nituthomithitio uhoru wigii Kilimo Hai, riiko ria TIST, kuhariria na gutungata nathari cia miti, uhandi wa miti, kugitira tiiri gukuuo ni maai na mangi maingi.

Nituheagwo nyongerera cia marihi ma miti na niturehoka nituguthii na mbere na TIST niguu tugie na maundu mangi maingi.



Mr. Fredrik Kithinji, mumemba wa BLESS TIST Groug thiini wa cluster ya Nguruki akihuthira Kilimo Hai.

Cluster ya Athi: Guthii na mbere.

Mwandiki: William Mugambi., ndungata ya cluster.

Niturakura! Cluster ya Athi kuuga.

Kuri October 2011, cluster ya Athi niyatuikire ya mbere kwandikithio iri ta Saving and Credit Society(SACCO).Uu nikumana na wendi na wirutiri wa amemba guteithania. TIST niyatuheire mweke thiini wa micemanio ya cluster kuria tucemanagia na tugathomithania.

Twambiriirie ta gitati na tugicoka tugikura na gutuika table banking na riu turi SACCO. Ona makiria ma githomo kiria kia bata twamukagira o

mweri kuma kuri TIST, amemba aitu nimaiyukitie SACCO ta njira ya kwongerera mawega maria twonaga kuma kuri TIST.

Nitukenetio ni uteithio uria tuonete kuma Igembe South Sub-County Cooperative officer, Mr. Githiri uria watuteithirie hari wiyandikithia na agitutjomithia maundu a SACCO.

Turi thiini wa TIST, nituguthii Kunene na tuthii na mbere!



Nituniine gukuuo gwa tiiri ni maai!

Gukuuo gwa tiiri ni maai kumanaga na maai maria maratherera na marahitukira mugundaini uteri muhande kindu, uteri nyeki kana miti na uteri mwenje mitaro ya maai. Migunda miingi namakiria cluster iria cirri na migunda miinamu niikoretwo iri na thina uyu na ingi igakorwo ithukitio muno.

Fertilizer nyingi niyuragira na igakuuo ni maai na mbec a nyingi cikora na cigathii na maai. Na migunda iitu igathii na-mbere na kuhinyara makiria..

Niturahinyaniriria o umwe witu akinye makinya ma kugitira thina uyu na njira ya kuhanda miti ya kinduire migunda-ini iitu na kuhanda nyeki na irio cia mugunda. Njira ino niikwongerera umithio kuri urimi wa mahiu na unyihie mahuthiro

ma irio cia mahiu.

Nituthii na mbere na kuiyukia njira cia kugitira na kumenyerera njuui na ihumo cia maai na kuhanda miti iria miagiriru. Na ningi, reke twathikire mawatho ma thirikari ma kwaga kurima 30m kuma ruui na kwaga kuhanda miti ya mibau 100m kuma njuui-ini.

Muno makiria, ithuothe twambiririe kuhuthira Kilimo Hai. Kilimo Hai nigiteithagia kinyihia hinya wa maai maria maragera mugunda. Marima ma Kilimo Hai nimahotaga kuiga maai ge=wa kahinda karaihu na kwa uguo magetha makongerereka na njira nene.

Riria twategereria maai na miberethi ya nyumba, notuhote kugia na maai maria mangihuthirwo kimera kia riu

Arimi a TIST kuhurana na ugaruruku wa riera.

Amemba a TIST nimakoretwo makihurana na ugaruruku wa riera uria ukoretwo kuo thi yothe na arimi aingi nimoritie mataaririo wega thiini wa semina na micemanio niguu mataukwo wega ugoro uyu wigii ugaruruku uyu wa riera, maundu maria ungirehe na uria mangihota kuhurana naguo.

Nitwonaga maundu maria ugaruruku wa riera urehete umuthi. Na kuheana mamwe ma maundu maria marehetwo niguu, mbura iria yari nene muno ya Elnino ya mwaka wa 1998 iria yathukirie bururi na gukigia na ng'aragu nene muno hamwe na muiyuro wa maai iriaini wa mwaka wa 2004 muno ciarehetwo ni ugaruruku uyu wa riera. Maundu mangi ni ta guthira kwa barafu iria ikoragwo kirima-ini kia Mt. Kenya na imera citarathimika na cigatwarana wega iria citumite magetha mathuke na manyihe, kuhua kwa njuui na ihumo cia maai na mangi maingi.

Mwero uyu ngathiti niikwonania maundu maria maririirio thiini wa semina maria mangitutethia

gutaokwo wega ugaruruku wa riera nikii. Tukwambiriria na kumenya wega ciugo icio naningi tuthii na mbere na guthoma uria miti yaku inyitaga itemi kunyihia ugwati uria umanaga na ugaruruku wa riera.

Ugaruruku wa riera ni kii?

Ugaruruku wa riera ni kwongerereka kwa urugari uria uri thi uria ucokaga ugatuma riera ricenje. Thi riria yagia na urugari muingi niitumaga imera cia mbura cicenjie na gukagia na ihuhakania nene na maai ma iria makambatira, mimera igathuka na miti ikaninwo ohamwe na nyamu cia githaka. Riria atalamu makwaria maundu megii ugaruruku wa riera, nimaroraga muno global warming iria irahagwo ni maundu mariu mundu ekaga na mogwati maria marehagwo ni maundu maya.

Thi niirahuha makiria?

li! Thii niyongereire urugari na muigana wa 1°C kwa makiria ma miaka 100. Aingi a atalamu a



uhoro wa riera monaga ati andu nio matumite thi yongerereke urugari na njira ya gutema miti na gucina indo cia tiiri, coal petrol na riera itheru na kwaga gutungata migunda yao.

Maundu maria marehagwo ni Greenhouse.

Maundu maria marehagwo ni greenhouse nit a kwongerereka kwa urugari wa thi nitondu riera guku iguru riria ritagwo greenhouse ta carbon dioxide, nitrous oxide, sulphur dioxide na methane nichotaga kunyita hinya wa riuu. Carbon nyingi yumanaga na gutema miti, ndogo ya iganda, ndogo ya ngari na ndogo ya makara na miti.

Mogwati ma Global Warming ni mariku?

- Kwaga kwa maai na kuuma kwa migunda.
- Gutherema kwa mirimu ta malaria. Kugia na urugari muingi na kuhotithia rwagi guciarana na kwongerera ugwati wa malaria. Micii miingi na mathibitari nomakorwo ni ugwati uyu na mituurire ya andu ikanyiha na ikuu cikongerereka.
- Kunyiha kwa magetha ma urimi na makiria mabururi-ini maria mari East Africa. Na niundu wa kunyiha kwa mbura na kwongerereka kwa guciarana kwa tutambi niundu wa ungi wa urugari, magetha nimanyihaga na uthoni ugathii nambere na kuongerereka miciini iitu.
- Kwongerereka kwa mathogora ma irio nitondu arimi aingi nimanyihitie magetha na irio cikanyiha, mathogora nimathiaga iguru nitondu andu nimarabatara irio na ni nini.
- Mogaruruku manene ma magetha na riera na muno mititu. Ihumo cia maai cikahua. Maundu maya nimagutuma uhei wa maai wa irio unyihe. Maundu maya ningi nimakunyahia uthondeki wa thitima ya maai. Iganda ciitu, mathibitari na

kundu kungi kuria gutumagirwo thitima nigukuhutio na njira nene ma. Utambia wa maai mataown-ini na miciini nigukuhutio ona kuo.

- Mamilioni ma andu mari ugwati-ini wa muiyuro wa maai uria urehagwo ni mbura nene na maai ma iria kwambatira.

Niatia tungigitira Global Warming?

Handa na utungate miti!

Ta urui twona haha iguru, carbon dioxide ni imwe ya riera riria rirehaga global warming. Miti niigucagia carbon dioxide kuma riera-ini riria ireka photosynthesis na ikamiiga thiini wayo mutiini na miriirni hamwe na tiiri ta cellulose carbon. Na ningi, riria miti yatemwo na yacinwo niirekagiriria carbon iria ikoretwo iigite rieraini.

Niui ati o muti nouthondeke riera riaguo?

Miti na mahuti maguo niuhumbagira tgi. Niitumaga kugie na riera riega na kiiruru gikaagira. Niukuona ati tiiri uria uri miti-ini iria iri na kiiruru niukoragwo uri mugunyu gukira uria uri riuu-ini. Riria thi yaikara iri hehu, tiiri niuhotaga gkuiga ugungu gwa kahinda karaihu. Uu nikuga ati miti iria iri mugunda-ini gwaku niiteithagia tiiri kugia na maai na igateithia kuiga maai macio gwa kahinda karaihu. Njira ino niiguteithiriria mimera yaku hamwe na aria mahuthagira maai.

Carbo Credits ni kii?

Niguo uthondeke carbon credits cia TIST urabatara indo 3;

- 1) Kwongerereka kwa kunyiha kwa carbon riera-ini
- 2) Kwiranira kunina carbon riera-ini gwa kahinda karaihu.
- 3) Kuhitukio ni honge ciirugamiriire ati makinya nimoetwo kuringana na watho.



Miti niigucagia carbon dioxide kuuma riera- ini riria ireka photosynthesis na ikamiiga thiini wayo , miri- ini ohamwe na tiiri- ini. Muigana wa carbon uria woyagwo kuuma riera- ini na ukaigwo nouthimike na uthuthurio na uhitukio na njira nginyaniru na kugucio kuu kwa carbon rieraini nokwendio kuri thoko ya carbon credits. Aguri nomagure carbon credits ici niguu kunyihia carbon dioxide.

TIST iri na uhoti wa kwendia carbon iriaigucitio miti- ini ota uria arimi mendagia igwa kana iria. No riria urendia carbon ndurabatara kuneana muti. No urabatara kugucia carbon dioxide kuma riera- ini mugunda- ini waku kana mutitu- ini na utarirwo. Wendi wa carbon nouhanikire New York, Chicago kana London ona kana micii mingi bururi- ini wothe, kana uiguithanirio ni andu kiumbe na makambuni imwe kwa imwe. Nonginya tukinyirie ikiro na mawatho ma thoko. Tutingitema mititu kana miti iria iri migunda- ini gwisu tondu undu uyu niuthukagia maria maturigiciirie. Nonginya twitikire kuiga miti iri muoyo gwa kahinda ka miaka 30 na makiria. Nonginya tuheane ugoro mukinyaniru. Riria miti yahandwo, ithimi na uteri nichihuthikaga guthima muigana wa carbon iria igucitio ni miti ya arimi a TIST. Ririkana o ringi, miti nditwaragwo thoko. likaraga migunda- ini na o uria iraikara kuo noguo marihi maguthii nambere na kuingiha. Kwa uguo murimi athiaga nambere na kuiga miti iri muoyo na ikamuhe irio cia mahiu ohamwe na ngu na matunda. Mbeca iria TIST ithondekaga kumana na wendia wa carbon cithondekaga kihumo kia marihi maria magayanagwo ni arimi a TIST na igatumika gutheremia TIST, hamwe na githomo, uteri wa miti na utungati wa TIST

Miti yothe igucagi carbon iiganaine ?

Aca, miti iria ikoragwo na utungu munene nihotaga kuiga carbon nyingi gukira iria miceke. Miti miraihu noayo niigugagia carbon nyingi gukira

iria mikuhi. Kwa uguo, miti mitungu niirehage marihi maingi kumana na carbon credits. Uu nikuga ati miti iria ihanditwo na utaganu mwega iri na mweke wa gukura iri minene na irehe marihi maingi. Ndigayanaga unoru wa tiiri na maai ta miti iria ikuhaniriirie.

Kwa uguo, niguu kwamukira marihi maingi kumana na miti, ni hari na bata kuhanda miti na utaganu muiganu uria ukumiteithia gukura iri mitungu na miraihu. Kuhurura miti niguu wone ngu na niguu ikure wega ni njira njega ya gutungata miti.

Aguri a carbon credits mari ku na ni ariku?

Gwa kahinda gaka carbon credits yendagio na njira ya kwirutira kuhitukira gukinyiria mawatho ma thoko. Mawatho maya nomakorwo mari ngurani ota uria gukoragwo na mithemba ngurani ya indo thoko- ini ingi iria wendagia na ukagura (ta kahuwa). TIST noyendie carbon credits kuhitukira mawatho maya kana kuhitukira thoko ya kwiyendera tondu ikoragwo iri na ukinyaniru mwega.

Kuri na ikiro ngurani cia thoko na mawatho ngurani maria macenjagia ma uhandi wa miti, urori na uramati na nomuhaka tukinyanirie maundu maya niguu tuhote kwendia carbon. Tuhuthagira uthuthuria uria niwa kirathi kia iguru muno –Verified Carbon Standard (VCS) na Climate, Community and Biodiversity Alliance Standards (CCBA).

TIST ikoragwo na aguri mithemba iiri.

Wa mbere ni andu aria merutiire kuheana mbeca ciao niguu kuhinyiriria andu kuhanda mit. Muhiano nit a kuriha mitaratara ya uhandi wa miti niguu gutua uhiki na micemanio iri na riera itheru. Wa keeri ni kambuni thiini wa US, Europe, Canada na mabururi maria mangi makoragwo na iganda maria marihaga na kwiyendera uhnyihia wa carbon nitondu nomakorwo mari na wendi mwega kana makihariria niundu wa ,awatho maria mangiuka thutha- ini.

TIST niikenetio nigukorwo na carbon credits ya kirathi kia iguru na ikahota kuhe aguri aao.



Utheru: Guthambia moko.

Guthambia moko na thabuni ni umwe wa maundu maria mahuthu ma kugitira mirimu ta kuharwo na pneumonia iria irehaga ikuu nyingi cia ciana Kenya.

Moko mahuthikaga gutambia mirimu kuma mundu kuri uria ungi kuhitukira kuhutania kana njira ingi. Andu nimatheremagia bacteria na kuhutania moko, njuiri, maniuru na uthiu. Moko maria mahutanitie na nyamu kana giko kia nyamu hamwe na irio ciri na giko nimatheremagia mirimu, viruses na tutambi. Guthambia moko na thabuni nigutumaga utheremu uyu uthire.

Guthambia moko na maai matheri gutinginina utheremu uyu biu ta riria wathambia na thabuni. Uthambia mwega wa moko na thabuni uhuthagira 8-15 seconds na thutha kuniarithia biu.

Ikiro cia bata ugithambia moo na thabuni

maya nimo mahinda maria ma bata wagiriirwo niguthambia moko.

1. Thutha wa kuria irio.
2. Thutha wa kunyita kundu kwa muingi.
3. Thutha wa kunyita ciana.
4. Thutha na mbere ya kuhariria irio na muno nyama.
5. Thutha wa kuhuthira kioro.
6. Riria moko mari na giko
7. Thutha wa kunyita nyamu.
8. Riria wee kana mundu uri hakuhi nawe ari muruaru.

Kumenyithania guthambia moko na thabuni.

Guthambia moko na thabuni nikwa bata muno na makiria kuria andu macemanitie(cukuru, ofisi, kanitha, micemania), kuria andu aruaru mari(thibitari, nursing home), kuria irio cirathondekerwo na makiria kuria kuri na ciana nini.

Njira ya naihenya ya githambia moko thutha wa kuhuthira kioro.

Njira iria huthu ni gukorwo na kibuyu kri na maai hakihi na kioro na uige thabuni hau. No ona kuri ouguo, njira ino ti nginyaniru tinu andu nomarinyita kibuyu njira iria ingitambia erms. Njira ingi na njega noithindekwo na njira ino:

1. Thondeka rubau rwega na uhuririre kamucumari.
2. Enja irima ria uitira maai.
3. Thondeka mukebe munene na uiyurie maai.
4. Etha mukebe ungi munini na uuture irima.
5. Tura karima kanini na-thi na na wikire kamuti.
6. Rikia mukebe munini hari uyu munene na uiyurie maai.
7. Cuuria mukebe munini rubau-ini ruria niguo maai mabiririe guitika.
8. Thambia moko maku na thabuni.

Weega wa njira ino ni ati unyitaga o mukebe uria munini o rimwe niguo wikire maai.

Mazingira Bora



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Kiswahili Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Bwana Githiri, afisa wa Ushirika kutoka Igembe South Sub-County aonyeshwa akifunza memba wa cluster ya Athi kuhusu uendeshaji wa SACCO.

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Kikundi cha TIST cha Blessy: Kilimo hai imeongeza mazao yangu.

Umeletewa na Annet Kaari, mtumishi katika cluster.

Sisi, memba wa kikundi cha TIST cha Blessy na cluster ya Nguruki, tuna furaha kugawana nanyi kuhusu maendeleo na mafanikio yetu tangu tulipoingia katika TIST mwaka 2011.

Kikundi chetu kina wanakikundi kumi na wawili, ambao watano wake ni wanawake na saba ni wanaume. Kufikia hapo, tumepanda zaidi ya miti mipya elfu mia mbili ambayo imehesabiwa na ambayo ni mchanganyiko wa miti ya kiasili, migeni na mitunda.

Tangu tulipojiunga na TIST, tumepata mafunzo mengi. Tumefunzwa kuhusu kilimo hai, meko ya kuokoa nishati, kutayarisha na kusimamia vitalu, upandaji wa miti, kuzuia umomonyoko wa udongo na mengi mengineyo.

Huwa tunalipwa motisha ya miti na tuna nia ya kuendele kujiunga na shughuli za TIST ili kupata faida zaidi.



Bwana Fredrick Kithinji, memba wa kikundi cha TIST cha Blessy katika cluster ya Nguruki.

Cluster ya TIST ya Athi: Kusonga mbele.

Umeletewa na William Mugambi, mtumishi katika cluster.

Tunakua! Yasema cluster ya Athi.

Mwezi wa Octoba mwaka 2011, cluster ya Athi ikawa cluster ya kwanza katika TIST kusajiliwa kirasmi kama SACCO. Hili hufuata kujitolea kwa hali ya juu kwa memba ili kusaidiana kati yao. TIST ilitupa nafasi kupitia mikutano ya cluster ambapo tunakutana na kugawana mawazo mapya.

Tulianza kama kundi la kuleteana pesa kila mtu siku yake kasha tukaanza kuleta pesa pamoja na kupenana mikopo kati yetu na sasa tuko SACCO

kirasmi. Pamoja na mafunzo mengine tunayopata kila mwezi kutokana na TIST, memba wetu wamekumbatia SACCO kama njia ya kuongeza thamani faida tunazopata kutokana na TIST.

Tuna shukrani sana kwa usaidizi kutoka kwa afisa wa Ushirika katika sub-county ya Igembe Magharibi, Bwana Githiri, ambaye hakutusaidia kusajilika tu, bali pia alitufunza jinsi ya kuendesha SACCO.

Pamoja na TIST, upeo wetu ni mbali na ni pana. Kusonga mbele kila wakati.!



Achisha mmomonyoko wa udongo!

Mmomonyoko wa udongo husababishwa na maji yanayopitia juu ya ardhi na huathiri hasa ardhi ilipo wazi, pasipo na nyasi ya kufunikia au mashamba yasiyo na mitaro au yaliyo na mimea chache. Ardhi nyingi hasa katika cluster zilizona miinuko zimeachwa na mitaro, katika maeneo mengine kuna mitaro mikubwa zaidi.

Tani za mbolea ya viwanda zimepotea kupitia mmomonyoko wa udongo na pia mamilioni ya pesa yamepotezwa baharini. Hata hivyo, ardhi zetu zimedhoofika zaidi na zaidi.

Tunahimiza kila mmoja wetu kuchukua hatua ya kuzuia janga hili kwa kupanda miti ya kiasili katika mashamba yetu na kupanda nyasi na mimea mingine ya kufunika ardhi. Mambo haya yataongeza

thamani ya ukulima wa mifugo na kupunguza gharama za kununua lishe ya mifugo.

Tukumbatieni njia za kulinda na kuhifadhi kwa kufunikia vijito na mito yetu kwa miti iliyo na urafiki na mito. Pia, tutiini sheria za serikali kwa kuepuka kulima mita thelathini au kupanda mikaratusi mita mia moja karibu na mito hii.

Muhimu zaidi, kila mmoja wetu aanze kilimo hai. Kilimo hai husaidia kupunguza kasi ya maji yanayopita juu ya ardhi na palipo na mvua isiyotosha, mashimo ya kilimo hai huweka maji muda mrefu zaidi na kuongeza uwezekano wa kupata zao zuri. Kwa kunasa maji kutoka kwa paa la nyumba zetu, twaweza kukusanya maji yanayoweza kutumika wakati wa kiangazi.

Wakulima katika TIST wapambana na ongezeko la joto ulimwenguni na mabadiliko ya tabia nchi.

Wakulima katika TIST wameitikia mwito wa ulimwengu wa kupambana na ongezeko la joto na mabadiliko ya tabia nchi. Wakulima wengi wametafuta kuelewa kupitia semina/mafunzo ya TIST na katika mikutano ya cluster ili kusoma na kuelewa mengi zaidi kuhusu kuongezeka kwa joto, athari zake kwa tabianchi na mbinu za kukabiliana nalo. Tunaona athari za mabadiliko ya tabianchi leo. Ili kuonyesha matukio kadhaa ya athari hizi, mafuriko ya Elnino ya mwaka 1998 yaliyovuruga karibu nchi yote na ukame mrefu uliofuatilia, na upepo mkali wa mwaka 2004 sana sana uliongezewa na ongezeko la joto duniani. Viashiria vingine mashuhuri ni kupunguzika kwa barafu katika kilele cha mlima Kenya, hali ya anga isiyo na utaratibu na ambayo imesababisha kuharibika kwa mazao katika maeneo mengi, kukauka kwa chemichemi na vyanzo vya maji, pamoja na mengine mengi.

Jarida la mwezi huu linaangazia mafunzo

kutoka semina ili sote tuelewe ongezeko la joto duniani na mabadiliko ya tabianchi. Tutaanza kwa kuelezea kila neon na kulieleza zaidi na pia tujue jinsi miti yako ina jukumu kubwa katika kukabiliana na athari za ongezeko la joto duniani.

Ongezeko la joto duniani ni nini?

Ongezeko la joto duniani ni ongezeko wastani la joto duniani, ambalo huleta mabadiliko katika tabianchi. Dunia yenye joto zaidi yaweza kusababisha mabadiliko katika mvua, dhoruba kali zaidi, kuongezeka kwa maji baharini, kuharibika kwa mimea, na athari kadhaa kwa mimea, wanyama pori na wanadamu. Wanasayansi wanapongea kuhusu suara la mabadiliko ya tabianchi na katika hali ya anga, wasi wasi yao huelekezwa kwa ongezeko la joto linalotokana na kazi za binadamu na utofauti katika tabianchi na hali ya anga unaoletwa na jambo hili.

**Je, joto katika dunia linaongezeka?**

Ndio! Dunia imeongezeka joto zaidi ya digrii moja katika miaka mia moja iliyopita. Wengi wa wanasayansi wanaoongoza katika dunia hufikiri kuwa shughuli za binadamu hufanyanya dunia kuongezeka joto, kama kuchoma makaa yam awe, petrol na gesi ya kiasilia na kukata misitu na usimamizi mbaya wa ardhi.

Greenhouse Effect ni nini?

Athari hii ni kuongezeka kwa joto duniani kutakotokana na uwepo wa gesi Fulani katika hewa, zinazoitwa gesi chafu, kama, carbon dioxide, nitrous oxide, sulphur dioxide, na methane ambazo hutega nishati kutokana na jua. Vyanzo vikuu vya kaboni ni ukataji wa misitu, gesi kutokana na viwanda, gesi kutokana na magari, gesi kutokana na kuchoma miti au makaa na kuchoma misitu.

Hatari za ongezeko la joto duniani ni zipi?

- Uhaba wa maji mkali katika maeneo kame au yanayopakana na maeneo kame waweza kusababisha maeneo zaidi kuwa na jangwa.
- Ongezeko la kuenea kwa magonjwa kama malaria. Jinsi maeneo yanavokuwa yenye joto zaidi, yanakuwa mwafaka zaidi kama maeneo ya kuzalisha ya mbu, na kuongeza uwezekano wa kupata malaria. Familia na hospitali nyingi zaweza kuathirika, wastani ya miaka ya kuishi kupungua, na ongezeko la vifo vya watoto wadogo.
- Kupunguka kwa uzalishaji katika nchi za kitropiki na kisub-tropiki, hasa nchi katika Afrika Mashariki. Kwa sababu ya mvua iliyopunguka na ongezeko la uzalishaji wa wadudu kwa sababu ya joto, uzalishaji wa chakula waweza kupungua na ili husababisha umaskini na njaa katika familia na jamii nyingi.
- Gharama zilizoongezeka za chakula katika ulimwengu mzima. Jinsi wakulima wengi watakavyopata mazao chache na chakula kuwa adimu, ndivyo bei ya chakula itakavyoongezeka kwa sababu mahitaji ni mengi na usambazaji ni kidogo.

- Mabadiliko makubwa katika uzalishaji na muundo wa mifumo muhimu ya mazingira hasa misitu. Maeneo ya vyanzo vya maji katika milima na misitu huendelea kukauka. Hili litaathiri uwezo wa kumwagilia mazao maji na kupunguza maji katika mikondo ya maji yanayohitajika kujaza mabwawa na hifadhi za maji. Hili litapunguza kutengenezwa kwa umeme. Viwanda, mahospitali na taasisi zinginezo zetu ambazo kwa kiwango kikubwa hutegemea umeme zitaathirika sana. Usambazaji wa maji ya paipu katika maeneo ya mijini nay ale ya vijijini pia utaathirika.
- Makumi ya mamilioni ya watu watawekwa katika hatari ya mafuriko na maporomoko ya ardhi, yanayoletwa na makadirio ya ongezeko la uzito wa mvua na katika maeneo ya bahari, ongezeko la viwango vya maji.

Nawezaje kuzuia ongezeko la joto ulimwenguni?**Panda na uichunge miti!**

Kama ilivyotajwa hapo juu, carbon dioxide ni moja ya gesi zinazoleta ongezeko la joto ulimwenguni. Miti hunyonya gesi hii kutoka kwa hewa inapotengeneza chakula na kuiweka katika mbao, mizizi na udongo kama kaboni selulosi. Hata hivyo, miti inapokatwa na kuchomwa, huachilia kaboni iliyokuwa imeweka.

Unajua kuwa ila mti waweza kutengeneza tabianchi ndogo mahali ulipo?

Miti na bima yake hupunguza joto lililo katika uso wa dunia. Hisi faraja ya kivuli cha mti. Tambua kwamba udongo ulio chini yake huwa na maji zaidi kulika ya udongo ulio palipo na jua pasipo na kivuli. Udongo unapokaa ukiwa baridi, huwa unaweka maji muda mrefu zaidi. Ili lamaanisha kuwa miti katika ardhi yako itasaidia kuongeza kiasi cha maji katika udongo wako na pia itasaidia kuweka maji udongoni kwa muda mrefu zaidi. Hili litasaidia mimea yako na pia kusaidia watu wanaotumia maji katika eneo lako.

**Kadi za kaboni ni nini?**

Ili kutengeneza kadi ya kaboni wahitaji vitu vitatu:

- 1) Punguzo la kweli na la kuongeza la kaboni dioksidi iliyo katika hewa;
- 2) Ahadi ya kuweka kaboni hiyo mbali na hewa kwa muda mrefu;
- 3) Ukaguzi unaofanywa na chama tofauti kinachothibitisha kwamba shughuli zimefanyika kulingana na mujibu wa sheria.

Miti hunyonya kaboni dioksidi kutoka kwa hewa wakati inapotengeneza chakula na kuiweka katika mbao, mizizi na udongo. Kiasi cha kaboni kilichochukuliwa kutoka kwa hewa hupimwa na kuhesabiwa, halafu, kinapothibitishwa kuwa sahihi, kaboni hii iliyonyonywa yaweza kuuzwa katika soko la ulimwengu kama kadi za kaboni. Wanunuzi yaweza kununua kadi hizi kukabiliana na kaboni wanayoachilia kwa hewa.

TIST huweza kuuza kaboni iliyonyonywa na miti kama wazalishaji wanavyouza sukari na maziwa. Hata hivyo, katika kaboni, hauhitaji kutuma mti sokoni. Badalake, thamani ya kaboni iliyotolewa katika hewa na kuwekwa katika miti iliyo shambani au katika msitu wako, hupimwa na kuripotiwa. Biashara ya kadi za kaboni yaweza kufanyika New York, Chicago, London na mijiji mingineyo ulimwenguni, ama pia kupangwa kati ya watu au kampuni mbili moja kwa moja. Lazima tutimize sheria na mahitaji ya soko. Hatuwezi kukata msitu wote au kukata miti ili kupanda miti kwani hili ni baya kwa mazingira. Lazima tujitoe kuweka miti hii katika shamba kwa muda mrefu, thelathini au zaidi. Lazima turipoti data sahihi. Miti inapopandwa, vipimo na hesabu hufanyika ili kupima kiasi cha kaboni iliyonyonywa na miti ya mkulima katika TIST. Kumbuka tena, miti haipelekwi sokoni. Hukaa shambani na jinsi inavyokaa hai, ndivyo malipo yanavyoongezeka. Kwa hivyo, mkulima hukaa na miti, lishe ya mifugo, kuni, matunda na pia karanga. Pesa zinazotengenezwa na TIST katika kuuza kadi za kaboni hujenga chanzo kipya cha mapato na hugawanywa kati ya vikundi vidogo katika TIST na hutumika kusaidia kukidhi gharama za TIST, ambazo ni pamoja na mafunzo, uhesabu miti na usimamizi.

Je, Miti yote hunyonya kiasi sawach kaboni?

La, miti iliyo na mzingo mpana huweka kaboni zaidi ya miti iliyo myembamba. Miti mirefu pia hunyonya kaboni zaidi ya miti mifupi. Hivyo basi, miti iliyo mipana huleta mapato zaidi kutokana na kadi za kaboni. Haishindani kupata virutubisho katika udongo na maji kama miti iliyokaribiana.

Hivyo basi, ili kupata mapato mazuri kutokana na miti yetu, ni muhimu kuipanda kwa nafasi tosha itakayoirusu kukua kiafya, kwa urefu na upana. Kupunguza miti ili kupata kuni na kuiacha miti mingine ikue vizuri huwa njia nzuri zaidi ya kusimamia miti yako.

Ni wapi/nani hununua kadi za kaboni?

Hivi sasa, kadi za kaboni huuzwa katika masoko ya hiari na katika masoko ya kuhitimu mahitaji. Zaweza kuthibitishwa kwa njia tofauti, kama kulivyo na bidhaa mbalimbali na kuthibitishwa kwa bidhaa zingine unazonunua na kuuza (kama kahawa, kahawa aina mbalimbali). TIST yaweza kuuza kadi zake za kaboni katika masoko ya hiari au katika masoko ya kuhitimu mahitaji kwa sababu kadi zake ni za hali ya juu.

Kuna viwango mbali mbali katika masoko haya vilivyo na sheria mbali mbali na zinazobadilika kila baada ya muda zinazohusu upandaji wa miti, ufuatiliaji, na kuripoti ambazo tunahitajika kuhitimu ili kuuza kadi hizi za kaboni. Tunatumia viwango vya hali ya juu zaidi katika ukaguzi na kuthibitishwa — the Verified Carbon Standard (VCS) na the Climate, Community, and Biodiversity Alliance Standards (CCBA).

TIST ina wanunuzi wa aina mbili msingi:

Aina ya kwanza ni ya watu wanaojitolea kupeana pesa ili kuwapa watu motisha ya kupanda miti. Kwa mfano kulipia miradi ya upandaji wa miti kufanya harusi au semina kuwa kuwa isiyoongeza kaboni katika hewa. Aina ya pili ni ya makampuni yaliyo Amerika, Uropa, Canada na katika nchi zingine zilizokua viwanda zinazojitolea kupunguza gesi chafu zinazotoa kwa sababu mawakala wema wa mazingira au wanajitayarisha kuhitimu mahitaji Fulani ya baadaye.

TIST ina furaha sana kuwa na kadi za kaboni za hali ya juu, na kuweza kusambaza kwa wateja mbalimbali.



Usafi : Kuosha mikono.

Kuosha mikono kwa sabuni ni njia moja iliyo katika njia bora na zenye gharama nafuu zaidi katika kuzuia magonjwa ya kuhara na nimonia, ambazo pamoja husababisha vifo vya watoto wengi katika Kenya.

Mikono mara nyingi hubeba vijidudu kutoka kwa mtu mmoja hadi kwa mwingine, kupitia kuguzana au kupitia kuguza mahali. Watu wanaweza kutambaza bacteria kupitia kuguza mikono, nywele, pua na nyuso za wengine. Mikono ambayo imeguza mavi ya mtu au mnyama, maji ya mwili kama makamasi na vyakula ama maji yaliyochafuka hubeba bacteria, virusi na vijidudu vinavyobeba magonjwa. Kuosha mikono kwa sabuni husaidia kupitia kuhinikiza uambukizaji wa ugonjwa.

Kuosha mikono kwa maji pekee husaidia kidogo kuliko kuosha kwa sabuni kwa upande wa kutoa vidudu. Uoshaji mikono ulio bora ni kwa sabuni na kwa muda wa sekunde nane kufika kumi na tano, kukifuatiliwa na kusuuza na maji yanayomwagika.

Wakati muhimu sana wa kuosha mikono kwa sabuni

Zifuatazo ni saa muhimu za kuosha mikono yako:

1. Kabla na baada ya kula vyakula na vitafunio
2. Kabla ya kuwatunza watoto wadogo
3. Baada ya kuguza maeneo ya umma.
4. Kabla na baada ya kutayarisha vyakula, sanasana nyama, kuku au vyakula vya kutoka baharini
5. Baada ya kutumia choo
6. Wakati mikono ni chafu
7. Baada ya kuguza wanyama
8. Wakati wewe au mtu aliye karibu nawe ni mgonjwa

Utambuzi wa uoshaji mikono kwa sabuni

Uoshaji mikono unawezekana kuwa muhimu zaidi wakati watu wanakutana (shuleni, maofisini, makanisani, mikutanoni), ambapo wagonjwa wapo (hospitalini, maskani ya ulezi), mahala chakula kinatayarishiwa na kugawanwa na manyumbani, sanasana walipo watoto wadogo na watu wazima wagonjwa.

Kituo cha kuosha mikono baada ya kwenda choo kilicho rahisi kutengeneza

Kituo rahisi zaidi ni kuwa ni kuwa na mkebe uliojaa maji nje ya choo. Sabuni yapaswa kuwepo.

Hata hivyo, njia hii si nzuri sana kwani watu watahitaji kushika kibuyu kabla na baada ya kuosha mikono jambo ambalo bado litasambaza vidudu. Njia badala ya kuosha mikono ni kufanya kituo kama ifuatavyo:

1. Tengeza sura ya mbao iliyo na msumari katikati wa kushikilia pegi.
2. Tengeza shimo la kuchukua maji machafu kwa kuchimba shimo likizunguka sura na kulijaza mawe. Hili litaruhusu maji kuingia mchangani.
3. Chukua mkebe mkubwa uliofunguka juu (pipa au kibuyu kilichokatwa) na ukijaze maji.
4. Tafuta mkebe mdogo zaidi uliofunguka juu, kama chupa ya maji iliyokatwa.
5. Toboa shimo upande wa chini wa mkebe huu na huongeze mkono wa kuushika.
6. Ingiza mkebe mdogo kwa ule mkubwa ili kuujaza maji.
7. Tundika mkebe mdogo kwa pegi ili maji yaanze kutoka kidogo kidogo kupitia shimo kama kwa tapu ya maji.
8. Osha mikono yako kwa sabuni.

Ubora wa njia hii ni kuwa unaguza mkebe mdogo mara moja pekee kuujaza maji.

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
www.tist.org

Kikamba Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Mutongoi wa Co-operative Mr. Githiri, Igembe South Sub-County aitwony'a ithyi ngwataniao ya Athi TIST undu wa utwaisya maundu ma SACCO.

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Kikundi Kya Blessy TIST: Nima Ya Kusuvia ni tumite ngetha yongeleka.

na Annet Kaari, muthukumi wa ngwatanio.

Ithyi ene kikundi kya Blessy TIST twi nthini wa ngwatanio ya Nguruki na twina utanu kumutavya maendeeo ala twinamo kuma twalika thini wa TIST mwakani wa 2011.

Kikundi kitu kina ene / amemba ikumi na eli ala ni iveti itano na aume muonza. Kwayu twina miti mbee wa 1,200 ila tuvandite na mivitukithye ila ni mithemba kivathukany'o yivo miti ya kikamba, miti ya kuka na miti ya matunda.

Kuma twalika nthini wa TIST nitukwatite momanyisyo maingi amwe ma maumanyisyo aya nita nima ya kusuvia (CF), Maiko mausuvia mwaki, Kuseuvya ivuio na kuisuvia, Uvandi wa miti, kusuvia muthanga kukuwa na maundu angi maingi.

Nitwithiitwe tuyiivwa ndivi ya uthuthio na nitutwite kwikala nthini wa TIST nikana tutetheke mbeange.



Mr. Fredrick Kithini, umwe wa ene ma kikundi kya Blessy TIST nthini wa ngwatanio ya Nguruki aendee na kwika nima ya kusuvia (CF).

Ngwatanio ya Athi: Kuthi na Mbee.

na William Mugambi, Muthukumi wa ngwatanio.

Nitwuanite! niw'o ngwatanio ya Athi ikwasya. Kwi October 2011, Ngwatanio ya Athi niyatwikie ya mbee thini wa TIST Kwiandikithya wa Sacco (Saving and Credit Co-operative Society). Kii kyaatiiwe ni ene ma Athi kwiyumya kwa kila umwe.

TIST nitunengeta mesa ya kukomana na kunengane mawoni kivathukany'o na meu yila twakomana mbumbanoni sya kila mwai.

Twambiie ta Nzangulo na twaendee twambiia kwia mbesa sya mesa nayu tui

nitwiyandikithitye ta SACCO. Ovamwe na momanyisyo ala twithiitwe tuikwata kuma kwa TIST, ene kikundi kii nitwithiitwe tuitania SACCO ta nzia imwe ya kwongela ukwati kuma kila twakwata kwa TIST.

Twina muvea kwa kwithiwa tukwatitwe mbau ni mutongoi Igeme South Sub-County Co-operative

Mr. Githiri, ula watutetheeisy kwiandikithya ta SACCO na withiitwe aitumanyisya undu wa kuendeesya maundu ma SACCO.

Twina TIST twina uthathau na nituendee mbee na kuasa.



Ungwamyia muthanga kukuwa.

Muthanga kaingi ukuawa ni kiw'u kyasembela muthangani utemuvwike ni nyeki, miti kana ona mitau. Itheka mbingi munamuno sya ngwatanio situ syi nthini wa isio ndiuku/syikitheeoni na syina matwika ma muthanga kutuuka na kukuwa ni kiw'u, na isioni ingi.

Unou mwingi wa muthanga kaingi niuendete na muthanga uikiwa na wasyo wa mbesa mbingi ukatwawa ukangani. Na uu now'o itheka situ iendee na muthanga kwosa.

Nituu thuthya kila umwe atate na vinya kusuvia muthanga kwa kuvanda miti ya kiene na nyeki vamwe na ikuthu na mimea ya kuvwika muthanga. Kii kikongela ueti kwa nima ya indo sya yiia nundu tukeethiwa tutekua liu wa indo.

Tutanw'e ni kusuvia mawithyululuko syivo mbusi, mikao na kuvanda miti ila isuvia kiw'u na kuvwika nthongo situ na kuisuvia. Ingi twiw'e miayo ya silikali na tuiika kuima nguumoni sya mbusi. Tutie matambya ta miongo itatu kuma mbsini na matambya yiana yimwe kuma kula kwi kiw'u tuivanda misanduku.

Kya vata, kila umwe witu atate eke nima ya kusuvia (CF). Nima ino nikusiia kiw'u kusemba kitheete na ethiwa mbua ni nini maima ala twisaa nimeutea kiw'u na kiyikala kwa kilungu kiasa kwoou kiitetheesya kwithiwa na ngetha nzeo.

Kwa kuketha kiw'u kuma ialani sya nyumba nikuututetheesya ukwata kiw'u kya utumia ivindani ya nthano.

Aimi ma TIST kuola uvyuvu wa nthi na uvinduku wa nzeve.

Aimi ma TIST nimeetikie wito wa kumatha undu tukuola uvyuvu wa nthi na uvinduku wa nzeve. Aimi

angi nimamathie undu matonya kuelewa nzia ii kwisila kwa momanyisyo na semina sya TIST na ingi kwa mbumbano sya ngwatanio sya kila mwai nimaendeeie na kuelew'a undu wa uvyuvu wa nthi na uvinduku wa nzeve na niata matonya kwika kuola mothuku ala maetawe ni uvyuvu na uvinduku. Kwa ngelekany'o ta El-Nino ya 1998 ila yaetie wasyo munene na itina yaatiwa ni yua inene nthini wa nthi yitu Kenya, Ingi kiseve kinenen kya hurricane mwakani wa 2003 ila tukwo nitasyaetiwe ni uvyuvu na uvinduku wa nzeve. Ngelekany'o ingi ni kuthela kwa ia kiimani kya Mt. Kenya, mbua kwithiwa iteumanyika yiua indii na kusesya ivinda yila yauaa na kwoou kundu kwingi ithima, nthongo kungala vamwe na mbusi na mikao ila itany'aa.

Ithangu ya mwai uyu ni kukwony'a momanyisyo amwe ma semina ala meutuma ueangwa mbee undu wa uvyuvu wa nthi na uvinduku wa nzeve mbeange. Mbee twianmbiia kwa kumanya

kila ndeto na tuyona undu miti ithukumaa kuete ualyuku nthini wa uvyuvu wa nthi.

Uvyuvu wa nthi nikiyau?

Uu ni wongeleku muutia kuma muthangani ula uetae uvinduku wa nzeve. Uvyuvu/muutia mwingi kuma nthi utumaa undu mbua yuaa isesya, kukethiwa na iuutani, kiw'u kya ukanga kwambata, mimea kulea usyaa, nyamu sya kithekani kukosa liu, miti vamwe na andu. Yila asomi ma saensi mekwasya uvyuvu wa nthi niwongelekete nundu wa mawiko ma mundu na kuete mauvinduku manene ma nzeve na uvyuvu wa nthi.

Ikonyo inya sya nthi niendee na uvyuva?

Ii!, nthi yi'u tui niyongelete uvyuvu kwa ndikilii imwe 10C ivindani ya myaka iana (100years). Asomi aingi meisilya kana mawiko ma mundu ala uendee na kwika nimo matumaa muiitia wa nthi uendee na kwongeleka amwe nita:- kuvivya syindu ila sumasya syuki ithuku muno ta mavia ma coal, mauta ma petrol na nzeve ila syi ungu wa muthanga vamwe na kutema miti na kulea usuvua itheka.

**Nyumba ya Ngilini yithiawa na uthuku mwau?**

Nyumba ino ya ngilini niyongelaa uvyuvu wa nthi nundu nzeve ila yumasya na kulekya nthini wa mawithyululuko nzeve nthuku ta Carbon Dioxide, Nitrous Dioxide, Sulphur Dioxide na Methane Trap kuma suani.

Nzeve ithi nthuku sumaa ona kambunini na industries syosawa ni miti na kwoou yila miti itevo iyiete uvyuvu kwa kwosa na kusiiia vinya kuma suani. nzeve ithi nisumaa nthini wa mitokaa, ngu syavivya na mititu yakana.

Mothuku ma uvyuvu wa nthi mni mau?

- Kiw'u kwaa isioni ila sya weu na kutuma iso ingi itwika weu kana mangalata.
- Kwongeleka kwa mowau ta malaria. nundu undu kundu kwavyuva niw'o kwithiawa kwaseuvya isio nzeo sya umuu kuyaia na niw'o ukuaa tulinyu twa uwau wa malaria. Kwoou yila uu weeethiwa uwau wa malaria uiyaiika na kwongela ikw'u sya tuukenge na kutuma masivitali mausua.
- Kuoleka kwa ngetha ta undu kwithiitwe nthini wa nthi sya umiloni wa sua. Yila mbua yaua nini na tusamu tula twanangaa liu twongeleka nundu wa uvyuvu liu kuma miundani naw'o nunyivaa nundu wa ukosa mbua na kulika ni tusamu tuu nakii kiyiete wongeleku wa ukya misiyini kuthi mbaini na nthi kwa vamwe.
- Nthooa wa malii niwongelekaa nundu yila liu munini na ayi ini aingi na vai liu ungi nonginya vei wambate nikana uiwe nala mena mbesa sya kuuthooa.
- Ingi usyai na mititu iivinduka nundu ethiwa kuna kiw'u na liu nyamu nikuoleka kwa kukw'a na kukosa liu na mititu iyuma nundu miti ndikala vate kiw'u. kii nakyoy ingi kiituma liu ulea ukethwa nesa nundu vai kiw'u kya kungithya

miunda. Ingi sitima uioleka kwa industries, sivitali na kunduni kungi kwa vata kwa mundu. Ingi kiw'u kya miveleki kwa andu ma mataoni na kula kungi kiyioleka onakyo.

- Mamilioni ma andu nimekwithiwa na ivuso ithuku nundu wa muthanga kutuuka, nundu mbua yaua nakw'o kula kwi ukanga na maia kiw'u kiyongeleka na uyithia mawikalo nimeethiwa matevo.

Nata tutonya ysiia Uvyuvu wa Nthi?**Vanda an Kusuvia miti!**

Oundu tuwetete vaa iulu nzeve itavisaa (Carbon dioxide) ni imwe ya nzeve ila ietae uvyuvu nthini wa nthi yonthe. Miti niyosaa nzeve ino kuma kwa mawithyululuko yila ikuseuvya liu na kwia nthini wa mithamba, mii, matu na muthanga. Onakau yila twatema miti na twavivya isyokaa ikaumya nzeve isu itavisaa na kumilekya ingi mawithyululukoni.

Ni wisi kana kila muti nuseuvasya kavinduku ka nzeve?

Miti na matu mayo nimavwikaa muthaka wa nthi. Nutaniaa muunyi wa muti. Sisy ungu wa muti nukwona muthanga ula wivo ni mwiu na ti undu umwe na ula uathitwe ni sua. yila ungu wa muti vena muunyi nivathithu na vena kimeu kwa ivinda iasa kwi vala vaathitwe ni sua. kii kionany'a kana miti ila yi muundani kwaku nitetheeasya muthanga kwia kimeu na kiw'u kwa ivinda iasa kwi vala vate miti. Kiw'u kii kikatethya mimea yaku ni kikatumika maundu ni angi kisioni kyaku.

Carbon Credits nimyau?

Kuseuvya Carbon Credit sya TIST wienda syindu itatu

1. Nzeve itavisaa kwithiwa iyioleka na kwingeleka nzeveni (mawithyululukoni)
2. Kwiyiava kuola nzeve itavisaa kuma mawithyululukoni
3. Muthiani / muvitukithya kuikiithya kana mawiko othe mekitwe undu vaile.



Miti niyosaa nzeve itavisaa kuma mawithyululukoni na kutumia kuseuvya liu wayo vala iwiaa ta ngu mithambani, miini na muthangani. Nzeve itavisaa ila yumitw'e mawithyululukoni ithimawa na undu muti utonya kwia yiana naindi niw'o yikawa isavu na kuvitukithw'a kana ni yawo na indi nzeve ino yumitw'e mawithyululukoni na kwiwa mutini niyo itesawa sokoni ta Carbon Credits. Athooi ala mauaa mauaa ta nzia imwe ya kuola nzeve ino nthuku methiitwe mailekya mawithyululukoni.

TIST nitonya uta nzeve ino itavisaa oundu mundu utesaa sukali kana yia. Onakau kuta nzeve ino mundu ndalisasya muti melini/isiwani. Indi vaita ni kuma nzeve ila muti uyu wuwity'e mawithyululukoni na kwithiwa muti wivo uendee na unyw'a nzeve itavisaa. Nzeve ino itavisaa itesawa sokoni sya New York, Chicago, London na misyi ingi minene nthi yothe nitesawa kwa mivango kati wa andu kana kambuni. Nonginya tuvikie miao ya soko nikana tute nthini wa isoko. Mwiao umwe nikana miti ndyaile utemwe ngulutu kana mititu kwengwa nundu uu ni uthuku kwa mawithyululukoni. Nitwaile kwiyumya kuvanda miti yikale kwa ivinda iasa ta myaka miongo itatu. Na ingi nitwaile unengane uvoo waw'o. Miti yamina uvandwa masavu amwe nimaile kwikwa ta undu nzeve itavisaa ikwoswa ni miti ivanditwe ni aimi ma TIST. Manya ingi kana miti nditwaawa sokoni itiawa o muundani kwaku vala yaile ikala kwa ivinda iasa nikana ukaendee ukwata ndivi na kuunenge liu wa indo, ngu, matunda na mbindi/ngii. Mbesa ila TIST ikwataa kuma kutani kwa nzeve itavisaa nikuaaniaw'a tukundi tunini twa TIST na ingi utumika kukwatiia ndivi sya kumanyisya, kuvitukithya na kuungamia.

Miti yoothe inyusaa nzeve itavisaa yianene?

Anye'ee, Miti ila mithathau noyo yiaa nzeve mbiki kwi miti mitheke. Miti miasa niyosaa nzeve mbingi kwi miti mikuvi. Kwoou uthathau wa muti nuetae mbesa mbingi nthini wa soko wa carbon credits.

Kii nikwasya utaaniu wa miti niwaile nikana unenge miti nzeve na kwithiwa itonya uthathaa na kuasava nikana yithiwe na ueti museo. Ingi yimitaaniu nesa ndiithiwa iyuaania unou wa muthanga, kiw'u kana sua. Kwoou nikana ukwate ndivi nzeo kuma mitini manya kana utaaniu wa miti niwaile nikana yiane nesa yimithathau na miasa. Ingi kuola miti ni kuseo ni kutumaa ukwata ngu na kutuma miti ila yatiwa yiana nesa.

Niva kana ni aau mauaa nzeve itavisaa (Carbon Credits)?

Kwayu nzeve ino itesawa sokoni sya kwiyumy'a. Nitonya kwithiwa ivitukithitw'e kivathukany'o kwa ivinda na mivai kivathukany'o otondu soko syithiawa kivathukany'o sya kaawa na kaawa ka kwiseuvisya ungu wa masyitwa kivathukany'o. TIST nitonya uta carbon credits syayo nundu niatiie mawalany'o na nisyaa kilasi kiyiulu. Ve kilasi kivathukany'o na miao iulu wa uvandi wa miti yikalaa isesya na kusyaiiw'a na livoti ila taile uvikia nikana tute nzeve yitu sokoni ithi yiya kilasi kya yiulu. Nitutumiaa nzia sya yiulu muno kuvitukithya, kukunikila, kuthiana n akwona nisyaaile - verified carbo standard (VCS) kwa nzeve, mawithyululukoni, mbai na uvathukanu wa syithio situ (Climate, Community na Biodiversity Alliance Standards).

TIST yithiawa na aui mithemba ili:

Mbee ni andu ma ngoo sya wendi museo ala mauaa kwa kwenda matuthuthye kuendee na kuvanda miti. Ngelekany'o Kuiva andu mande miti kwa alusi kana conference ya kwikala tuoete nzeve itavisa.

Keli ni kambuni ila syi US, Europe, Canada na nthi ingi ila syina industries nimeyumasya kuola GhG ilasyumite nikwithiwa mena wendi museo kwa mawithyululukoni kana meenda wambiia kuete walany'o wa kuola nzeve itavisaa.

TIST yina utanu kwithiwa nzeve yayo yi imwe ya kilasi kya iulu na itonya uteea athooi aingi kivathukany'o.



Utheu na Kuthesya: Kuthamba Moko.

Kuthamba moko na savuni ni nzia imwe itethiawa na ngalama ya kusiiu uwau wa kwituuu na kyambo ila ni imwe kati wa mowau ala moaa syana thini wa nthi ya Kenya.

Moko kaingi nimo tusamu kana germs ila ietae uwau syisilaa kuma munduni umwe kuthi ula ungi kana kuma vandu mundu weekwatila. Andu ni unyaiikya bacteria kwa kukwata kw'oko kwa mundu ungi kana swii, iny'uu kana uthyu. Moko ala makwata mai ma mundu kana nyamu, kiw'u kuma mwiini ta kimia ni uthokoany'a liu kana kiw'u kila kitonya uwasya andu angi. Kuthamba moko na savuni nikusuviaa kunyaaika kwa bacteria kana tusamu tula tuetae uwau munduni.

Kuthamba moko vate savuni kunyumasya bacteria kana virus syothe mokoni, indi wathamba na savuni vandu va sekondi ta 15 na kwithambukya nikuvetaa tusamu tuu.

Ivinda yavata ya kuthamba moko na savuni.

1. Mbee na itina wa kuya liu kana matunda.
2. Mbee wa kukwata mwana.
3. Itina wa kwikwatila vandu vatumiawa ni andu aingi.
4. mbee na itina wa kuseuvia liu munamuno nyama, nguku kana makuyu.
5. Itina wa kutumia kyoo.
6. Yila moko mena kiko.
7. Itina wa ukwata nyamu.
8. Yila we kana umwe wenyu ni muwau.

Kumanya na kumanyithany'a iulu wa kuthamba moko na savuni.

Kuthamba moko kaingi nikwaile vala andu aingi makomaniaa ta sukulu, kanisa, mbumbano, Vala andu awau kana matonya ukwatwa ni uwau kwa mituki mai ta masivitali vala liu ukuuwa na kuawa na misiyini munamuno vala ve syana nini na andu aima mii yo itena vinya wa kukita mowau.

Vandu vaseuvitwe va kuthambia moko itina wa utumia kyoo kwa ngalama ninini.

Nzia ila yi laisi vyyu nikwosa katoma kwikia kiw'u na kwia nza wa kyoo vamwe na savuni. Onakau nzia ino ti nzeo nundu mundu nonginya akwate katoma kaa mbee wa kuthamba na itina undu ula utonya utuma germs iendee na kunyaiika. Kindu kya uthamba moko nikitonya useuvia uyu.

1. Seuvia vulemu ya uvwau yina musumaa kati ta kikuli.
2. Seuvia iima ya ulika kiw'u kula kyathamba moko na yiima yiu uyusuya mavia nikana kiw'u kilike muthangani.
3. Mantha itoma yime ikunue kana utile katoma na uyusuya kiw'u.
4. Mantha suva munini uu na utila.
5. Seuvia iima inini yila itomani vaaya ungu na uyukia kwoko.
6. Inda ula suva yila itomani yikiw'u wusue.
7. Isilya ula suva kila kikulini withie kiw'u kyambia uma ta muvelekini.
8. Thamba moko na savuni.

Useo umwe wa nzia ino ni kana ukwataa kasuva kaa katue oimwe yila ukwikia kiw'u.

Mazingira Bora



TIST

The International Small Group & Tree Planting Program
www.tist.org

Kipsigis Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Kiwegini kongoi missing Mr. Githiri en toretenyin koyob Igembe South Sub-County Cooperative. Kiginyorunen konetisiet ole kimuchi keribto SACCO.

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Blessy TIST group: Kigoteswon rurutik imbaret ne mogiboti.

Ane Annet Kaari, kiboitiotab kilasta.

Echek membaekab Blessy TIST ak Nguruki kilasta ko kiboiboi kebchei ak biik alak agobo bandabtai ak kelunoik che kigenyuru kongeten ingechut TIST.

En kurubinyon ketinye membaek taman ak oeng; chebiosok mut ak murenik tisab. Inguni ketinye ketik 1200 cheboto ketikab kipkaa, logoek ak chebo jumbek.

Kigenyuru konetisosiek che chang kongeten ingetou TIST, kou okobo imbaret ne mogiboti, maisiek, kabeti, teret nepo ngungunyek, minetab ketik ak ribetab tuguk. Kige nyoru melekwek en ketik ak ketinye ketestai asi kenyorun chenchang.



Mr. Fredrick Kithinji, a member of BLESSY TIST Group in Nguruki Cluster practicing conservation farming

Athi TIST cluster:Wendi tai.

Ane William Mugambi, kiboitiotab kilasta.

Kigeegitu! Mwoe kilasta nepo Athi.

En arawetab Taman 2011, koik netai kilasta nepo Athi kosirgei koik SACCO. Konyor anyun biik boroinde kotoret gei. Kigonech TIST kamuget koyob tuiyosiekab kilasta, yegituyechini kebchei kopwotutik che lelach. Kiginam kewirchigei legut kot kebesenchigei

rabisiek ne inguni kemiten en SACCO. Kinyoru kora konetisosiek en TIST ak kiboboenchini membaek SACCO amun kitesak kelunoik en TIST. Kiwegini kongoi missing Mr. Githiri en toretenyin koyob Igembe South Sub-County Cooperative. Kiginyorunen konetisiet ole kimuchi keribto SACCO.



Ribetab ngungunyek!

Ibetab ngungunyek kobitu yongorobon ak kobun beek ole momiten suswek anan kotimwek, koipe ngungunyek en chongindo. Mising ko en imbarenik chemiten tulonok ko gigotoo chepngeisusiek ole imuchi kobun beek.

Kigobit anyun kobetetab kotoltoiwek chechang missing ak rabisiek chechang che kigemetechi barisiek ak chanchosiek kotestai imbarenik kongemoksei ak kongemoksei.

Kimwochin chitugul koyom en kimnotet tugul netinye asi kimuch keter bunyondoniton en minet anan kogoletab ketikab kipkaa en imbarenik kiok

ak koletab suswek ak minutik, niton kopose karametab kiyagik ak konyor tuga omitwogik.

Ongemin ketik che chomtos ak beek asi komuch korib oinosiek chemengechen ak cheechen. Ongetegis kora matgegol kokwoutik sosom (30 M) en olenegit oinet ak matkemin chepkogutgei en ole miten beek; ongemin kowoutik pogol (100 m) asimait tigitik ole mi beek. Ongetiem missing keboisien imbaret ko magitem asi komoib beek ngungunyek. Ongeitin ketach beekab robta ak kegonor asi yenyoy kemeut keboisien.

Temikab TIST kotinye naet agobo burgeiyetab nguony ak waletab itondab emet.

Ngen che chang en temikab TIST agobo niton. Kigechil niton temik en konetisiosiek ak seminars ak en tuiyosiekab kilasta koguiyo agobo burgeiyetab emet, ak nee nebitu agobo niton ne oret negimuche keposen. Kitinye ak kenyoru koimutik en betusiek tugul. Koborunet netai ko kirobon robta El Nino en 1998 ne kibun emet ak let konyo kemeut, kibitz kora koristo neo missing en 2004 nito ko koborunetab waletab emet. Kibit en emet; kosib kochotio koikab beek en Mt. Kenya amun en burgeiyet ne kibitz en emet; kosib ko kobetio anan rorunetab amitwogik ene emet, kotenyo beek en

kondametusiekab beek ak anagei chechang chegitok.

En arawani ketinye asi komuch koguiyo biik agobo burgeiyetab emet ak walletab emet komie. Kitinye ororunetab chuton tugul asi iguiye ile tos imuch kotoret.

Ne anyun burgeiyetab emet?

Burgeiyab emet kogochin nguwendet koet missing burgeiyet, niton kogochin emet konyor wallet. Ye eet mat en emet komuch kowal orowekab robta, koriswek che gimen, kotesak beek en nyanchosiek, lo mabit omitwogik, koseretio ketik, tiongik ak biik.



Ye ngalal ngomotik agopo niton bo waletab emet kotinyegei ak burgeiyetab emet; niton kotinyegei ak boisionikab biik missing ko agobo itondab emet ko bitumen niton.

Tos tesosei mat en emet?

Ee amun en kenysisiek 100 chegogopata kogitesak 1⁰c. Tinye ngomotik kole eng bosionikab biik che yoe kogochin ngwoindut koet mat. Niton kounetab mwanik chegitom kepoishen, petro, koristo nemiten ak koluletab keti, ribetab emet ne mayamat.

Tos tinye koriswek alak?

Niton keguren kotab kurwek amun miten en nguony koriswek che terotin kou carbon dioxide nitrous oxide, sulphur dioxide, mitane trap energy koyob asista. Olepitunen korisi ya (carbon) kotiletab timwek, koristo ne yopu factorisiek karisiek, nesek ak beletab osnosiek.

Ne ngoiyondit ne konu burgeyetab emet?

- ◆ Konu kotesak ongatet en ye mamiten beek.
- ◆ Konu kotesak mionwek kuo eset.
- ◆ Amun igochin kalyangik che ibu eset kochanga, komuchi kebek biik che chang.
- ◆ Konu koet bananda en biik amun ye kaet mat, komuchi komabiit omitwogik missing

ko korotinwek chemiten oretab asista.

- ◆ Konu kobit oliet ab omitwogik. Kwo barak missing amun rorunet.
- ◆ Ye tiny timwek ak osnosiek kobitu kobetio beek en tulonok, komagenyuru beek che kimuchi keboisien en imbarenik, kobetio omituokik, komagenyuru stimet ak beek en korik ak en townisiek.
- ◆ Biik che chang komosiche mengotosiek en maranetab neek.

Omuche oter burgeiyetab emeti?

Min ketik ak irib!

Kou en mwaetab koristo noton ya (Carbon) ko konu burgeiyetab emet. Ketik anyun koboishen koristo (carbon dioxide) en yaetab omitwogik, konori en temenik, tigitik ak ngunyek, yegitil ketik any ko kagichunda korisoton kwo soet, kotes burgeiyetab emet.

Tos imuch inai ile ketit kotinye waletab emet?

Ketit ak orwet gotuche emet. kaitit urwet kosir olemiten asista.ole kaitit kogochin yoto kokoitit en abogora niton koboru kole ye imin ketik konyoru ngungunyek chemiten imbarengung kotityet en kila ak kila ,agotrurutik tugul.

**Mungaretab koristo konee?**

Mungaret kotinye tuguk somok:

1. Komiten keretab bosetab koristo noto yaa (CO₂) en koristo.
2. Kebos carbon en kenysisiek chechang.
3. Miten biik che tononchingei asi korib agoib kokwout kole kogisib mogutik tugul che tinye.

Ketik koboisien carbon ak kogonor en ketik, tigitik ak en ngungunyek. Kimuch kenai koristo ne yaa nemiten barak ak nekogiboisien ak keyai esabu. Ko bit anyun chemungarainik che ole ak kwoldoi. Itin anyun TIST koalda koristo ne kogiboisien en ketik kou temik che tinye sugaruk ak chego. Mogimuchi keib ketit kwo ndonyo kobaten kibimoni toltolindab ketit ak kiyokto. Mungarani kotesetai en New York , Chigaco, London ak emotinwek alak. Miten ngotutik che bo mungaret ak tononywan. Biik alak komuche kotil ketik en osnet asi kogol alak, maiyanat niton amun ketesi carbon kotes burgeiyet. Kimokinigei kemin ketik chebo kasarta ne goi choton ko kipkaa. Ye testai temik koribe ketik konyorunen kelunoik chetoretegei en kaa kou- rabisiek, kwenik ak logoek.

Tos ketik tugul koboisien koristo ne kergei?

Acha, ketik chetebesen ak chegoen kotinye koristo neo kosir ketik chemengechen. Ketik chetebesen kotinye raninik che chang amun konori koristo neo. Noton anyun ye kigole ketik kigochi kokwoutik che yome asi koet ak konyor beek. Rib ketingung ak kechororchi asi koegitun ak inyorunen kwenik ak omitwogikab tuga.

Ano/ng'o che ole koristo?

En nguni kochang olig ago miten boroindo en ole imoche. Amun tinye boroindo olik ak oldoik (kou kawek kotinye keruti).

Miten kobesosiek en indonyo amun tinye agetugul ngotutikyik kou ole kimindo ketik, ole kiribto ak ole kiyumdo report. Kiboisien biik che miten barak (validation and verification, V.C.S) ak Climate Community and Biodiversity Alliance Standard (CCBA).

TIST kotinye olik oeng

Netai miten biik che tinye kapuatet ne mie ko kon rabisiek, kogochi che kimin ketik. Nipo oeng komiten kombunisie en US, Europe, Canadaa ak emotinwek alak chegitestai kotinye maget kepos koristo ne yaa.

TIST kotinye boiboiyet en amun tinye koristo ne kararan netinye mungaret, en olik che chang.



Tililinda ak Sanitation: Kounet 'ab eunek.

Kounet 'ab eunek keboishen subunit ko agenge en oratinwek che nyumnyumen che kimuche keisto en miandab diarrheal ak pneumonia, che alak en mionwogik che kigore meoshek 'ab logok en Kenya.

Eunek ko ole bune pathogens koibe mionwogik koba borwekchok , kongeten chito age agoi age, yon kagigat 'ge anan kenam inat. Bik komuche koib bacteria agoi chito age yo kotuyo eunek, sumek, serunek ak togochik. Eunek che kagotiny tuguk 'ab tyong'ik anan ko chebo chito , bek chebo borwek aka k chemiten serunek, ak omitwogik che contaminated anan ko bek komuche koibot bacteria, viruses ak parasites koit borwek 'ab bik . kounet 'ab eut kobore tyong'ichuton.

Kounet 'ab yet ak bek icheget komoyome kobar tyong'ichuton agoi ketesta subunit . Kounet ne kararan nebo eut kotore saaishek 8 - 15 seconds, agityo kerinsen ak bek icheget.

Saishek che mogchinge kounet 'ab eut.

Ichochu ko saaishek che mogchinge kounet 'ab eut:

1. Kotomo keomishe ak yon kageomishe.
2. Kotomo kebai lagwet.
3. Yon kaginam inatushek.
4. Yon kimoche kechob omitwogik ak yo kagochobok sansana banyek ak ingogenik ak chebo oinoshek.
5. Yon kageboishen toilet.
6. Yon muren eunek.
7. Yon kogitiny tyong'ik
8. Yon imyoni anan komyoni chi age.

Konet 'ab bik agobo kounet 'ab eunek.

Kounet 'ab eut kobo maana sanasan en ole chang

bik congregate (sugulishek , offices, kanisoshek, tuyoshek), ole mitenbik chmyondos kou (sibitalishek , nursing homes), ole kichoben omitwogik en korigchok, sanasan ole miten logok ak bik che yechen.

Kit negimuche keboishen kiunen eut yon kagebunu toilet.

Facility initon ne mingin ko itinye jerry can ne kaginyit bek water agityo kinde pi en latrines. saponit kora konyolu kebishen.

Lakini , oranitn komakararan angamun tinye bik jerry can yon iune eunek agityo kosibtot germs. Kit age ne kimuche keboishen kiunen eunek kechobe kou ni:

1. Chob frame nebo bogoinik netinye kipchumariat en kwenet nekingobunen.
2. Chob ole pune bek yon kagiundo en ng'weny ole negit ak frame inoton ak kinyit ak koiwe. inoniton kotoreti bek koba ng'weny.
3. Cheng' container newo (jerry can ne kakiti koyatag) agityo inyit ak bek.
4. Cheng'container age neming', neu chuboit ne tilat.
5. Chob konda ne kiten en chupointon ak inkoig handle.
6. Irogten chuponoton koram bek chemi en newo.
7. Agityo ingopu chupoit ne ming'in en kipchumaryandanikan, itendenunen bek konyigan.
8. lunen anyun eut bechuton ak iboishen saponit.

Uzuri nebo oraniton ko, kitinye chupoit ne mingin mara ang'enge kityo asikobwa bek.