

Mazingira Bora



TIST

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

English Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Taylor's Senior Managers talking to Rose, a member of Mt Kenya Afforestation 2008KE167 during their visit to TIST last month. Story page 2

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TIST receives more Visitors from Taylors of Harrogate Company.

Last month, we shared with you good news of having hosted important visitors from Taylors of Harrogate, a renowned tea and coffee buying company in UK. TIST is building a relationship with this company to work together in expanding tree planting in some selected tea and coffee growing zones.

Again, on February 9th 2015, more Taylor visitors made a brief visit to some of our TIST groves. In this delegation, we had Andy Brown, Linda Close, Henry Boocock, and Emily Hawken. Martin Weru, Eunice Wambui and Leah Maina received them in TIST.

In the afternoon hours, we took them to

Kimahuri Cluster where they visited Jacaranda Tree Growers 2005KE469, Mt. Kenya Afforestation 2008KE167, and Mitero Down 2008KE282. Jacaranda Tree Growers currently has 15464 trees, Mitero Down 1528 trees while Mt. Kenya Afforestation has 734 trees.

In particular, they visited John Gichuki Groves of Jacaranda. John has more than 15,000 trees with riparian, indigenous, and bees, but mostly Cyprus trees. We then traveled to 2008KE167, Rose farm, which is a medium, sized dedicated grove. Our last visit was to 2008KE282 John Grove with the majority of the 134 trees being indigenous with a few fruit trees.

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 these impacts, the El Nino floods of 1998 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 believe that activities 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. This would result in more areas becoming desert.
- Increased spread of diseases like malaria. As areas become warmer, more become suitable breeding grounds for mosquitoes, 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 and reduce generation of hydroelectric power. Our industries, hospitals and other institutions that heavily rely on electricity will be severally 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 can create a micro climate?

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 even help the water users in your area.

What are carbon credits?

In 1997, a number of countries signed a UN agreement which said that all signing countries would work together to reduce how much they pollute, particularly limiting greenhouse gas pollution. This agreement was called the Kyoto Protocol, named after the Japanese city of Kyoto where the agreement was signed.

Under the Kyoto Protocol many industrialized



nations have agreed to reduce the levels of carbon dioxide they produce. One way to do this is by taking carbon dioxide out of the atmosphere and storing it in the ground or in trees. 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.

For instance, 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 product 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 is done in New York, Chicago, London, and other cities globally. At these markets, carbon offsets are bought, traded, and sold in large volumes for money.

We have to meet the market 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 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 and the fruits and the nuts. The money that TIST makes selling carbon offsets is then shared with TIST Small Groups and used to support the costs of TIST, including training, Quantification, and management.

Through carbon markets, planting trees can provide a new source of income because they absorb and store carbon that can be measured, reported, and sold as carbon credits. Trees also provide many other environmental, material and medicinal benefits.

Do all trees absorb the same amount of carbon?

No, trees that have a 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. In order to receive good payments out of our trees, it is important to plant them with good enough spacing, which will allow them to grow healthy, tall and big.

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). Here are some of the major markets and types of offsets:

- 1) Certified Emission Reductions (CERs) for the Clean Development Mechanism, (CDM) represents the market created under the Kyoto Protocol. These carbon credits must be verified and certified under the CDM process for use by the industrial countries that have made GhG reduction commitments under the Kyoto Protocol to help them comply with agreements. This is a compliance market. Verification and Certification is done by independent Designated Operational Entities (DOEs) and approved by the Executive Board of CDM. Currently, this market does not work very well for many forestry projects, including TIST.
- 2) Another market that requires verified emission reductions are the non-Kyoto compliance markets. In the US, which is not a signatory to Kyoto, some of the individual states are requiring GhG reductions, with Australia having similar requirements. While the approval



process will require that the emission reductions be verifiable, and verified by an independent party, it is a separate and different process than the CDM procedures. These markets have a lot of potential, but are not currently open to TIST.

- 3) Voluntary markets are where TIST has sold offsets from tree planting by TIST farmers. There are two types of voluntary market buyers. The first is a small market 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 to make a Conference carbon neutral. The second type of voluntary market buyer is a

much larger potential market made up of companies in the US and other non-Kyoto 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. 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 offsets. Currently, two leaders that TIST has been verified under are the Verified Carbon Standard and the Climate, Community, and Biodiversity Alliance Standards.

Cluster reporting: Share your successes to make your Cluster TIST strong!

In TIST, we find strength in taking action together and sharing our successes with others in our Small Groups, in our Clusters, and beyond. Monthly Cluster reports at Cluster meetings and accounting are an important part of this success. Each Cluster is responsible for submitting an accurate Cluster meeting report and Cluster accounting report every month. Your Cluster Servant and Accountability person will work with you to submit these reports using the Palm computer. Soon, we will be able to see these reports on the TIST mobile website. This way, we can be more transparent and all know that the data reported is accurate.

Cluster servants should work with the Accountability person to make sure accurate information is reported in these monthly reports and on Cluster elections and representatives. The more we help each other, and hold each other accountable for accurate information and for achieving big results at low costs, the stronger and better TIST becomes.

Reminder: for success, every month your Cluster should:

- 1) Attend your Cluster meeting and remind other groups to attend.

- 2) Review together the results your cluster has achieved: new trees planted, groups quantified, and how budget was spent together as a Cluster. Make this part of the Cluster meeting and of your Small Group meetings!
- 3) Send reports by Palm for Cluster Meeting and Cluster Accounting
- 4) Organize quantification with Quantifiers and make sure someone from your Cluster assists in each quantification!
- 5) Invite your friends and neighbors to join TIST at a Cluster meeting. Share this *Mazingira Bora* and help them with the application process.
- 6) Make bigger results! Plant trees, build or buy an energy saving stove, and practice CF.

Remember that a strong Cluster should have at least 200,000 quantified trees, 30-50 active Small Groups who meet each month, elected servant leaders, and be carrying out and reporting on good training and quantification.



Kujengana: Don't miss the blessing for your Small Group and Cluster.

Kujengana is a very important part of your Small Group weekly meeting. It says in Ephesians 4:15, 16 that we are to build each other up into the fullness of Christ. Each person in your TIST Small Group brings his or her own special talents and gifts to the entire group. One of the wonderful things that happen in the Small Group is recognizing, sharing and using those God-given talents.

Kujengana is a way to let those talents be seen and be used. There are two parts to Kujengana:

- Before the closing prayer, every person in the group says **one specific, positive thing** that the leader did at that meeting. For example: they smiled, kept to time, made good plans, encouraged all group members to speak, greeted me and made me feel welcome, pointed out something that was going very well in the meeting or in the work the group was doing, etc. Each member needs to say something different. This is not optional. Everyone gives Kujengana to the servant leader. Some groups also give Kujengana to the co-leader.
- In addition, if someone sees a gift shown by the leader, a group member can also say that.

With Rotating Leadership, each week a new leader will receive Kujengana. Through Kujengana, we encourage each other on the good things that week's leader did in the meeting and the talents the person showed. Kujengana is also the way we learn to look for positive things about people and then say them. We all need to train our tongues to say the positive. In addition, the whole group learns what that group thinks is important in a servant leader. The next leaders will benefit from what they have heard in Kujengana about previous leaders and know what the groups think is important in being a servant leader.

In response to Kujengana, that week's servant leader just says, "Thank you" after each group member's specific, positive statement. There is no discussion about how it could have been done better, or differently. Often, the person is happy when he or she is told the good things he or she did during the meeting. Sometimes we learn things about ourselves we didn't know! Kujengana helps the leader on that day recognize his or her talents and keeps on using them. Kujengana also helps the Small Group because all the members improve their servant leadership as they learn. Kujengana is a double blessing!

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TIST nirariungirwe ni ageni bangi kuuma kiri kambuni ya Taylors of Harrogate.

Mweri muthiru, nitwagaanire nabwi nkuuma injega ya kuriungirwa ni ageni ba bata kuuma kiri kambuni imwe iria ijikene mono ndene ya UK niuntu bwa kugura majani na kauwa itagwa Taylors of Harrogate. TIST nigwaka ucore na kambuni iji nikenda twitaniria amwe ngugi ya kwaramia uandi miti kiri ntuura imwe inthure cia majani na kauwa.

Kairi, tariki kenda mweri jwa iiri mwaka juju, ageni bangi kuuma Taylor nibariungiire miunda imwe yetu ya TIST na mpwi. Kiri gikundi giki, nikwari na Andy Brown, Linda Close, Henry Boocock na Emily Hawken. Martin Weru, Eunice Wambui na Leah Maina nibabagwatire ugeni ndene ya TIST.

Mathaa ja thaa inyanya, nitwabaikirie cluster ya Kimahuri naria bariungire ikundi bia Jacaranda Tree Growers 2005KE469, Mt. Kenya Afforestation

2008KE167, na Mitero Down 2008KE282. Gikundi kia Jacaranda Tree Growers kirina miti ngiri ikumi na ithano magana jatantatu ja mirongo itano na inna, Gikundi kia Mitero Down kirina miti ngiri imwe magana jatano na mirongo iiri na inana na kia Mt. Kenya Afforestation kirina miti magana mugwanja ja mirongo ithatu na inna.

Nibariungire miunda ya John Gichuki ya jacaranda. John arina nkuruki ya miti ngiri ikumi na ithano imwe ya iria iri nteere cia ruuji, ya gintwire na irina njuki, indi mono mithithinda. Riu nitwariungire 2008KE167, munda jwa Rose, juria juri munda jutinenei mono na jumenyeri. Ndiunga yetu ya muthia yari kiri 2008KE282, munda jwa John juria jwari na miti iria mingi ya miti igana na mirongo ithatu na inna iri ya gintwire na imikai iri ya matunda.

Arimi ba TIST nibakurua na kuruutira kwa nthi na kugaruka kwa rera.

Arimi ba TIST nibajukiritie itagarua kiriro kia nthi yonthe gia kurua na kuruutira kwa nthi na kugaruka kwa rera. Arimi babaingi nibacuite kwereva gukurukira semina na moritani ja TIST na kinya micemanio ya cluster kumenya na kwereva nkuruki kwegie kuruutira kwa nthi, uria kuruutira guku kugaruraga rera na matagarua jaria jomba kujukua nikenda tukabana na untu bubu. Nituonaga mantu jamaingi jaria jaumaniitie na kugaruka kwa rera narua. Kuejana minguanano imikai ya mantu jaja ni kurutira na kunyenyea gwa nkamia iria ituuraga iguru ria murima Kenya, rera itikumba kubangirwa niuntu ikaraga ikigarukaga na kwou igatuma imera bikathuka guntu kuria kwingi, kunyara kwa ithima na biumo biao nduuji na mantu jangi jamaingi.

Gazeti ya mweri juju ikagaana natwi mantu kuumania na uritani bwa semina nikenda twinthe tuumba kumenya kuruutira kwa nthi na kugaruka kwa rera nimbi.

Tukaambiria na kumenya o riiitwa niakwa riugaga na kumenya nkuruki kuriegie na riu tuthome kwegie uria miti yaku itethagia kunyiyia mantu jaria jaumanagia na kuruutira kwa nthiguru.

Kuruutira kwa nthi nimbi?

Kurutira kwa nthi ni kwingia kwa murutira jwa nthiguru, buria butumaga rera ikagaruka. Nthiguru irina kiruutira nkuruki no itume gukagia na kugaruka kwa uria mbura ijaga, iburutani birina inya nkuruki, gwitia kwa iria, kuthuka kwa imera na mantu jangi jamaingi kiri imera, nyomoo na antu. Riria athomi baariria kugaruka kwa rera, bethagirwa bategete mono kurutira kuria kuretagwa ni mantu jaria jathithagua ni muntu na kugaruka nainya kwa rera kuria kuretagwa ni bubu.

Nthiguru nikurutira nkuruki?

li! Nthiguru nirutirite na 1°C ndene ya miaka igana iria ithiri. Athomi baria baingi nthigurune



nibakuthugania ati mantu jaria antu bathithagia nijagutethia gutuma nthiguru igia na kiruutira nkuruki ta kuithia makara, maguta ja ngari, na gasi na kugiita miitu na kuremwa kumenyeera miunda bwegu.

Greenhouse Effect nimbi?

Greenhouse effect ni kwongereka kwa muruutira kwa nthiguru niuntu bwa icunci bimwe bia ruugo, bigwitwa greebhouse gases, ta ruugo rwa kaboni, rwa nitrous, rwa sulphur na methane ruria rujukagia murutira kuumania na riuu. Kaboni yuumaga mono kuumania na: ugiti miti, ruugo kuumania na kambuni, kuumania na ngari, kuumania na gwakiria nkuu, makara na miitu.

Mantu jamathuku jaria jaumanagia na kuruutira kwa nthiguru ni jariku?

- Thina ya ruuji ndene ya ntuura injumu. Bubu butumaga guntu gukwingi gukooma nkuruki.
- Gutamba gwa mpwi kwa rwagi. O uria ntuura ikugia murutira, nou gukabua gwa guciarirwa kwa rwagi na kwou kwingia kwa mbajua cia rwagi. Nja na cibitari inyingi nocikinyirwe, maisha jagakuia na aana babaingi bagakua.
- Kunyia gwa irio bia munda ndene ya nthiguru iria ciri na murutira na ngai, mono ndene ya East Africa. Niuntu bwa kunyia kwa ngai na kwingia kwa guciarana kwa tunyomoo niuntu bwa kwingia kwa muruutira, irio kuuma miundene no binyie na bubu bugatuma gukugia ukia na mpara ndene ya nja na ntuura.
- Uguri bubunene nkuruki bwa irio ndene ya nthiguru. O uria amemba babaingi baguketha bibikai nou irio bikaura, uguri bunene niuntu babaingi nibakubienda na nibikai bikwoneka.
- Kugaruka gukunene kiri uciari na gukaranira kwa imera na nyomoo ndene ya mwitu kuria kurina bata mono. Naria ruuji rugwatagua ibarine na miitune gukenderea kuuma. Bubu bugatuma antu baremwe kuanda into bia ruuji na na kunyiyie ruuji ruria ruri miurone untu

buria bugatuma biria biaki bia kugwatia ruui birega gukinyirwa niru. Bubu bukanyiyia stima iria ikuthithua. Kambuni cietu, cibitari na biuthurani bingi biria bitumagira stima na wingi bikaremwa gwita na mbele uria bibati. Ruuji ruria rwitaga tauni na ntuurene imwe na paipu kinyaru rukanyia.

- Antu milioni kumi ya ikumi bakarugurirwa thiina cia kuigara kwa ruuji na kugua kwa nthi, niuntu bwa kwingia kwa mbura na ndene ya ntuura iria ciri iriene, ruuji rwa iria rugaitia.

Niatia mpumba gutigithia kuruutira kwa nthiguru?

Aanda na umenyeera miti!

Ja uria twauga au iguru, ruugo rwa carbon ni rumwe rwa ruugo ruria rutumaga nthiguru iruutira. Miti nijukagia ruugo ruru kuuma kiri ruugo rungi igitene ria kuthithia irio na kuruika mutine, mirine na muthetune ja kaboni iguitwa cellulose. Indiri, riria miti yagaitwa na yaithua, niiritaga kaboni iji na kumicokia kairi ruugone.

Niwiji ati o muti no juthithie rera inini??

Miti na irundu biayo nibikunikagira nthi igakara irina mpio. Thikira uthongi bwa kirundu kia muti. Tega woone ati muthetu juria juri rungu jurina ruuji nkuruki ya juria juri rungu ria riuu gutina kirundu. Riria nthiguru ikaraga irina mpio, nthi niikaraga na ruuji igita riraja nkuruki. Guku ni kuuga miti ndene ya muunda jwaku igagutethia kuingiyia ruuji ndene ya muthetu jwaku, na nitethagia kuruika igita riraja nkuruki. Bubu bugatethia imera biaku na kinya butethie atumiri ruuji ndene ya ntuura yaku.

Credit cia Kaboni nimbi??

Mwakene jwa 1997, nthiguru ingana unna niciasainire cigitikanagiria ati nthiguru iria cionthe ciasainire cigaitaniria ngugi kunyiyia uria bathukagia naria gututhiurukite, mono kunyiyia kuthukia kwa ruugo na ruugo rwa greenhouse. Baruga iji ya gwitikaniria yetirwe Kyoto Protocol, kuumania na tauni ndene



ya Japan igwitwa Kyoto naria yasainirwe.

Ndene ya Kyoto Protocol, nthiguru inyingi iria cirina kambuni ikuri niciitikaniritie kunyiyia ruugo ruruthuku rwa kaboni ruria cithithagia. Njira imwe ya kuthithia uju ni kujukia ruugo ruru rwa kaboni oome ya ruugo ruria tukucagia na kuruika nthiguru kana mitine. Miti nijukagia ruugo rwa carbon kuuma ruugone igitene ria kuthithia irio na kuruika mutine, mirine na muthetune. Ruugo rwa kaboni ruria rujukagua ruugone na rugekwa no ruthimwe na gutarwa, na riu rugategwa kethira ni rwa mma, ruugo ruru ruthuku rukucagua ni miti no rwendue thokone ya nthiguru ja credit cia kaboni. Aguri no bagure credit iji antune a kaboni iria bathithagia.

Munganano, TIST niumbaga kwendia kaboni iria itonyaga mitine ja uria athithia bendagia sukari na iria. Indi na kaboni, utiikagia kiria ukwendia thokone. Antu a gwikia, goro ni kuumania na ati kaboni nijukagua ruugone, igekwa mutene ndene ya muunda kana mwitu jwaku, ikathimwa na ripoti igatumwa. Kwendia gwa kaboni nikuthithagua New York, Chicago, London, na taunine ingi ndene ya nthiguru. Ndene ya thoko iji, kaboni iria iriti ruugone niciguragwa, ikeendua mbea inyingi.

No mwanka tukinyire jaria jendekaga thokone, tutumba kugiita miti kana miitu nikenda tuanda miti niuntu guku gutibui kiri naria gututhiurukite. Nitubati gwikiria gwika miti igikuraga igita ririraja, miaka mirongo ithatu nankuruki. No mwanka turipoti jaria jario jongwa. Riria miti yaandwa, ithimi na gutarwa nikuthithagua kuthima ni kaboni ingana miti ya arimi ba TIST ikuciitie. Kairi rikana, miti itikagua thokone. Ikaraga muundene na o uria igita riria yakara muundene rikuingia nou igita ria kuriwa rikuingia. Kwou, murimi neekaga miti, matunda na nkandi. Mbea iria TIST yoonaga kuumania na kwendia kaboni riu niiganagwa gatigati ka ikundi bibinini bia TIST na kurita ngugi cia TIST, amwe na moritani, utari miti na urungamiri.

Gukurukira thoko cia kaboni, kuanda miti nikuejanaga njira injeru ya kwona mbea niuntu nijukagia na gwika ruugo rwa kaboni ruria ruumba

kuthimwa, ripoti gutumwa na kwendua ja credit cia kaboni. Miti niejanaga kinya baita ingi cia kinaria gututhiurukite, kiinto na kindawa.

Miti yonthe nikucagia ruugo rwa kaboni runganene?

Ari. Miti iria yarami nkurki niyo iikaga kaboni nkuruki ya miti imiceke. Miti imiraja kinyayo nikucagia kaboni nkuruki ya miti imikui. Kwou, miti iria imati niyo ikareta mbea inyingi nkuruki kuumania na credit cia kaboni. Kou ni kuuga miti iria iandi itarenie bwega niyo yumba kumata na kurea na kureta mbea inyingi nkuruki. Itishindanagira irio kana ruuji ja miti iria ithagirwa ikuianiritie.

Kwou, nikenda twona mbea injega kuumania na miti yetu, kurina bata kumianda itaranitie bwega nikenda yumba kugia inya, kurea na kwarama.

Inaa/nibau baguraga credit cia kaboni?

Igitne riri, credit cia kaboni ciendagua thokone cia kwiritira na ndene ya thoko iria igwitia mantu manna. Niikurukithagua na njira mwanya, oja uria kurina mithemba mwanya ya into bingi biria uguraga na kwendia (ta kauwa, na kauwa kathithitue na gwitwa riitwa mwanya) kaboni. Aja ni imwe cia thoko iria nene na mithemba ya :

- 1) Certified Emission Reductions (CERs) ya Clean Development Mechanism (CDM) nirungamagira thoko iria yathithirue ni Kyoto Protocol. Credit iji cia kaboni no mwanka itegwe na ikurukithue thiguru ya CDM nikenda itumirwa ni nthiguru iria ikuri iria ciikite wirane kiri Kyoto Protocol gutetheria kuthingatira wirane bubu. Iji ni thoko igwitia mantu manna. Utegi ngugi na gukurukithua nikuthithagua ni independent Designated Operational Entities (DOEs) na gugetikirua ni utongerira bwa CDM. Igitene ria nandi, thoko iji ti injega mono kiri miradi ya miitu, amwe na TIST.
- 2) Thoko ingi iria ciendaga kunyiuwa kwa kaboni gutari ni thoko iria ciitagia mantu manna citi



cia Kyoto. Ndene ya Amerika, nthiguru imwe nicikwenda kunyia kwa GhG. Australia niitagia mantu oja jau. Kinya kethira gukurukithua gukenda kaboni itari na yategwa ni kiama kiri gyonka, ni untu bwa mwanya na njira cia CDM. Thoko iji ni injega mono indi thaa iji citiruguri kiri TIST.

- 3) Thokone cia kwiritira ninoo TIST yeendagia credit cia kaboni kuumania na uandi miti bwa arimi ba TIST. Kurina aguri bairi ndene ya thoko cia kwiritira. Wa mbele ni thoko inini iria irina antu baria bairitirite kuejana mbeba gwikira antu motisha ya kuanda miti. Minguano ni kuria miradi ya uandi miti kuthiria ruugo ruruthuku kuumania na muranu kana

mucemanio jwa semina. Muthemba jwa iiri jwa aguri ba kwiritira ni inene nkuruki na ni ya kambuni ndene ya Amerika na nthiguru ingi iria ikuri na iria itisainite Kyoto niuntu ni akiki babega ba naria gututhiurukite kana nibakubangira mantu jaria jakendekanaga thokone ntuku ciijite.

Kurina mantu mwanya mwanya ndene ya thoko iji jaria jendekaga gukinyirwa na sheria ikugaruka o igita o igita cia uandi miti, kumimenyera na kuripoti iria tubati gukinyira nikenda tuumba kwendia ruugo. Igitene riri, TIST nikurukithitue ni Verified Carbon Standard na Climate, Community, and Biodiversity Alliance Standards.

Gutuma ripoti cia Cluster: gaana jaria uumbene kirijo nikenda wikira cluster yaku na TIST inya.

Ndene ya TIST, nitugiaga inya ndene ya kujukia matagaria turi amwe na kugaana uumbani bwetu na bangi ndene ya ikundi bibinin, ndene ya cluster na kungi. Ripoti cia o mweri cia micemanio na utumiri mbeba cia cluster ngicunci kirina bata mono kiri uumbani bubu. O cluster ni ngugi yayo gutuma ripoti cia mma ciegie mucemanio na utumiri bwa mbeba o mweri. Mutari miti na muritani wa cluster yaku bakaritaniria ngugi na cluster gutuma ripoti iji bugitumagira Palm. Igita riti kuraja, tukoomba kwona ripoti iji kiri website ya thimu ya TIST. Na njira iji, tukoomba kuaa ba weru nkuruki na kumenya ati mantu jaria jonthe jari kiri ripoti ni jaria jario jongwa.

Ariti ngugi ba TIST nibabati kuritaniria ngugi na atari miti na aritani kumenyeera ati mantu jaria jaroo jongwa nijo jari kiri ripoti iji cia o mweri na kiri ithurano bia cluster na arungamiri. O uria tuguthethania, na gwitikania na ripoti cia mantu jamma na jari jao jongwa na kiri kuthithia manttu jamanene tugitumagira mbeba inkai, nou TIST igakura kiinya na kuthongoma nkuruki.

Rikana: nikenda tuumbana, o mweri cluster yaku niibati:

- 1) Gwita mucemanione jwa cluster yaku na uriikanie ikundi bingi gwita

- 2) Tegereeni mantu jaria cluster yenu yuumbite kuthithia: miti imieru iria iandi, ikundi biria bitariri miti na uria mbeba cia cluster cia o mweri ciatumirwe ni cluster. Thithieni untu bubu bue gicunci kia micemanio ya cluster na ya gikundi gikinini!

- 3) Tuumeni ripoti cia mucemanio na utumiri bwa mbeba cia cluster na Palm. No butume ripoti na ntumwa cia thimu kethira mutari miti na muritani wenu ati akui, indi nibabati kwithirwa bari micemanione nikenda babwitira ngugi.

- 4) Bangireni utari miti na atari miti. Menyeera ati kuri na muntu kuuma cluster yenu kiri utari miti bunthe!

- 5) Gaana Mazingira Bora iji na ubatethie kuthingatira njira ya kuuria gutonya kiri TIST

- 6) Thithieni mantu jamanene nkuruki! Aandeni miti, akeni kana bugure mariko ja nkuu inkai, burime na njira ya urimi bubwega.

Rikama: cluster irina inya niibati kwithirwa irina miti imitare nkuruki ya ngiri magana jairi, ikundi bibinini mirongo ithatu gwita mirongo itano biria bitirimanaga o mweri, atongereria ba uthumba babataare na ithirwe ikithithagia na kuandika ripoti cia uritani na utari miti bubwega.



Gwakana: Bukaaga kitharimo kia gikundi kienu.

Gwakana ni gicunci kirina bata mono ndene ya mucemano jwa gikundi kienu jwa o kiumia. lugaga ndene ya Aefeso 4:15,16 ati nitubati gwakana tugakinyira uujuru bunthe bwa Kristo. Muntu wonthe ndene ya gikundi gikinini gia TIST naretaga talanta na biewa bia mwanya kiri gikundi kionthe. Gintu kimwe kiria kiri gia kurigaria kiria gikarikaga ndene ya gikundi gikinini ni kwona, kugaana na gutumira talanta iu tuei ni Murungu.

Gwakana ni njira ya kureka talanta iu cionwa na citumirwa. Kurina icunci biiri ndene ya Gwakana:

- Mbele ya iromba ria muthia, o muntu ndene ya gikundi auge gintu kimwe gikieega gikwirungamira kiria mutongeria athithirie ndene ya mucemano. Mung'uanano, nathekerie, nekire mathaa, nathithirie mibango imiega, neekire amemba bonthe inya, nanketherie na natumire ndaigua nkinyite, naugire akwona gintu gigita bwega mucemanione kana ngugine ya gikundi, na jangi jamaingi. O mumemba nagwitia kuuga gintu mwanya. Bubu ti bwa kwithurira. Muntu wonthe naakaga mutongeria wa uthumba. Ikundi bimwe ibakaga kinya mutetheria wa mutongeria.
- Kwongera, kethira muntu akwona kiewa ndene ya mutongeria, mumemba noauge.

Gukurukira utongeria bwa kithiuruko, o kiumia mutongeria umweru agakwa. Gukurukira Gwakana, nitwikanagira inya kiri into bibiega biria mutongeria wa kiumia athithitie mucemanione na talanta iria muntu ou onenie.

Gwakana ni njira ya kinya kuthoma mantu jamega kwegie antu na riu kujauga. Twinthe nitugwitia gwitana nduume cietu kuuga mantu jamega. Kwongera, gikundi kionthe nikimenyaga jaria gikundi kithuganagia jarina bata kiri mutongeria wa uthumba. Atongeria bangi bakoona baitakuumania na jaria baigitue ndene ya Gwakana kwegie atongeria bangi na bakamenya jaria gikundi kithuganagia jarina bata kiri mutongeria wa uthumba

Arikia gwakwa, mutongeria wa kiumia kiu naugaga, 'lbwega' nyuma ya o mumemba wa gikundi auge gintu gikithongi na gikwirungamira. Gutikwariria uria aringi kuthithia bwega nkuruki kana na njira ya mwanya. Jaria maingi, muntu nethagirwa akeni erwa mantu jamega jaria athithirie mucemanione. Rimwe na rimwe nitumenyaga mantu kwegie twingwa jaria tutikwiji!

Gwakana nigutethagia mutongeria wa ntuku iu kumenya talanta ciawe na gwita na mbele gwitumira. Gwakana kinya nigutethagia gikundi gikinini niuntu amemba bonthe nibamenyaga gutongeria bwega nkuruki o uria bakuthoma. Gwakana ni kitharimo nteere ijiri!

Mazingira Bora



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Taylor's Senior Managers talking to Rose, a member of Mt Kenya Afforestation 2008KE167 during their visit to TIST last month. Story page 2

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TIST kwamukira ageni makiria kuuma Taylors of Harrogate Company.

Mweri ucio urathirire, nitwakwirire ugoro mweka wa uria twanyitire ugeni agenia bata kuuma Taylors of Harrogate, imwe ya kambuni iria cirri ngumo hari uguri wa macani na kahuwa thiini wa UK. TIST niirathondeka ngwataniro njega na kambuni ino uria tungirutithania wira niguo gutheremia uhandi na ukuria wa miti icigoini iria cikuragio macani na kahuwa

Na ningi, kuri mweri 9 February 2015, ageni makiria kuuma Tylors nimatugeneire na njira nguhi kuri migunda imwe ya TIST. Hari aria mari marugamiriire kambuni ino, twari na Andy Brown, Linda Close, Henry Boocock na Emily Hawken. Martin WERu, Eunice Wambui na Leah Maina a TIST nio mamukirire ageni aya.

Kuri mathaa ma miaraho, nitwamatwarire thiini

wa cluster ya Kimahuri kuria maceereire Jacaranda Tree Growers 2005KE469, Mt. Kenya Afforestation 2008KE167 na Mitero Down 2008KE282. Jacaranda Tree Growers gwa kahinda gaaka*** Mitero Down iri na miti 1528 nayo Mt. Kenya Afforestation iri na miti 734.

Na njira nguhi, nimacereire mugunda wa miti wa John Gichuki wa Jacaranda. John ari na makiria ma miti 15,000 iria ni ya kuria kwaraga, ya ki-nduire na njuki, no muno ni mithithinda. Ningi nitwaceerire kuri Rose Farm 2008KE282 kiria ni gikundi gitari kinene muno. Iceera riitu ria muthia riari 2008KE282 John Grove uria wari na miti iria miingi muno hari 134 iri ya ki-nduire na miti minini ya matunda.

Arimi a TIST kuhurana na ugaruruku wa riera.

Arimi a Tist nimaiyukitie ritana ria kuhurana na ugaruruku wa riera thiini wa thi. Arimi maingi nimataukiirwo ni ugoro wa ugaruruku uyu o hamwe na mathuna maria ungirehe thiini wa semina o hamwe na micemanio ya cluster. Nitwonete mathina maingi ma ugaruruku uyu umuthi. Kugweta maundu mamwe nita El Nino ya 1998 iria yatumire bururi ugie na nga'aragu nene, muiyuro wa maai wa 2004 onaguo ni thina warehirwo ni muiyuro uyu wa maai. Maundu mangi nita guthira kwa barafu ya kirima kia Mt. Kenya ohamwe na ugaruruku wa imera undu uria utumite irio ciage gukura wega miena ino, njuui kuhua na kung'ara.

Ngathiti ya mweri uyu niikuheana githomo kuma semina niguo tutaukwo ithuothe matgina maya.

Nitukwambiriria na kumenya uria miti iteithagiriria hari kunyihia mathina maya.

Ugaruruku wa riera ni kii?

Ugaruruku wa riera ni wongerereku wa urugari thiini wa thi, uria utumaga riera ricenje. Thi iri na urugari muingi gukira githimi niutumaga imera cia mbura cicenjie, kugie na huho, maai ma iria mambatire na irio ciage gukura wega. Nyamu cia githaka nicihutagio ni mathina maya ohamwe na andu. Riria athomi a science maria maundu maya, meciria mao ni ugaruruku wa riera uria urehagwo ni maundu maria tureka turi andu.

Ati thi ni iragia na urugari muno.

Nima! Thi niyongereire urugari na muigana wa IC gwa kahinda ka miaka 100 mihituku. Athomi marauga ati maundu mamwe ma maria twikaga nimaratuma thi yongerere urugari ta;gucina makara, petrol na gutema miti ohamwe na kwaga kumenyerera migunda iitu wega.

**Mathina ma Greenhouse nimariku?**

Mathina ma greenhouse ni wongerereku wa riera uria thi yonaga tondu hari riera ritagwo greenhouse ta carbon dioxide, nitrous oxide, sulphur dioxide na methane nicigiragiriria hinya wa riuu gukinya thi. Carbo yumaga maundu-ini maya: gutema miti, ndogo kuma iganda-ini, ndogo kuma ngari-ini ohamwe na ya ucini wa makara.

Mogwati ma ugaruruku wa riera?

- Kwaga maai kuria kwaraga na nogutwike runyanjara.
- Gutambio kwa mirimu ta Malaria. O uria kundu kwagia na urugari muingi, noguo rwagi rwonaga handu ha guciarania na ugwati wa malaria ukongerereka. Micii miingi na thibitari nicigiaga na thina uyu na andu magakua.
- Kuniya kwa urimi mabururi-ini maingi na makiria maria makoragwo East Africa. Na nitondu wa wongerereku wa riera na rwagi na tutambi guciarana, nikugiaga na ngaragu na ukia ukongerereka mici-ini iitu.
- Thogora wa irio ugathii iguru tondu irio ti nyingi na nicirabatarwo ni andu aingi nimaracibataru.
- Ugaruruku munene wa uciarithania wa maundu ma riera na muno thiini wa mutitu. Ihumo cia maai cikahua na mititu ikoma. Njira ino niigutuma urimi wa maai na njuui iria nini cikahua. Uruti wa thitima maai-ini niukuniya. Iganada ciitu ohamwe na mathibitari na kundu kungi kwa bata kuria gukoragwo kwihokete thitima nicikuhitio ni thina uyu. Maai ma

miberethi kwaga miciini na thiini wa town.

- Andu 10M mari ugwati-ini wa miyyuro ya maai ohamwe na ituika maundu maria marehagwo ni mbura nene na maai kwambatira iria-ini.

Tungigitira mathina maya atia?

Handa na umenyerere miti!

Ta uria twauga, carbon dioxide ni riera rimwe riria ritumaga kugie na ugaruruku wa riera. Miti niigucagia carbon ioxide kuma rieraini riria miti irakura na ikamiga thiini wa muti, miri na tiiri-ini iri ta cellulose carbon. On kuri o uguo, riria miti yatemwo na yacinwo niirekagiriria carbon ino igathii riera-ini.

Uri wa menya o muti nouthondeke riera riaguo?

Miti na mahuti maguo niuhumbagira thi. Kiiruru kia muti ni kiega. Riria tiiri uhumbiritwo niukoragwo na ugunyu na uu nikuga ati miti niiguteithia kwongerera maai tiiri-ini na ugateithia kuiga maai maya gwa kahinda karaihu. Irio nicigukura wega ohamwe na maai kuingiha.

Carbon credits nikii?

Kuri mwaka wa 1997 mabururi maingi nimekirire uiguano wa UN uria waugaga at mabururi maya nimakurutithania wira hamwe kunyihia uthukangia wa riera na muno kunyihia uthukia wa greenhouse gas. Uiguano uyu wetiryo Kyoto Protocol na wetanirio na mucii uri thiini wa Japan kuria uiguano uyu wetikaniirio.

Rungu rwa Kyoto Protocol, mabururi maingi maria makoragwo na iganda nimetikaniirie kunyihia muigana wa carbon dioxide iria marutaga. Njira imwe ya gwika uguo ni ni kweheria carbon dioxide



riera-ini na kumiiga thiini wa miti. Miti niigucagia carbon dioxide kuma riera-ini riria muti urakura na ukamiiga mutiini na tiiriini. Muigana wa carbon iria igucagio kuma riera-ini na ikaigwo miti-ini no uthimike na utarike. Carbon ino niyendagio thiini wa thoko ya carbon iri ta carbon credits. Aguri nimaguraga niguu manyihie carbon riera-ini. Kwa muhiano, TIST niri na uhoti wa kwendia carbon iria igucitio ni miti ota uria arimi mendagia iria na cukari. Thiini wa carbon, onagutuika ndutwaraga kindu thoko. Uthiaga na muigana wa carbon iria igucitio na ikaigwo miti-ni.

Thoko ya carbon ikoragwo New York, Chicago na Lodon hamwe na micii ingi thiini wa thi. Thiini wa thoko ino carbon niyendagio na gikiro kinene na mbeba cikoneka.

No muhaka tukinyanirie ikiro niguu tuingire thoko. Tutingitheria mititu niguu tuhande miti tondu tiwega kuri maria maturigiciirie. No muhaka twitikire gutigirira miti niyaikara kahinda ka miaka 30 na makiria. No muhaka tuheane ugoro mukinyaniru. Riria miti yahandwo, ithimi na mathabu ma carbon iria arimi a TIST magucitie. Ririkana ringi, miti nditwaragwo thoko, iikaraga migunda-ini na o uria yaikara muno noguo ukugia na mbeba nyingi. Kwa uguo, murimi niatigagwo na maciaro ma muti. Mbeba iria ithondekagwo ni TIST thutha wa kwendia carbon credits cigayanagio kuri ikundi cia TIST na cikhuthika mahuthiro-ini ta githomo, utari wa miti, na menyereri wa mitaratara ya TIST. Kuhitukira thoko ya carbon, uhandi wa miti niurehaga njira ya guthukuma tondu miti niigaga carbon iria ingithimika na yendio. Miti niikoragwo na dawa namawega mangi maingi mega.

Miti yothe igucagia carbon iiganaine?

Aca. Miti iria mitungu iigaga carbon nyingi gukira iria miceke. Miti miraihu niigucagia carbon nyingi gukira iria mikuhi. Kwa uguo niti iria mitungu niikurehe mbeba nyingi kumana na carbon credits. Uu nikuga ati miti iria ihanditwo na umenyereeri munene na utaganu muiganu niikuraga wega na ikarehe mbeba nyingi.

Kwa uguo niguu twamukire marihi maingi kumana na miti iitu, ni undu wa bata tuhande miti miingi na utaganu muiganu niguu ikure wega iri na hinya na iri miraihu wega na mitungu.

Niku na nuu uguraga carbon credits?

Gwa kahinda gaka, carbon credits yenagio n akwiyendera na gukinyanira thoko-ini. Noitikirike na njira ngurani, ota uria gukoragwo na mithemba miingi ya indo na ukinyaniru kuri indo iria ingi ciendagio thoko-ini. Haha ni mithemba imwe yayo;

1. Certified Emission Reductions (CERs) ya Clean Development Mechanism (CDM) irugamagirira thoko iria ithindeketwo ni Kyoto Protocol. Carbon credits ici nomuhaka cikorwo cikinyaniire na cikhithukio rungu rwa CDM kuhuthika ni mabururi maria manyihitie GhG na magetikaniria thiini wa uiguano uyu wa Kyoto Protocol. Ino ni thoko ya gukinyanira. Gukinyanira na gwitikirika gwikagwo ni Designated Operational Entities (DOEs) na igekirwo kiore ni bord nene ya CDM. Gwa kahinda gaka thoko ndirutaga wira wega na mitaratara ya mititu miingi hamwe na TIST.
2. Thoko ingi citabataraga gukinyanira na ciri nja ya uiguithanio wa Kyoto Protocol. Thiini wa



USA, iria ndikirite uiguanano wa Kyoto kirore, states imwe nicirekirira unyia wa GhG. Australia iri na ikiro ota icio. Na tondu ukinyaniru urenda unyihia mwitikiriku, ni njira ngurani na iria ya CDM. Thoko ici ciri na mieke miingi no cititikirite TIST.

3. Thoko cia kwiendera ni iria TIST yendetie carbon credits kumana na arimi a TIST. Kuri nithemba iiri ya thoko cia kwiendera, ya mbere ni thoko nini ya aria merutiire kuruta

mbeca niguo kwagirithia riera. Muhiano nita kuhanda miti niguo kwagirithia riera. Ya keeri ni kwirutira gwa company cia America na aria matari thiini wa Kyoto protocol na nimaterutira kunyihia GhG.

Nikuri na ukinyaniru na uigananu thiini wa thoko ici na ni ngurani, gwa kahinda gaaka, TIST niitikirikite na ikahitukio rungu rwa Verified Carbon Standard and the Climate, Community, and Biodiversity Alliance Standards.

Ripoti cia Cluster: heana maundu maria mukinyaniirie niguo cluster yanyu igie na hinya.

Thiini wa TIST, nitukoragwo na hinya riria turoya makinya ma hamwe na kuheana maria tutoretie kuri arimi aria angi a ikundi ciitu ona thiini wa cluster na makiria.

Ripoti cia o mweri thiini wa micemano ya cluster na mathabu ni cia bata muno hari gutorania. O cluster iri na uigiririki wa gutuma ripoti nginyaniru na mathabu ma o mweri. Atari na athomithania a cluster yanyu nimakuruta wira na hinya hamwe niguo mamuteithiririe gutuma ripoti ino kuhitukira Computer ya palm. Ica ikuhi nitugukorwo na uhoti wa kwona ripoti ici kuhitukira Mobile Website. Kihitukira njira ino, notukorwo na utheri na tumenye uhoro uria wakinya ni mukinyaniru. Atungata a TIST magitriirwo kuruta wira hamwe na atari a miti na athomithania niguo gutigirira maundu macio nimakinyaniru thiini wa ripoti cia o mweri thiini wa ithurano cia cluster na arugamiriri. O uria turathii na mbere na guteithania na tugatigirira o mundu nimukinyaniru hari maundu maya noguo tukugia na TIST numu na iri na hinya.

Kiririkania: niguo kugia na maciaro, o mweri cluster yagiriirwo:

1. guthii micemano-ini nakuririkania aria angi uhoro wigii micemano.

2. Kurora maciaro ma cluster: miti miero iria mihande, ikundi iria itariirwo miti, na uria mathabu maratwarithio thiini wa cluster. Tigirira nimwaririria maundu maya micemano-ini
3. tuma ripoti na palm computer cia micemano na mathabu ma cluster. No utume SMS angikorwo atari na athomithania matiri hakuhi no no muhaka makorwo micemano-ini niguo mamutungate.
4. Hariria utari wa miti na atari. Tigirira kuri na mundu wa kumateithiria!
5. Nyita ugeni andu matari amemba a TIST thiini wa micemano yanyu ya cluster. Heana ngathiti ya Mazingira Bora na umateithiririe kwiandikithia.
6. Korwo na maumirira mega! Handa miti miingi na ugure riiko ria TIST, huthira Kilimo Hai.

Ririkana: cluster iri na hinyayagiriirwo nigukorwo na miti itanyihire 200,000 iria mitare, ikundi 30-50 aria macemanagia o mweri, atongoria athure na makorwo magituma ripoti cia o mweri.



Riu ambiriria kurutithia mubango waku wira mecemanio uyu ungi ukite.

Kujengana: Ndukahitukwo ni irathimo thiini wa gikundi kianyu. Kujengana ni gicunji kia bata thiini wa TIST micemanio-ini ya o wiki.

Thiini wa Ephesians 4:15,16 ati twakane turi thiini wa kristo. O mundu thiini wa gikundi kinini kia TIST arehage kiheo giake kia mwanya na akahe gikundi giothe. Maundu mamwe ma magegania mahanikaga thiini wa gikundi ni gukurana na kuhuthira iheo iria mahetwo ni Ngai.

Kujengana ni njira ya kuona na kurutithia iheo wira. Kuri na miena iiri thiini wa Kujengana:

- mbere ya mahoya ma kuhinga, o mundu thiini wa gikundi akauga kindu kime kirahutia kaundu na nikiauthii wa na-mbere karia mutongoria eka thiini wa mucemanio. Kwa muhiano, atheka, aiga mathaa, akorwo na mubango mwega, ekira arimi hinya kwaria, angeithia na atuma njigue ndi mucii, auga kaundu thiini wa mucemanio na gatuma mucemanio uthii na-mbere wega. O mundu agiriirwo nikuga kaundu ngurani. Kaundu gaka ni ka muhaka. O mundu auge kaundu ga kujengana kuri atungata. Ikundi ingi niciheanaga kujengana kuri munini wa mutongoria.

- Na makiria, angikorwo mundu nionete kiheo kuma kuri mutongoria, no age uguo.

Tukihuthira utongoria wa guthiururukana, o kiumia mutongoria mweru niakwamukira kujengana. Kuhitukira Kujengana, niturahinyiriria arimi na mutongoria guthii na-mbere na maundu mega kiumia kiu.

Kujengana ni njira njega ya gukurana na kumenya kiria mundu arathimiirwo. Ithuothe twirute kwaragia maundu meega. Na makiria gikundi gikona maundu maria mega na mabata mekitwo ni atungati. Mutongoria uria uguka niagukorwo athomete kuma kuri atongoria aria angi.

Hari kujengana ututngati wa kiumia kiu agacokeria andu ngatho o thutha wa o mumembakuheana uhoru wake. Mutikariririe uria kaundu kangiekirwo wega na njira ngurani. Muno, mundu niakenaga riria erwo maundu mega maria ekite thiini wa mucemanio na makiria nituthomaga maundu maitu maria tutoi!

Kujengana niguteithagia mutongoria kumenya kiheo giake na guthii na-mbere na gugitumira. Kujengana niguteithagia atongoria kwagirithia utongoria o magithomaga, Kujengana ni kirathimo maita meeri.

Mazingira Bora



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Nguzo ya taarifa: Shirikisha mafanikio yako kufanya nguzo yako na TIST nguvu. Ukurasa 5

Kujengana: Msikose baraka ya Kikundi chenu. Ukurasa 6



TIST yapata wageni zaidi kuoka kwa kampuni ya Taylors of Harrogate.

Mwezi uliopita tuligawana nawe kuhusu habari njema ya kuoka wageni muhimu sana kutoka kwa kampuni ya Taylors of Harrogate, ambayo inajulikana sana Uingereza kama mnunuzi mkubwa wa majani chai na kahawa. TIST yajenga uhusiano na kampuni hii ili tuweze kufanya kazi pamoja ya kuupanua mradi wa upanzi wa miti katika maeneo ya majani chai na kahawa yaliyochaguliwa.

Tena, tarehe tisa mwezi wa pili mwaka huu, wageni zaidi kutoka Taylor walifanya matembezi ya haraka kwa baadhi ya mashamba yenye miti ya TIST. Katika kundi hii walikuwepo Andy Brown, Linda Close, Henry Boocock, na Emily Hawken. Martin Weru, Eunice Wambui na Leah Maina waliwapokea katika TIST.

Katika masaa ya alasiri, tuliwapeleka cluster ya Kimahuri ambapo walitembelea kikundi kinachoitwa Jacaranda Tree Growers, nambari ya TIST

2008KE282, Mt. Kenya Afforestation nambari ya TIST 2008KE167, and Mitero Down nambari ya TIST 2008KE282. Jacaranda Tree Growers kwa sasa wana miti elfu kumi na tano, mia nne sitini na nne, Mitero Down wana miti elfu moja mia tano na ishirini na nane ambapo Mt Kenya Afforestation wana miti mia saba thelathini na nne.

Walitembelea mashamba ya John Gichuki hasa. John ana zaidi ya miti elfu kumi na tano ambayo ni pamoja na miti iliyo mipakani mwa mto, miti ya kiasili na iliyo na nyuki, lakini sanasana miberoshi. Baada ya hapo tulitembelea kikundi nambari 2008KE167, shamba la Rose, ambalo ni lenye ukubwa wa kati na lililochungwa vyema. Matembezi yetu ya mwisho yalikuwa ya kikundi nambari 2008KE282, shamba la John, ambalo lilikuwa na miti mingi ikiwa ya kiasili katika miti mia moja thelathini na nne na miti michache ikiwa mitunda.

Wakulima katika TIST wapigana na mabadiliko ya hali ya hewa.

TIST wakulima waliitikia wito wa kimataifa wa kupambana na ongezeko la joto duniani na mabadiliko ya hali ya hewa. Wakulima wengi walitaka kuelewa kupitia semina TIST / mafunzo na katika nguzo mikutano ya kujifunza na kuelewa zaidi kuhusu ongezeko la joto duniani, athari zake kwa hali ya hewa, na kukabiliana na mbinu. Tunaona wengi athari za mabadiliko ya hali ya hewa leo. Tu kuelezea matukio kadhaa ya athari, El Nino mafuriko ya 1998 kwamba uliharibu mengi ya nchi na ukame wa muda mrefu kwamba ikifuatiwa na upepo wa nguvu ya 2004 walikuwa uwezekano ulizidi kwa joto duniani. Nyengine vielelezo mashuhuri ni taratibu amevaa mbali barafu katika kilele cha Mlima. Kenya, hali ya hewa haitabiriki ambayo ilisababisha na kushindwa kwa mazao katika maeneo mengi, kukausha ya chemchem na maji ya vyanzo vya maji maeneo, miongoni mwa wengine wengi.

Jarida la mwezi huu kushiriki maelezo ya

mafunzo na semina ili sote tuweze kuelewa joto duniani na mabadiliko ya hali ya hewa bora.

Tutaanza na kufafanua kila mrefu na kulielezea zaidi na kisha kujifunza jinsi ya miti yako na jukumu muhimu katika kuondokana na madhara ya ongezeko la joto duniani.

Je, nini joto duniani?

Joto duniani inahusu ongezeko la wastani katika joto ya dunia, ambayo kwa upande husababisha mabadiliko katika hali ya hewa. Joto duniani inaweza kusababisha mabadiliko katika mwelekeo wa mvua, nguvu ya dhoruba, kupanda kwa bahari ngazi, kushindwa mazao, na mbalimbali ya athari juu ya mimea, wanyama pori, na binadamu. Wakati wanasayansi majadiliano kuhusu suala la mabadiliko ya hali ya hewa, wasiwasi wao ni kuhusu ongezeko la joto duniani husababishwa na shughuli za binadamu na mabadiliko ya hali ya hewa tofauti na hali ya hewa hii huleta juu.

**Ni kweli dunia inapata joto?**

Ndiyo! Dunia inaogezwa joto kwa C kuhusu 1° zaidi ya miaka 100 iliyopita. Wengi wa wanasayansi duniani kuongoza hali ya hewa kufikiri kwamba mambo ya watu kufanya ni kusaidia kufanya dunia joto, kama vile kuchoma mabaki ya mafuta ikiwa ni pamoja na makaa ya mawe, petroli, na gesi asilia, na kukata misitu na kusimamia ardhi hafifu.

Je, ni madhara ya hewa taka?

Ni athari chafu ya kuongezeka kwa joto duniani kwa sababu ya kuwepo kwa baadhi ya gesi katika anga, gesi za viwandani, kama dioksidi kaboni, oksidi nitrojeni, dioksidi sulfuri, na methane ambayo hutega nishati kutoka kwa jua. Vyanzo vikuu vya kaboni ni: ukataji wa miti, gesi inayozalishwa kutoka kwenye viwanda, gesi inayozalishwa kutoka magari, gesi inayozalishwa kutoka kuchoma ya kuni au makaa na uchomaji wa misitu.

Je, ni nini hatari ya joto duniani?

- Kufungua kwa maji katika maeneo kame na semiarid nchi.
- Hii inaweza kusababisha maeneo zaidi kuwa jangwa. kuongezeka kuenea kwa magonjwa kama vile malaria.
- Kama maeneo yenye joto zaidi huwa yanafaa kuzaliana kwa misingi ya mbu, na hivyo kuongeza hatari ya maambukizi ya malaria. Familia nyingi na taasisi za afya zinaweza kuathiliwa na vifo vya watoto wachanga viwango kupanda. kupungua kwa uzalishaji wa kilimo katika nchi nyingi za hari, hasa katika nchi za Afrika Mashariki.
- Kutokana na mvua kupungua na kuongezeka kuzaliana kwa wadudu kutokana na kupata joto kuongezeka, uzalishaji wa mazao ya chakula unaweza kupungua na matokeo yake ni umaskini na njaa miongoni mwa familia nyingi na jamii. Bei ghali ya bei ya vyakula duniani
- Kama zaidi wakulima kupata mavuno kidogo na chakula kuwa adimu, bei kuongezwa kwa sababu mahitaji ni ya juu na ugavi ni ya chini.

mabadiliko makubwa katika tija na muundo wa mifumo muhimu ya kiikolojia hasa ya misitu.

- Maji katika vyanzo vya milima na misitu kuendelea kukauka. Hii itaathiri uwezo wa kumwagilia mazao na kupunguza mtiririko muhimu kushika mabwawa na vyombo vingine vya kushikilia maji. Hii itapunguzauzalishaji wa nguvu za kawi. Viwanda vyetu, hospitali na taasisi nyingine ambazo sana hutegemea umeme vitaadhirika sana. usambazaji wa maji ya bomba katika maeneo ya mijini kama vile maeneo na vijijini pia huathirika.
- Makumi ya mamilioni ya watu wamo katika hatari kutokana na mafuriko na maporomoko ya ardhi, inaendeshwa na ongezeko la makadirio ya kiwango cha mvua na, katika maeneo ya pwani, kupanda viwango vya bahari.

Nawezaje kuzuia joto duniani?

Panda na utuze miti?

Kama ilivyoelezwa hapo juu, dioksidi kaboni ni moja ya gesi ambayo kusababisha ongezeko la joto duniani. Miti kunyonya dioksidi kaboni kutoka hewa. Hata hivyo, wakati miti inakatwa na kuchomwa moto, hiyo huachilia kaboni ambayo imehifadhiwa kwenye mizizi na kuirudisha kwa hewa tena.

Je, unajua kila mti mmoja unaweza kujenga hali ya hewa micro?

Miti na bima zao huifanya dunia kuwa baridi. faraja ya kivuli cha mti. Ona kwamba udongo chini ni ya miti una unyevunyevu. Hii ina maana kwamba miti kwenye ardhi yako itasaidia kuboresha kiasi cha maji katika udongo wako, na kusaidia kuhifadhi maji kwa muda mrefu. Hii itasaidia mazao yako na pia hata kuwasaidia watumiaji wa maji katika eneo lako.

Je, ni nini upungufu wa karboni?

Katika 1997, nchi kadhaa zili saini mkataba wa Umoja wa Mataifa ambao ulisema kuwa nchi zote ambazo zimesiani zingefanya kazi kwa pamoja ili kupunguza kiasicha uharibifu wao katika mazingira gani mazingira. Mkataba huu uliitwa Itifaki ya Kyoto, jina lake baada ya mji Japan la Kyoto ambapo mkataba ulisainiwa.



Chini ya Itifaki ya Kyoto mengi ya mataifa yenye viwanda vingi wamekubali kupunguza viwango vya kaboni wao huzalisha. Njia moja ya kufanya hili ni kwa kuchukua dioksidi kaboni nje ya anga na kuhifadhi katika ardhi au katika miti. Miti kunyonya dioksidi kaboni kutoka hewa wakati photosynthesis inatukia na kuhifadhi katika mizizi, na udongo. kiasi cha kaboni kuchukuliwa kutoka hewa na kuhifadhiwa inaweza kupimwa na mahesabu, na kisha, wakati kuhakikiwa kama sahihi, ngozi hii ya dioksidi kaboni inaweza kuuzwa katika soko la dunia kama mikopo ya kaboni. Wanunuzi wanaweza kununua kadi hizi kukabiliana carbon dioxide yao.

Kwa mfano, TIST ni uwezo wa kuuza kaboni fyonzwa katika miti tu kama wazalishaji huuza sukari na maziwa. Lakini kaboni haiwezi kupelekwa sokoni. Badala yake, thamani ni kutoka dioksidi kuchukuliwa nje ya hewa, katika mti kwenye shamba lako au misitu, kipimo na taarifa. biashara ya mikopo ya kaboni ni kufanyika katika New York, Chicago, London, na miji mingine ya kimataifa. Katika masoko haya, , biashara, na kuuzwa kwa kiasi kikubwa kwa ajili ya fedha. Tuna kukidhi mahitaji ya soko. Hatuwezi wazi msitu au kukata miti kwa kupanda miti tangu hii ni mbaya kwa mazingira. Tuna kujitoa kwa kushika miti kukua kwa muda mrefu miaka, 30 au zaidi. Tuna kuripoti data usahihi. Mara miti ya kupandwa, baadhi ya vipimo na mahesabu yaliyotolewa kupima kiasi cha kaboni Miti ya TIST wakulima kufyonzwa. Kumbuka tena, miti kweli kamwe kuchukuliwa kwa masoko. Wao kubaki katika shamba na tena wao kukaa hai, tena kipindi ya kupokea malipo. Hivyo, mkulima anayeshika miti na matunda na karanga. fedha kwamba TIST inafanya kuuza offsets kaboni kisha kupasua na Vikundi TIST na kutumika kusaidia gharama ya TIST, ikiwa ni pamoja na mafunzo, Ukaguzi, na usimamizi.

Kupitia soko la kaboni, upandaji miti, Unaweza kutoa chanzo kipya cha mapato kwa sababu wao kunyonya na kuhifadhi kaboni kwamba unaweza kuwa kipimo, taarifa, na kuuzwa kama mikopo ya kaboni, Miti pia hutoa nyingine nyingi kimazingira, nyenzo na faida ya dawa.

Je, miti hunyonya kiasi gani cha kaboni?

Miti ambayo ina mduara mpana (zaidi majani) kuhifadhi zaidi kaboni kuliko miti ambayo ni nyembamba. Miti mirefu pia kunyonya karboni zaidi kuliko miti mifupi. Kwa hiyo, miti ambayo ni minene huleta mapato zaidi kutoka kwa kadi za kaboni. Hii ina maana kuwa miti iliyopandwa kwa nafasi zuri huwa na nafasi ya kukua na kuwa mirefu na kulipiwa zaidi kwa kuwa hiyo hunyonya karboni zaidi. Haishidanii rutuba ya udongo na maji kama vile miti ambayo ni imepandwa karibu.

Kwa hiyo, ili kupokea malipo mazuri nje ya miti yetu, ni muhimu kwa kupanda katika nafasi nzuri ya kutosha ambayo kuwaruhusu kukua kwa afya na hivo kuwa mirefu na kubwa.

Ambapo / ambao ni wanunuzi wa mikopo ya kaboni?

Hivi sasa, mikopo ya kaboni huuzwa katika masoko ya hiari. Karboni inaweza kuwa imethibitishwa kwa njia tofauti, kama vile ambavyo kuna bidhaa tofauti ,bidhaa nyingine ya kununua na kuuza (kama kahawa na kahawa asiri chini ya maandiko mbalimbali). Hapa ni baadhi ya masoko makubwa na aina :

- 1) Soko liloruhusiwa kwa ajili ya Mfumo wa Maendeleo Safi inawakilisha soko umbwa chini ya Itifaki ya Kyoto. Mikopo kaboni ithibitishwe na kuthibitishwa chini ya mchakato kwa ajili ya matumizi ya nchi zilizoendelea kwamba wamefanya kupunguza ahadi chini ya Itifaki ya Kyoto ya kuwasaidia kuzingatia mikataba. Hii ni soko kufuata. Ukaguzi na vyeti ni kufanyika kwa Enheter huru teule ya Utendaji (Je) na kupitishwa na Halmashauri Kuu ya CDM. Kwa sasa, soko hii haina kazi vizuri sana kwa miradi mingi ya misitu, ikiwa ni pamoja na TIST.
- 2) Mwingine soko kwamba inahitaji kupunguza uzalishaji kuhakikiwa ni non-Kyoto kufuata masoko. Nchini Marekani, ambayo siyo mtiaji saine wa Kyoto, baadhi ya majimbo ya mtu binafsi ni wanaohitaji kupunguza GhG. Australia ina mahitaji sawa. Wakati mchakato wa kupitishwa itahitaji kwamba kupunguza uzalishaji lithibitishwe, na kuthibitishwa na chama huru, ni mchakato tofauti na tofauti ya



taratibu CDM. Haya masoko mengi ya uwezo, lakini si sasa kufungua kwa TIST.

- 3) Masoko ya Hiari ni ambapo TIST ina kuuzwa offsets kutoka upandaji miti na wakulima wa TIST. Kuna aina mbili ya wanunuzi wa hiari soko. kwanza ni soko dogo linaloundwa na watu tayari kutoa fedha kuhamasisha watu kupanda miti. Mifano ni pamoja na kulipa kwa ajili ya miradi ya kupanda miti ya kufanya harusi au carbon mkutano neutral. Aina ya pili ya mnunuzi hiari soko ni kubwa sana uwezo wa soko linaloundwa ya makampuni katika Marekani na mengine yasiyo ya Kyoto nchi za viwanda kuwa

ni kufanya ahadi ya hiari ya kupunguza uzalishaji wa GhG yao aidha kwa sababu wao ni mawakili wema wa mazingira au wao ni kuandaa kwa ajili ya baadaye mahitaji ya udhibiti.

Kuna wengi viwango tofauti katika masoko haya kwa sheria tofauti na yanayobadilika juu ya upandaji miti, ufuatiliaji na utoaji taarifa kwamba sisi lazima kukutana kuuza offsets. Hivi sasa, viongozi wawili kuwa TIST umethibitishwa chini ni Thibitishwa Carbon darasa na Hali ya Hewa, Jamii, na Viwango Biodiversity Alliance.

Nguzo ya taarifa: Shirikisha mafanikio yako kufanya nguzo yako na TIST nguvu.

Katika TIST, tunapata nguvu katika kuchukua hatua za pamoja na kushirikiana mafanikio yetu na wengine katika Makundi yetu Small, katika makundi yetu, na kwingineko. Kila mwezi taarifa juu ya nguzo mikutano nguzo na uhasibu ni sehemu muhimu ya mafanikio haya. Kila nguzo ni kuwajibika kwa kuwasilisha sahihi nguzo mkutano na nguzo ripoti ya uhasibu kila mwezi. Nguzo yako ya makwatifaya na mkufunzi kazi na wewe kuwasilisha ripoti hizo kwa kutumia kompyuta Palm. Mapema, tutakuwa na uwezo wa kuona taarifa hizo kwenye mtandao wa TIST Mkono. Kwa njia hii, tunaweza kuwa na uwazi zaidi na wote tunajua kwamba data taarifa ni sahihi.

Nguzo ya watumishi wanapaswa kufanya kazi kwa makwatifaya na mkufunzi ili kuhakikisha taarifa sahihi ni taarifa katika ripoti hizo kila mwezi na juu ya nguzo uchaguzi na wawakilishi. zaidi sisi kusaidiana, na kushikilia kila mmoja kuwajibika kwa taarifa sahihi na kwa ajili ya kufikia matokeo kubwa kwa gharama nafuu, TIST nguvu na bora inakuwa.

Mawaidha: Kwa ajili ya mafanikio, kila mwezi nguzo yako lazima:

- 1) Hudhuria nguzo yako mkutano na kuwakumbusha makundi mengine ya kuhudhuria.

- 2) Kurekebisha pamoja matokeo nguzo yako imepata: miti mpya kupandwa, vikundi kukaguliwa, na jinsi bajeti zilitumika pamoja kama nguzo. Kufanya hii sehemu ya mkutano wa nguzo na ya Small yako Group mikutano!
- 3) Send taarifa na Palm kwa Nguzo Mkutano na Mhasibu Nguzo. Unaweza kutumia SMS kuripoti ikiwa makwatifaya yako na mkufunzi haipo, lakini wanapaswa kuwa katika mikutano ya kuwatumikia ninyi.
- 4) Kuandaa quantification pamoja na Makwatifaya. Hakikisha mtu kutoka nguzo yako kusaidia katika kila quantification!
- 5) Mualike rafiki yako na majirani na kujiunga na TIST katika kikao nguzo. Shirikisha hii Bora Mazingira na kuwasaidia mchakato wa maombi.
- 6) Matokeo ya matokeo makubwa! Kupanda miti, kujenga au kununua kuokoa nishati jiko, mazoezi CF.

Kumbuka: Nguzo imara lazima kuwa na angalau miti 200,000 kukaguliwa, 30-50 kazi vikundi vinaweza kukutana kila mwezi, waliochaguliwa mtumishi viongozi, na kuwa kufanya nje na taarifa juu ya mafunzo mazuri na quantification.



Kujengana: Msikose baraka ya Kikundi chenu.

Kujengana ni sehemu muhimu sana ya mkutano wa kila wiki wa kikundi chako. Inasema katika Aefeso 4:15,16 kuwa tujengane hadi tuwe na utimilifu wa Kristu. Kila mtu katika Kikundi chako cha TIST huleta talanta na zawadi zake maalum kikundini. Moja ya vitu vya kuajabisha inayotokea katika kikundi kidogo ni kujua, kugawana na kutumia talanta hizo ulizopewa na Mungu.

Kujengana ni njia moja ya kufanya hizo talanta kuonekana na kutumika. Kuna sehemu mbili za Kujengana:

- Kabla ya ombi la kufunga, kila mtu katika kikundi aseme kitu kizuri maalum ambacho kiongozi amefanya katika mkutano huo. Kwa mfano, alitabasamu, aliweka masaa, alifanya mipango mizuri, aliwatia nguvu wanakikundi wote kuongea, alinisalimu na alinifanya nijisikie nimekaribishwa, alisema kitu kilichokuwa kinaendelea vizuri katika mkutano ama katika kazi iliyokuwa ikifanywa na kikundi, na kadhalika. Kila mwanakikundi anahitajika kusema kitu tofauti. Hili si la kujichagulia. Kila mtu ajenge kiongozi wa utumishi. Vikundi vingine hujenga hata msaidizi wa kiongozi.
- Kuongezea, ikiwa mtu ameona zawadi iliyoonyeshwa na kiongozi, mwanakikundi anaweza pia kusema ni zawadi ipi.

Kwa kupitia uongozi wa mzunguko, kila wiki kiongozi mpya hujengwa. Kupitia Kujengana, tunatiana nguvu kati yetu kuhusu vitu vizuri alivyofanya kiongozi wa wiki hiyo mkutanoni na talanta alizoonyesha mtu huyo.

Kujengana pia ni njia ya kujua kuangalia vitu vizuri kuwahuu watu halafu kuvisema. Sote twahitaji kufunza ndimi zetu kusema yaliyo mazuri. Kuongezea, kikundi chote hujua ni nini kikundi kinafikilia ni muhimu katika kiongozi mtumishi. Viongozi wanaofuata watafaidika kupitia waliosikia katika Kujengana kuhusu viongozi waliopita na kujua ni nini muhimu katika kuwa kiongozi.

Kujibu wakati wa kujengana, kiongozi wa wiki hiyo atasema, "Asante." baada ya kila mwanakikundi kusema taarifa nzuri iliyo maalum. Hakuna kujadiliana kuhusu vipi kungekuwa kuzuri zaidi ama tofauti. Mara nyingi, mtu huyo hufurahi anapoambiwa kuhusu mambo mazuri aliyofanya wakati wa mkutano. Wakati mwingine, huwa tunajua mambo kujihusu ambayo hatukuwa tunajua!

Kujengana husaidia kiongozi wa siku hiyo kujua talanta zake na kuzidi kuzitumia. Kujengana pia husaidia kikundi kidogo kwa sababu wana kikundi wote huboresha uongozi wao wa utumishi wanapozidi kujifunza.

Kujengana ni baraka mara mbili!

Mazingira Bora



TIST

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

Kikamba Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Taylor's Senior Managers talking to Rose, a member of Mt Kenya Afforestation 2008KE167 during their visit to TIST last month. Story page 2

Inside:

TIST Kukwata aeni angi kuma Taylor's ya Harrogate. Page 2

Aimi ma TIST kukitana na uvinduku wa nzeve na uvyuvu wa nthi yonthe. Page 2

Kutunga livoti kwa ngwatanio (cluster): Tutavye undu mwikite na kila kitumite muendee kuthuthya ngwatanio ila ingi na kwikia vinya TIST. Page 5

Kwakana: Ndukavitukwe ni uathimo wa kakundi kaku kanini. Page 6



TIST Kukwata aeni angi kuma Taylors ya Harrogate.

Mwai muthelu, nitweethiwe na ivuso iseo ya kumumanyithya uvoo museo wa kwithiwa tumakwatite aeni ueni kuma Taylors ya Harrogate, ila ni kambuni iuaa maiani na kaawa thini wa UK. TIST niendee na unosya nduu yoo na kambuni ino nikana mathuklume vamwe kuthathasya uvandi wa miti isioni imwe ila ivandawa maiani na kaawa.

Ingi kwi matuku 9/02/2015, aeni angi kuma Taylor nimatuthokeie okwa ivinda ikuvi na meethiwa matonya uvika isioni imwe ila tuvandite miti (mititu yitu). Aeni aa ni, Andy Brown, Linda Close, Henry Boocock na Emily Hawken. Ala mamathokisye ma TIST ni Martin Weru, Eunice Wambui na Leah Maina.

Masaani ma saa nyanya nimamatwaie nthini wa ngwatanio ya Kimahuri vala mavikie muundani

uvanditwe miti ya Jakaranda ya ngwatanio ino namba 2005KE469, Ingi nimaendie Mt. Kenya Afforestation Ngwatanio namba 2008 Ke167 na mavika Mitero Down 2008KE282. Nthini wa Mitero Down avandi ma miti ya Jakaranda nimatumite ivikya miti 1528 nayo mt. Kenya Afforestation yina miti 734.

Kwa mwolooto museo ni kana nimavikie muundani wa John Gichuki ula uvandite Jacaranda. John ula wina miti ta 15,000 ila ni ivulenen ya ngumoni sya mbusi ya kiene na nuithasya nzuki onakau miti yake mingi ni Cyprus. Nitwaendie ngwatanioni namba 2008KE167, muundani wa Rose ula timunene. Ingi nitwanikie muundani wa mwiso wa ngwatanio namba 2008KE282 ula ni wa John ula wina miti ta 134 ila mingi yiya kikamba na minini ya matunda. Kambunini ya

Aimi ma TIST kukitana na uvinduku wa nzeve na uvyuvu wa nthi yonthe.

Aimi ma tist nimeew'ie witano wa kukitana na ualyuku wa nzeve vamwe na uvyuvu. Aimi aingi nimandee kwenda kumanya kwa nzia ya movundisyo na semina sya TIST na yila mena mbumbano sya ngwatanio syoo iulu wa uvyuvu na uvinduku wa nzeve nthi yonthe, mauvindu ma uvyuvu na mothuku maw'o nthini wa nzeve na undu tutonya kwika kuete uvinduku munini. Nitukwona movinduku manene nthini wa nzeve umunthi. kwa ngelekany'o El-nino sya mwaka wa 1998 ila syaetie wanangiko munene nthini wa nthi yitu Kenya na yaatiiwa nimunyao munene, kinzeve kinene kya hurricane kya mwaka wa 2004 ithi syothe ietetwe ni uvinduku wa uvyuvu wa nthi. Kingi ni kwina ia ya kiima kya mt. Kenya kwoneka yiendee na kuoleka, na ivinda ya mbua kana thano itekueleeka nokithia mundu ndatonya umanya ni indii ukuvanda na aiketha, mbusi na nthongo mbingi sya kiw'u kung'ala na maundu angi maingi.

Mwai uyu ithangu yielesya iulu wa semona nikana

tuelewe iulu wa uvyuvu wa nthi na uvinduku w nzeve nesa.

Twiambiia kwa kuelelya ndeto na na kwimanyisya undu miti ithukumaa kilio kinene kukitana na uvyuvu uyu wa nthi.

Nikyau kitawa uvyuvu wa nthi (Global Warming)

Uvyuvu wa nthi withiawa uyonany'a wongeleku wa uvyuvu nthini wa nzeve ula uetae uvinduku nthini wa nzeve ukethia niya vyuva kwiundu itwie. Nthi mbyu ni ietae uvinduku wa undu mbua ikua, iutani syina vinya, ukanga kwambata, mimea kulea usyaa, miti kuma, na movindu maingi kwa nyamu na andu. Yila andu ma science me kuneenea iulu wa uvinduku wa nzeve , kimako kyoo kinene ni uvyuvu ula uetetwe ni meko ma mundu na undu mena uthuku mwingi kwa kila kindu.

**Kwa w'o nthi ni yiendee na uvyuva?**

ii! niw'o nthi niyongelekete uvyuvu wa kwa ndikilii imwe (10c) nthini wa myaka iana yimwe (100yrs). Aingi ma ala matongoety'e kw'autoalamu na utuika wa nzeve nimekwisilya kana maundu ala andu mekwika nimatumite nthi iendee na uvyuva kwa ngelekany'o Kuvivya mauta, mavia ma Coal, ngasi ya kuma nthi, kutemanga mititu na kulea unzuvia muthanga.

Nyumba sya ngilini (Greenhouse) syinthiawa na uthuku mwau?

Uthuku wa greenhouse ni kwithiniwa uvyuvu wa nthini utuma ngasi imwe ila syitawa greenhouse gases ta Carbon dioxide, Nitrous oxide, Sulphur dioxide na methene nikwataa vinya kuma suani. Nzeve itavisaa (carbon) ni kuma kwa miti ila yatemwa, ngasi kuma kambunini, ngalini na ngasi ya miti yavivya kana kuvivya makaa kana mititu.

Ni muisyo mwau uetawe ni uvyuvu wa nthi?

- Manthina ma kiw'u kaingi kundu kula kumu na kwi mang'alata nakuituma kutwika weu.
- Kwongeleka kwa uyaaku wa uwau ta malaria. Yila kundu kwa vyuva kutukaa kundu kuseo kwa umuu kusiyaia na kuituma uwau wa malaria wongeleka. kwoou iyiete uvindu kwa misyi na masivitali ona uyivu wa andu kwikala thayu na ikw'u sya syana iyongeleka.
- Kuoleka kwa liu kuma miundani ta isioni imwe sya Africa ya wumiloni wa sua. Nundu wa mbua kunyiva na kusiyaia kwa kutamu kwingiva mimea ya liu iieka kwika nesa na unyivu wa liu uiete ungya na nzaa nthini w' amisi mingi na mbai mbingi.
- Liu kwambata vei. Oundu aimi aingi maendee na ukwata liu munini kuma miundani now'o uendeeaa na kwinthiwa wimunini sokoni na nundu andu naingi ala meuwenda nthooa naw'o uyambata.
- Uvindu munene nthini wa usyao na kila kyonthe kyumea kithekani na mitituni. Mbumo sya mbusi nta iima na mititu niendee ma kuma.

Kii kikaete ualyuku nthini wa kungithya miunda, kususya nasukasya silanga na tulusi kwikala tuvitye kiw'u. Ingi kiw'u kyanyiva onakwo kusevya sitima kwa nzia ya kiw'u kuiyiva na kwoou uvindu uyu masivitali, industry, na kungi kula sitima utumikaa muno uyithia nakw'o nikwavikiwa nimauvinduku aya. Ingi kiw'u kiinyiva ola kula kitwaitwe na mivaivo ta mataoni na misyi imwe kiilea uvika kana kiivika kinini.

- Andu aingi vya mine nthina wa kwithiwa matonya uvikiwa ni mavuliko, kutheewa ni muthanga na kungi ta utee wa ukanga kiw'u kwambata iulu wa vala kitwie.

Nata ndonya usiia nthi kuvyuva?

Vanda miti na uimisuvia

Tondu tuwetete vaa iulu, nzeve itavisaa ni imwe kati wa ila ietae uvyuvu wa nthi. Miti ninyusaa nzeve itavisaa ila ikusevya liu wayo na kumia mithambani, miini na muthangani ta cellulose carbon. Onavala miti yatwemwa na kuvivya niyumasya nzeve isu itavisa na iilika ingi nzeveni.

Niwisi kana kila muti no uete uvinduku wa nzeve?

Miti na uthui wayo niviyikaa na kunthithya nthi. Niwiw'aa mimwianie uli muuthini wa muti. Syisya wone kana ungu wa muti vala vena miinyi kiw'u kyavo kivakui kwi vala vena sua. Yi la muthanga wekala wi muthithu now'o ukwatiia kimeu kwa ivinda iasa. Kii kimaanisya kana miti ila yi kithekani kwaku nikutetheesya kwikalya kiw'u muthangani kwa ivinda iasanga kute kula kutemiti. Kii niutetheesya mimea ya muundani kwika nesa na kutethya ala matumiaa kiw'u kisioi kyaku.

Carbon Credits ni kyau?

Mwakani wa 1997 nthi imwe nisyeekee saii wiw'ano woo na UN kana nikuthukuma vamwe kuola kuthokoanw'a lwa nzeve na kuola utumiku wa greenhouse. Wiw'ano uyu weetawa Kyoto Protocol ula weetawe uu kuatiania na isyitwa ya musyo umwe wa Japanese witawa Kyoto vala saii syeekiawa.



Ungu wa Kyoto protocol nathi mbingi ila syina industries nimeetikilanile kuola kiasi kila mekumya nzeve itavisaa. Nzia imwe ya kwika uu yai kwosa nzeve itavisaa (Carbon dioxide) na kumia nthini wa miti kana muthanga. Miti niyosaa nzeve itavisaa na kumitumia kuseuvya liu ula yiaa mithambani, miini na muthangani. Nzeve itavisaa ila yosetwe kuma mawithyululukoni nitonya kwiwa na uthimwa vamwe na kutalwa na indi isiw'a kana niyaw'o, nzeve ino noitewe kwa soko wa nthi yonthe ta carbon credits. Aui nimatonya kuua credits kuola nzeve itavisaa ila ikumya.

Kwa ngelekany'o TIST intonya uta nzeve itavisaa yi mitini ota undu sukali na yiaa itesawa. Kwa carbon, onakau, ndutumaa na meli kila uuta indi lato wa kuma kwa carbon ila yumitw'e mawithyululukoni na nzeveni na kwia mitini kana muthangani yi thime na ikalivotiwa. Utandithya wa carbon credit ukunawa nthini wa musyi wa New York, chicago, London na misyi ingi nthi yonthe. Nthini wa soko inthi carbon niuawa, kutandithw'a na kutewa kwa wingi mbesa. Nonginya tuvukie mawendi ma soko ino. Tuitonya ututa miti kana kwenga mititu tuvande miti nundu uu ni uthuku kwa mawithyululuko. Nonginya twiyumye kuikiithya nitwavanda miti na taendee na kumivanda tukiea ila ingi kwa ivinda iasa ta ya myaka miongo itatu kana mingaingi. Nonginya tutunge livoti yaw'o. Miniyamina uvandwa ithimo na utalo nonginya ukekwa kuthima ni carbon yiana ata imeletw'e ni miti ila ivanditwe ni aimi ma TIST. Lilikana miti nditwaawa sokoni uyu wa carbon, miti yikalaa vala yavandwa na undu yekala ivinda yiasa now'o ivinda ya kuendee na kuivwa yithiawa yi iasa. Kwoou muimi niwikalaa na miti na usyao wayo. Mbesa ila TIST iseuvasya kuma kutani kwa nzeve itavisaa ni iaanaw'a na kutumika tukundini tunini kukwata mbau uthukumi watw'o vamwe na kuiva amanyisa, quantification na uungamii wa ngwatanio ino.

Kwisila kwa soko sya nzeve itavisaa, kuvanda miti nikutonya kwithiwa kwi na ueti nundu miti niinyusaa carbon na kumia na nitonya uthimwa na kwineka undu yiana, kunenganwe livoti na kutewa ta carbon credits. Miti nietae moseo angi kwa mawithyululuko ta kwithiwa ni muiito na ninenganae moseo angi ta ngu,

mbau sya mwako na moseo angi maingi.

Miti yonthe inyusa carbon undu umwe?

Any'ee. Miti ila yina uthanthau munene (more biomass) niyiaa carbon mbingi kwi miti mitheke. Miti miasa ingi niyusaa carbon mbingi kwi miti mikuvi. Kwoou, miti ila mithathau ni yithiawa na ueti mwingaingi kuma kwa carbon credits. Kii kionany'a kana miti yavandwa yina myanya ila yaile yina ivuso iseo ya kuasava na kwiana yi mithathau na kuete ukwati munene kuma kwa carbon income. Nundu iyiuthaania unou ula wimuthangani kana kiw'o ta miti ila ivanditwe ithengeanie.

Kwoou, nikana ukwate ndivi nzeo kuma mitini no movaka wikie maanani kumitaanisya uivanda nikana yiane nesa yina unou ula waile na uasa.

Niva kana nuu uuaa Carbon credits?

Umunthi, carbon credits itesawa masokoni ma kwiyumya na sokoni ila syinakila kyavitukithw'e kya soko isu. Soko ithi nivitukithaw'a kwa nzia kivathukany'o, otondu kwi brand mbingi ivitukithaw'a na kutewa na kuuwa(ngelekany'o kaawa na kaawa organic ungu wa label kivathukany'o). Vaa ve imwe kati wa soko na mithemba ya kwambiia:-

- 1) Certified Emission Reductions (CERs) kwa Clean Development Mechanism (CDM) ila iungamiaa soko kuseuvya uiungu wa walany'o wa Kyoto. Carbon credits ithi nonginya ivitukithw'e na kusyaaisya ungu wa nzia ya CDM kwa kutumiwa ni nthi ila syina Industries ala maseuvitye GhG kwiyumya kuola ungu wa walany'o wa Kyoto kumatetheesya kuatiia wiw'ano uyu. ino nisoko ya witikilana. Verification na Certification nisyikawa ni ngwatanio ziyoka yitawa Designated Operational Entities (DOEs) and kuvitukithya ni aangami kana board ya CDM. umuthi, soko ino ndithukumaa nesa na project mbingi sya mititu, yivo TIST.
- 2) Soko ingi ila yendaa kuvitukithya kwa uoleku wa kumya nzeve itavisaa ni soko ya Non-kyoto compliance. Nthini wa US, ila nimwe kati wa nthi ila syeekiie saii wiw'ano wa Kyoto, imwe sya state syayo nisyendaa kuolwa kwa Ghg. Australia



niyithiawa na wendi usu. yila kuvitukithwa kwa walany'o uyu kuyenda kuolwa kwa umya wa nzeve itavisaa nikana uverifiawe ni ngwatanio kivathukanyo, ni undu umwe kivathukany'o na wina walany'o kivathukany'o na Cdm. Soko ino yina wikwatw'o onakau umuthi ti mbingue kwa TIST.

- 3) Soko sya kwiyumya nivo TIST itesaa nzeve yoo kuma kwa miti ila ivanditwe ni aimi ma Tist. Vaa ve soko ili sya aui ma kwiyumya. Imwe ni soko yina andu anini vyyu ala meyumitye kumwa mbesa na kunenge andu kumathuthya kuvanda miti. Ngelekany'o ni andu kuiva miti ivandwe kuseuvya vandu va utwaania kana kuseuvya conference Carbon neutral. Muthemba wakeli wa soko ino

ni athooi makwiyumya ila ni soko yivo na itonya kwika nesa ila iseuvitw'e ni kambuni sya US na angi ala ni non-Kyoto industrial countries ila meyumitye kuola kumya nzeve itavisas GhG nundu wa kwithiwa ni athukumi aseoo ma mawithyululuko kana meeta kwiyumbanisa ivinda yukite na kila kikendeka.

Kwina ilasi kivathukany'o nthini wa soko ithi na syikalaa na miao yikalaa isesya ivinda kwa yingi iulu wa uvandi wa miti, usyaiisya na kutunga livoti nikana tutonye uta sokoni ithi. Umunthi atongoi eli ala TIST ithukumaa wungu wamo ni Verified Carbon Standard na Climate, Community and Biodiversity Alliance Standards.

Kutunga livoti kwa ngwatanio (cluster): Tutavye undu mwikite na kila kitumite muendee kuthuthya ngwatanio ila ingi na kwikia vinya TIST.

Nthini wa Tist, tukwataa vinya kuma kuthukumani vamwe na kuaiana kila twinakyo nthini wa ngwatanio situ na mbee. Livoti syaw'o sya kila mwai sya ngwatanio na ikundi na masavu masyo ni syavata muno kwa kutethya ngwatanio kuendee na kwiyaka. Muvitukithya wenyu vamwe na mumanyisa nimeuthukuma vamwe maitumia Palm Computer kutunga livoti ithi. Mituki, nitukwithiwa tutonya kwona livoti ithi nthini wa website ya simu ya TIST. Kwa nzia ino kila kindu kiithwa kyenini mbeange na kutunga livoti kuyithiwa kwi kwa w'o.

Uthukumi wa ngwatanio niwaile uthukuma vamwe na muvitukithya na Mumanyisa kuikiithya livoti sya kila mwai ila ikutungwa nisyaw'o ona iulu wa usakuani wa ngwatanio. Kii kikatethya umwe kwa ula ungi na kila umwe akeethiwa ena muio wa kunengane livoti yaw'o na kuvikia usyao munene kuma utumikuni muni, na no w'o ngwatanio ya TIST ikuendee na kuseuva nakwithiwa na vinya.

Kilikany'o: Kwa kuendee kila mwai ngwatanio yenyu niyaile:-

1. Kuvika wumbanoni wa kila mwa na kulilikanya ikundi ila ingi kuvika.
2. Kusisya kwa vamwe kila muvikiite: Miti myeu ila

muvandite, ikundi ila mbitukithye, na undu mutumiite mbesa syenyu kwa vamwe ta ngwatanio(cluster). Twai uyu ta umwe wa kwika kila ivinda mwakomana mbumbanoni nthini wa ngwatanio na ikundi vamwe na tukundi twenyu.

3. Tungai livoti kwa Palm ila sya ngwatanio na masavu menyu. No mutumie nzia ya utumani mukuvi wa simu (SMS) ethiwa muvitukithya na mumanyisa wenyu ndevo, onakau nimaile ithiwa kila wumbano kumuthukuma.
4. Vangai kuvitukithw'a mwina muvitukithya, na ikiithyai umwe wenyu evo kumukwata kw'oko nthini wa kila ivitukithya.
5. Thokya anyanyau na atui kulika nthini wa TIST yila mwina w'umbano. Manege ithangu ya Mzingira Bora kumatetheesya kwiyandikithya na kwisomea na kwona useo wa TIST.
6. Nzeuvya usyao munene! Vanda miti, ua kana useuveye yiiko ya usuvia mwaki, Tumia nzia ya uimi wa kusuvia (CF).

Lilkana: Ngwatanio (cluster) numu yaile ithiwa iiyiva miti mbee wa 200,000 ila mivitukithye, tukundi/ikundi katiwa 30-50 ila siuthukuma na ikomanaa kila mwai, athukumi /atongoi asakue ni ene ngwatanio, na ngwatanio ikutungwa livoti nzeo kila mwai vamwe na uvundisya museo na uvitukithya.



Kwakana: Ndukavitukwe ni uathimo wa kakundi kaku kanini.

Kwakana ni kwavata muno nthini wa kakundi kanini yila mwakomana kila kyumwa. Nthini wa Aveso 4:15 - 16 yiasya tuthuthanie ithyi kw aithyi kwindu wa uima wa Klisto. Kila umwe kakundini kenyu kanini nuetae kinengo kivathukany'o kwa kakundi kenyu. Kindu kimwe mwaile ni kwika ni kwona na kwakana na inengo ila Ngai umunengete.

Kwakana ni kueka inengo ila mwinasyo kwoneka kila kimwe kiithukuma. Ve nzia ili sya kwakana

- Mbee wa mboya sya mwiso/kuvinga wumbano kila umwe niwaile uweta undu wa kuthuthia ula mutongoi wikie nthini wa wumbano usu. Kwa ngelekany'o, kukeny'a, kusuvia masaa, walany'o museo wa mivango, uneeni wa uthuthia andu maneene, ngethi itumie mundu ew'a e muthokye wumbanoni, kumya mwolooto iulu wa undu uwetiwe na weekwa ni kakundi kaa na weethiwa wi museo mbee kwa kila umwe na angi maingi. Kila umwe nowaile uneena undu onakau ni kwenda kwa mwene.
- Ethiwa nimwoona kineng'o kinenganitwe ni mutongoi wenyu nimwaile ukiweta nikana onake amanye na kwiyikia vinya.

Na utongoi wa kumanisya/kithyululu kila kyumwa mutongoi mweu akaakawa. Kwakanani kila umwe watongosya kyumwa kiiu akeethiawa akikite nundu kinengo kyake kila kiteni ungi akeethiawa atonya utavya na kuthuthw'a iulu wakyo ni amemba ala angi yila meuneenea kwakana.

Kwakana ni nzia ingi ya kuisya maundu ala maseo munduni na kumaweta, ithyoonthe nitwailwe uvundisya nimi situ kuneena mauseo ma umwe kuthi ula ungi. Nikana withie kila umwe niwoona na kusoma kuma utongoini wa uthukumi wa kila umwe wanyuvwa kutongosya. Mutongoi ula ungi mukanyuva akeethiwa emanyiity'e maundu meu kuma kwakanani kwenyu kula mwaaka mutongoi ula ei mbee wake. Ethiwa mukaneenany'a kwa kwakana ukeethia vaina mundu ukuthi anyungunyisya ayasya undu, unduu uu wialile kwikwa nundu kila umwe ena muyo na nimwianie nikwithiwa ethiwa motongoi ona akitie kwasya "nimuvea" kila umwe ena muyo na vai mundu ukwiw'a ataile na mundu atavya useo wake nutanaa na kumanya undu uteisi iulu wake mwene.

Kwakana ni uathimo keli nundu ula uteisi kinengo kyake akimanya nuendeeaa na kukitumia na ungi akevundisya kuma kwake kwoonda wa utongoi ula wanengwa.

Mazingira Bora



TIST

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

Kipsigis Version

An Environmental, Sustainable
Development and Community Forestry
Program.



Taylor's Senior Managers talking to Rose, a member of Mt Kenya Afforestation 2008KE167 during their visit to TIST last month. Story page 2

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Konyorchigei TIST toek koyob Taylors nebo Harrogate kombuite.

En arawanigonye ko kitinye pcheet agobo toek che kokorutechi emenyon bo Kenya koyob Taylors , Che nomu olikab chaik ak kawee en emetab Uk. Tinnye TIST chorwandit ak ichek asi komuch kogimit bandap tai nebo TIST en ole miten oligab chaik ak Gawee en minet tab ketik. Kora en 9th 2015 kochang toek che korutechi Temikab TIST en komoswek cheterterchin. En toek ko Andy Brown, Lilda Close, Hendry Bococoek ak Emily Hawken , kiboitunikab Tist che kimiten tugul ko Martin Weru , Eunice Wambui ak Leah Maina. En betunoton Kosgolen kimut koba

Kimahuri Kilasta ole miten membaiyat ne kigol ketikab jacaranda imbaret ko 2005 KE 469, mt Kenya afforestation, 2006 KE 167 ak Metiro town 2008 KE 282. Imbaretab jacaranda kotinye ketik 15,465. Metiro kotinye 1528. Mt Kenya 734. Kirutechi imbaretab John Gichuki Oletinye ketikab jacaranda chesire 15,000 agotinye Ngegutab beek , ketikab kipkaa, Kitinye segemik ago missing kochang cheborus kora en imbaretab Rose 2008 KE 167 Kotinye ketik che ingoloti. Nebo let anyun ko imbaretab John KE 282 Netinye ketik 134 kipkaa ak logoek.

Temik ab' TIST kokoker ng'alek ab Global Warming ak wallet nebo Climate.

Temik 'ab TIST konaam koker ng'alek 'ab gobal warming ak climate change. Temik che chang' kokocheng' konetutik en seminars chebo TIST ak en tuyoshek chebo cluster konai che chang' agobo gobal warming (burgeyet nebo ng'wondut), ole kokowalda ngwandet , ak ole kimuche keistoito. Raaini kekere wolutik che kikoib climate change. En koborutyet kou, El Nino floods nekibo kenyt 'ab 1998 nekiwech emet nenyon ak kemeut ne kiisubu , ak hurricane nikikim ochei en kenyt 2004 kokiibu ngalek 'ab global warming. Alak che imuche kobor kole kokoet global warming ko istoet 'ab glaciers en mt. kenya, wallet 'ab weather nebo emet , inoniton kokobos rurutik en minutik en Kenya, yamet 'ab oinoshek ak taboitishek , ak alak che chang'.

En newsletter nebo arawaniton keyome keker kele kakinetishe agobo ngalek 'ab global warming

ak ole kikoorondo climate nebo emet nyon.

Kinomen keororu maana chebo ngalek ak koborutik kwai ak ole toretito ketik guk kobos global warming en emet.

Global warming ko ne?

Global warming komaanishoni kole teset 'ab burgeyet en ng'wandet , ne en let koyoe climate en emet kowalak. Yon burgei emet kotese robta en emet , storms che kimen , teset 'ab ke en sea level , kokoyomso minutik , ak tuguk alak che kikowech minutik , tyong'ik , ak kimugul met. Yon kangalal kipsomaninik agobo climate change , ko orogenet nywai akobo global warming ko angamun en tuguk che yoe kimugul-met ak tuguk che yachen che ibu global warming ak wallet 'ab ole tebito emet.



Tesok sei burgeyet en ng'wondut?

Wou noton! Kogoyet burgeyet en ng'wondut en 1°C en kenysishek 100 che kokobata . Che cheng' en kipsomanik chebo science en ng'wondut koite kole tuguk che yoe bik ko choton che kokotes burgeyet en ng'owondut, kou belet 'ab fossils cheu coal, mwanik, ak koriswek che kilolen maat , ak tilet 'ab ketik ak osnoshek ak ole-kiboishoitoen imbarenik chok.

Ne Greenhouse Effect ?

Greenhouse effect ko teset 'ab burgeyet en ngwony angamun en koriswek che miten en angani, chekibore greenhouse gases, cheu carbon dioxide, nitrous oxide, sulphur dioxide, ak methane trap energy chebunu asita . tuguk che ibu carbon kou : tilet 'ab osnshek , koriswek chebunu factories ,koriswek chebunu karishek , koriswek chebunu kwenik yon kakibel anan ko makaa ak belset 'ab osnoshek.

Ne hatari chebo global warming?

- Tesoksei betet 'ab bek en emet ak kotese imbarenik che yomyotin .
- Tesoksei mionwokik en emet, cheu malaria. Yon katesta emet koburgeit ,koigu ole menyem mosquitoes , aka en let kotes mionwokik chebo malaria . Familia che chang' ak institutions che chang' komuche ko affectenak, kora kobosoksei kenysishek che kipkosobei, ak kotesak mionwokik en logok .
- Boset 'ab rurutik en komoswek 'ab tropical ak subtropical countries , sanasana ko en emotinwek che miten en eastAfrica .angamun en robta ne koktesak ak tyongik che ibu mionwikik che kokochang'a, komuche kobosok omitwokik en emet ak en let kotesak pananda ak rubetnen families ak kokwotinwek.
- Teset 'ab ke en beishek 'ab omitwokik . Angoteseta kobosoksei rurutik en imbarenik

ak kotutukinegitun omitwokik,kotesoksie beit 'ab omitwokik en ngwondut ko mugul.

- Wolutik che yechen en productivity ak composition nebo ecological systems sanasana en osnoshek . Komoswek che ilibu bek sanasana osnoshek ak tulonok kotese ta koyomdos . Inoniton kobose bek che katakiboishen en irrigation ak che katokiboishen en dams ak reservoirs. Inoniton kobose hydroelectric power en emet. Industries che choket , sipitalishek ak institutions alak che boishen sitimet koigu affected saidi . Bek kora che kiibe ak pipushek koba townishek ak resob kobosoksei.
- Bik Millionishek komiten en hatai nebo flooding ak landslides, ne ibu robwek chechang', en coastal areas, ak teset 'ab levelit 'ab sea.

Otertoi ona global warming'?

Min ak irib ketik!

Kou ye kakemwa en barak yu, carbon dioxide ko agenge en koriswek che sababishoni global warming. Ketik kogule carbon dioxide yon yoe photosynthesis ak kokonor en tigitik , temenoik ak ng'ung'unyek ko cellulose carbon. Lakini yon kakibel ketik koisto carbon ichukaniton koba hewani kora.

Kiingen ile imuche ketit kochob micro climate?

Ketik ak sokekwei kotere ngwony asi' kokaititit. Koibu uronok . Kora uronok'chuton kotere bek che miten en ng'weny komala asista. Yon kakaititit ng'weny kotere bek komaistoge en ngweny'. Inoniton komaanishani kole ketik che miten en koreng'ung kotese bek che miten en ng'ungunyek ,ak kotoret kotagobur bechoton en ngungunyek .

Ne carbon credits?

En 1997, kokisignen emotinwek alak agreement nebo UN nekimwoe kole emotinwek che sirotin



en agreement inoton kobose pollution chebo carbon en emotinwek kwai , sanasan ko en greenhouse gas pollution. Agreement initon kokikuren Kyoto Protocol.

En Kyoto Protocol ko kikoyan emotinwek che kikoik industrialized kobos carbon dioxide che kicheru en emotinwek kwai. Oret neta ko kicher carbon dioxide en atmosphere ak kekonor en ketik anan ko en ngweny'. Ketik koibe carbon dioxide en hewani yon teseta photosynthesis akityo kokonor en tikitik ,. Kiasi chebo carbon chekokicher en hewani kimuche kibiman , ak kityo ,yon kakeverriyfen kele iman , kimuche kealda absorbtion initon ko carbon credits en world market .Olik komuche koal credits ichuton asikobosen carbon dioxide emissions.

Kou ingunon, TIST komuche koalda carbon credits kou yon aldo factories chogo anan ko sukaruk . Lakini en carbon komokiloe koba pitonin . Bei nenyinet kotiyenke carbon chekokicher en hewani , akityo kekonor en ketik che miten en imbarenik anan ko osnoshek ,kokebima. Trading / Adaet 'ab carbon credits keyoe en New York, Chicago, London, ak cities alak en ngweny. En markets/ndonyo ichuuton, carbon offsets ke-ole , traded, ak kealda kokakochang'a en robinik chechang'.

Yoche kiitchin mogutik chemiten en market . Mokimuche ketill ketik anan ko asnoshek , angamun niton ko makararan en emetnyon. Yoche kekonunge kechomchin ketik korut en kosorwek chechang , ogo akoi kenyishek ,30. Yoche kikoiten ororutik che imanit . Yon kagemin ketik , keyoe measurements ak calculations kebiman chang'indab carbon TIST en ketik 'ab temik . Ketichuton kong'etu en imbarenik ak koten kotagosobtos, iteseta inyoru chepkondok . Temik kong'etu ak logoek, ketichuton . Rabinik chesiche TIST en carbon offsets keboishen en , kasishek cheu training, Quantification, ak management.

En carbon markets, minet 'ab ketik komuche koik olekinyorunen robinik angamun gule ak kokonor carbon che kimuche kebiman , ak kereborten, aka kealda en carbon credits. Ketik kora kokonunmaana chebo environment ,ak bogoinik ak kerichek.

Imuche kogul ketik carbon che kerke?

Achicha . Ketik che tinye circumference ne'wo koribe carbon chechang' kosir che tinye circumference che meng'echen. Ketik che koen kora kogule carbon che chang' kosir chenwogen. Ingunon ketik che neyotin koibu robinik che chang'. Niton konetech kole yoche kekochini ketik spacing ne kararan, asimorebenge omitwogik ak bek kou yon kakimin korubg'e.

Ano anan ngo' olik 'ab carbon credits?

En inguni , carbon credits keoldo en voluntary markets ak en compliance markets. Kimuche kecertifyen en oratinwek cheterter , lchochu koexambles chebo carbon markets ak offsets:

- 1) Certified Emission Reductions (CERs) chebo Clean Development Mechanism (CDM) korepresenteni market nekikichob en Kyoto Protocol. Carbon credits ichuton koyoche keverifiyen ak ke-certifiyen en CDM process asikoboishen emotinwek che industrialized chekikochob GhG reductions commitments en Kyoto Protocol asikotoret cheek comply akoo kaasyinet . Inoniton ko compliyance nebo markets. Verification ak Certification koyoe independent Designated Operational Entities (DOEs) ak koapproven Executive Board nebo CDM. En.iguni komoboishe ak TIST ak forestry.
- 2) Market age nemokinge keverifiyen emission reductions ko non-Kyoto compliance markets. En US, nemo agenge en Kyoto, en states alak komogchinge GhG reductions. Australia kora



komogchinge requirements ichuton. Markets ichuton kotinye kamuget newoo, lakini komayatat en TIST.

- 3) Voluntary markets ko ole kikoldaen TIST offsets chebo ketik chemine temik 'ab TIST. Olik 'ab voluntary market komiten mara mbili . Neta ko market ne kiten netinye bik che konuge kogon rabinik asikoendelesan minset 'ab ketik . Kou ipanaet ab projects chebo minset 'ab ketik wedding anan ko conference carbon neutral. Olik 'ab voluntary market chebo oeng' kotinye potential market newon nitinye compunishek chemiten US ak non-

Kyoto industrial countries chechobe voluntary commitments kobos GhG emissions chechwaget. Angamun chome emet anan ko angamun chobching'e mogotik chebo besho chebo emet .

Miten standards chechang' cheterterchin en market initon che tinye magutik cheteterchin ak rules ch waloksei kila agobo minet 'ab ketik, rebet nywai ,ak ole kireportento che yoe offsets koaldaak . En inguni , kandoik oeng' che kikeverifyen en TIST ko Verified Carbon Standard ak the Climate, Community, and Biodiversity Alliance Standards.

Reporting nebo cluster : Ongebchei borotet .

En TIST, Kesiche kimnotet nyon en bcheet 'ab borotet en Small Groups chchoket , ak en clusters.,Reports chebo kila arawet en clusters en tuyoshek chebo cluster ak accounting ko kit nebo maana sana en clusters chechoget . Kila clusters kotinnye jukumu koker kole koigoito reports en kila arawet agobo cluster accounting ak tuyoshek . Quantifier nebo cluster nengwonget ak Trainer kotoretok koker kole reports ichuton kokakisubmiten keboishen Palm computer. Komolo kimuche keker reports ichuton en TIST mobile website. Kou nito kimuche kotageigun transparent ak koet ngomnotet.

Cluster servants koyoche koyai kasit ak Quantifier ak Trainer koker kole kokikoito reports che imanit akobo ngalek 'ab cluster elections ak representatives. Koten kotagetoretike , Kotese ta koetu TIST.

Kobwotutyet : Asikebor en cluster konyolu keyai:

- 1) Ongebe tuyoshek chebo clusters ak komwoitechi alak koba toyoshek chebo groupit ak clusters.

- 2) Oger tugul results chekikonyor groupit ak cluster :ketik che kikemin ak carbon credits che kironyoru.
- 3) Oyogten reports koba Palm for Cluster Meeting ak Cluster Accounting. Imuche iboishen SMS yon momiten Quantifier anan ko Trainerlakinin yoche komiten en tuyet asi koservenak .
- 4) Organizen quantification koboto Quantifiers. Ker ile kotoret chi en ngalek 'ab quantification.
- 5) Tach choronok cheguget kobwa tuyoshek chebo cluster ak imwochi icheket komin ketik en korikwak.
- 6) Ongeyai tuguk che yechen ak kimin ketik che chang' ak keal stoves cheribe mat.



Techet 'ab ge; Rib men kosirin koberuret nebo groupit ngung'.

Teghet 'ab ge en groupit ko bo maana en groupishek che mengechen chebo TIST.

Mwoe en Ephesians 4:15,16 yoche ketech ke en kanyitet 'ab Christ. Chitukul en groupishek che meng'echen en TIST koibu talentaishek chwoik kobwa TIST. Kit agenge ne kararan en groupishek ko naet 'ab talentaishek che kikekonech.

Techet 'ab ke ko oret ne kimuche keboishen talentaishek chok. Miten komoswek oeng' en techet 'ab ge;

- Kotoma kesa saaet ne letu, kesom chitugul komwa kit ageng'e ne kararan agobo kandoindet. Tuguk cheu, kitoreti chi tugul en boishoni, kiiborwon kit ne kitomosich etc.. Yoche komwa membayat age tugul kit ne terchin. Inoniton komo optional. Chitugul kokochin teget' kandoindet nekobo kasara ton. Ogo groupishek kokochin kujeng'ana toretik 'ab kondoik.

Yon miten zung'uganet 'ab kandoinatet, kila wikit konyoru kandoindet Kujengana. En Kujengana, Keti ke en tuguk che kororon che koyai kandoindet nebo wiki noton ak talentaishek che koibor chi choton.

Kujengana kora kotoretech kenai ole kicheng'toi tuguk che kororon en membaek .Yoche kinet ng'elepwokik chok komwa tuguk che tech' . kora, konoe groupit noton kit neibwote kole bo maana en kandoik. Kandoik che rube konete ke en ng'alek che kakas en kujengana akopo kandoik che kokobata ak konai kit ne ibwote membaek kole yomeke en servan leaders.

En wolunet nebo Kujengana, komwoe kandoindet nebo wiki noton kole 'kong'oi', yon kakomwa membayat age tugul . Inoniton koboiboite kandoindet 'ab wiki noton yon kakemwochi tuguk che kororon che koyai en groupit ak tuyoshek .En yuton kimuche kinet ke tuguk che kimoging'en akobo ehek!

Kujengana kotoreti kandoindet 'ab kasaraton konai talentaishek che tinye akotakoboishen. Kujengana kora kotoreti groupishek che meng'echen, ang'amun kandoik tugul kotese skills chebo kandoinatet. Kujengana ko berurto konyil oeng'