

# Mazingira Bora



# TIST

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

**English Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**TIST Quantifiers: Help your Quantifiers to make your Cluster strong.**

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# Small Group Techniques: Group interaction.

**a) What is the best way to arrange people during a small group meeting?**

A small circle is the best. Don't have a table because it creates barriers between people. Don't have a chair and a large seat for the most important person. In TIST, we all sit the same way. We either all sit on the ground, or we all sit on chairs.

**b) What do you do if more than twelve people want to join your group?**

If there are more than twelve people interested in joining your group it is best to form a new group. The group can split in two, or three or four members of the original group form the core of the new group. This is better than one

member trying to start a group alone. Remember to start using rotating leadership straight away.

**c) What techniques can you use if the group energy is low?**

Split up the group into pairs and get each pair to talk about the task. Dramas also help. Sometimes stopping and each person saying something good that their group is doing can also motivate people again. Also remember to keep the meeting from becoming too long. By having a co-leader who is keeping time, you can focus the group's energy to making sure the work gets done in the agreed upon time period.

# TIST: The Best Practice in Conducting Weekly Meetings.

## Meeting Schedule.

To manage time well, a Small Group should have a well-organized meeting schedule. This is important because it will help you keep focus on your agenda and the most important activities. It is also important because in TIST, we commit to work together for the long-term to grow and maintain our trees for the carbon market. We need to know our fellow Small Group members well, since each person's actions impact our whole group and all of TIST.

It is important, too, for your Small Group to have regular meetings, preferably once a week or once in two weeks. This will give all members in your group an opportunity to strengthen your group and share and learn new ideas.

During your meeting, it is necessary to focus on important issues. Many TIST Small Groups have found the process below as a best practice for successful meetings:

**Step I. Greetings and introductions for any new members (5 – 15 minutes):**

Make sure everyone feels welcomed. Make it brief but let each person introduce him or herself.

**Step II. Opening prayer (2 minutes):**

A short word of prayer can help the group unite.

**Step III. Songs (5 minutes):**

These could be songs written by your group, or songs that encourage people such as religious songs.

**Step IV. Agreement on task and time (5 minutes):**

The leader explains what will be done in the meeting and the group members agree to do the task. The time spent on each task or discussion should be agreed so that the co-leader can help keep the meeting on time.

**Step V. Group work on tasks (1 hour):**

Ideally, tasks should have been discussed at the end of the last meeting. Tasks might include sharing what each person has done to help TIST activities, sharing best practices, training on some subject of interest, and any other important issue that will help your Small Group to prosper.

**Step VI. Kujengana (5 minutes):**

Each group member makes one positive, specific statement to that week's leader about his or her observable leadership of the meeting. In addition, anyone may identify a gift seen in the leader.

**Step VII. Closing prayer (2 minutes):**



## Small Group Best Practices: Action Steps and Action Planning.

**T**IST groups do a lot of practical activities: planting trees and improving agricultural techniques. When there is a lot of work to be done, it is good to create **action steps**. Each group member should tell the group what they are going to achieve that week. We are going to teach you and your Small Group how to do action planning. Please share this with other members of your Small Group during your meeting.

An action step is something that is:

- Specific
- Observable (a fly on the wall can see you do it!)
- Measurable
- Has a beginning and an end
- Make sure your action step is realistic and that you can achieve it!

For example, saying 'I will plant trees' is not an action step because it is too general. 'I will work on three mornings this week to transplant 75 seedlings into our new grove' is an action step because it is **specific** (transplant 75 seedlings), **observable** (people can see you do it), **measurable** (75 seedlings, 3 mornings) and **has a beginning and an end** (at the end of three days you can see the results).

When your group meets again, allow ten minutes near the end of the small group meeting for each person to report on his or her action step. Each person quickly:

- (1) **Tells the group what their action step was for the past week.**
- (2) **States what they actually did.**
- (3) **States what action step they will take for the following week.**

If the person succeeded in his or her action step, the group celebrates the success.

If, as often happens to start with, the group member met only part of his goal, the group encourages him / her and does not criticize or blame. When

people are able to freely share their successes and failures they will be encouraged to do better each week. Encourage your Small Group members to think of possible action steps. Make sure each is specific, measurable and realistic! Share and celebrate the action steps that your Small Group has accomplished.

### Action Steps for Action Planning

A similar method can be used when planning. Here an example is given in brackets. When your group is planning what to do, make sure your plans are:

**Specific** (Our TIST Small Group will plant 1000 trees at the local hospital by November 30)

**Measurable** (How many? - 1000 trees will be planted)

**Achievable/Realistic** (Our TIST Small Group can plant 1000 trees in 5wks – 100 trees per Tuesday and Thursday, 10 trees per person/per day)

**Time-bound** (Has a beginning and an end - we will plant the trees between Oct 15 to Nov 30)

**Observable** (A fly on the wall can see us planting) **SMARTO!**

This is the guide and test of your action steps for your plan and helps you be specific:

- 1) **What** – (Planting 1000 trees)
- 2) **Who** – (TIST Small Group members by name)
- 3) **When** – (Oct 15 – Nov 30)
- 4) **Where** – (At the hospital)
- 5) **How** – (We meet every Tuesday and Thursday afternoon after the heat of the day and dig holes, then plant the trees)
- 6) **Why** – (To improve the area around the hospital, have more shade for patients and visitors, people can sit under trees and the shade will make the hospital cooler)

Now, try to practice action planning in your next Small Group meeting.

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

**K**ujengana 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, 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 keep 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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## **Water pollution: Why does it matter and what can we do?**

**W**hen people fetch and drink untreated, polluted water, they may get very sick. We need to educate people in the cluster and community about the danger of untreated water so that they can better know how to treat water to stay healthy.

### **Water pollution has many causes:**

1. Discharge of untreated industrial waste and sewage
2. Careless human action around water points [rivers, wells, boreholes].
3. Poor drainage, so that waste runs into water source and water stagnates. Chemicals, like fertilizers and pesticides, can run from our shambas and pollute water.
4. Bathing and washing clothes at the water sources
5. Urinating and defecating near water sources.
6. Cracked cover slab at boreholes or wells .
7. Lack of latrines in rural areas. Rainwater can wash human waste into water sources.
8. Animals grazing near or in water sources used by people or upstream of people.

### **Water pollution causes many problems:**

1. Pollution can directly poison and kill plant and animals (including people) or cause poisoning through eutrophication, when nitrogen-containing fertilizer and waste are washed into water, causing increased aquatic plant growth. When these plants die, they cause the water to lose oxygen, which causes death for aquatic animals .

2. Polluted water used for cooking, washing and drinking, spreads many human diseases. These include intestinal worms, skin diseases, cholera, and diarrhea.
3. Some chemicals in polluted water can build up in our bodies over time, slowly poisoning us and causing harm to us and our children.

### **What can we do about pollution?**

1. Don't throw rubbish or pour waste into water sources. Encourage others to do the same.
2. Plant trees along riverbanks and lakes. Plant roots are excellent at filtering out waste and also stop soil from entering water bodies through erosion.
3. Avoid growing crops too close to rivers, lakes or wells to avoid fertilizer reaching the water source
4. Encourage people to build far from riverbanks.
5. Ensure that wells and boreholes are managed properly
6. Fence the water source to prevent animals from contaminating water.
7. Do not permit people to wash near the pump.
8. Ensure pit latrines are at least 50 meters away from water sources. Make sure there is adequate drainage and create channels to drain water away ending in a soak pit, a hole filled with stones where water can drain away.
9. Repair all cracks on the cover slab as soon as possible when they occur and clean the area regularly.
10. If you are unsure about water quality, boil it before drinking to kill microbes that can make you sick.





# Moringa: Plant this important tree for better nutrition and health.

*By Zakayo Kayuri*

**M**oringa is an important tree. When it is planted in your yard, it can provide you with shade and can meet many of your nutritional needs. It also can help purify your water through its dried, powdered leaves. It has even more medicinal, economic and nutritional benefits. Moringa leaves provide amazing nutritional value, providing:

1. Three times more iron than spinach.
2. As much protein as eggs.
3. Four times more vitamins A than carrots.
4. Four times more calcium than milk .
5. Seven times more vitamin C than oranges.
6. Three times more potassium than bananas.

Moringa can treat ailments, purify water, and feed the hungry.

Lack of safe drinking water is one of world's biggest health threats. Pressed moringa seeds can

turn dirty water into clean purified water more economically than imported chemicals. Mix 2 large spoons full of ground morning seeds with 20 liters of water. Stir or shake the water for 2 minutes rapidly, then 10 minutes slowly. Dirt and many bacteria will then settle from the water along with moringa, and can be filtered out.

Moringa's medicinal qualities are also promising. Moringa can be effective against skin infections, in lowering blood sugar, reducing swelling, healing gastric ulcers, lowering blood pressure and even calming the nervous system.

Moringa makes an efficient fuel, organic fertilizer and livestock feed.

It's one of the most useful trees, as you can see from all of the benefits above. TIST farmers, why wait? When we grow moringa in TIST, we earn carbon credits and can enjoy all of the other benefits elaborated above.

Let each of us plant at least one!

## Help Your Cluster Get All Groves Baselined.

**A**s part of carbon market requirements, all groups registered in TIST must have their groves baselined and validated. The groves must have accurate tracks that show where trees are planted. External auditors do the validation, checking the data to make sure it is accurate and complete. Validation is an important, required step in the carbon business. It helps assure carbon credit buyers and carbon market regulators that the work the TIST farmers are doing is real, actual and meets the markets standards.

Today, there are 41,000 groves in Kenya, 29,000 groves have been validated.

Some have been verified. Verification, as name suggests, verifies the amount of carbon sequestered by TIST farmers trees. It is only after verification that TIST can sell carbon credits and earn income for the farmers. However, TIST must demonstrate accuracy, transparency and honesty for the data corrected.

Out of 12,000 remaining groves, 4,500 groves

are ready but 7,000 groves are not yet ready. Out of 7,000 groves remaining, 1,068 groves are "priority" groves.

TIST is therefore, calling upon all members to help and support Quantifiers in Quantification that include good baselines and tracks for these groves as soon as possible. If all groves are fully baselined by the end of this month (October, 2012), we will request Validators to come and audit them next month or in December. Please organize to have members of your cluster show Quantifiers where groves are and be ready to answer their questions.

The table below shows the name of clusters and groves that require urgent and immediate baseline. Please discuss in your cluster ways that you can have these groves attended this week or next. Also, talk to your quantifier and find out if he/she has done them, or if s/he requires additional help to complete them. TIST Leadership Council and US Team are ready to help you.



## ENGLISH VERSION

6

<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>	<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>
Ankamia	24	5,663	Kithoka	13	3,788
Barangu	12	2,684	Limauru	1	458
Burguret	3	1,218	Miathene	3	638
Buuri	1	1,885	Mikunduri	14	3,998
Chung'ari	20	3,908	Mithuri	6	869
Gachua	4	628	Mpuri	25	12,665
Gaturiri	19	5,146	Muhonia	7	589
Giaki	7	7,382	Mumbuni	1	402
Gikumene	16	4,216	Munyu	15	4,289
Githongo	70	21,090	Muragara	16	2,971
Gitimene	31	15,309	Murinya	21	5,689
Iriga	1	3,712	Mururune	24	3,617
Irindiro	12	2,842	Mweiga	2	839
Kaaga	19	3,321	Mwichiune	4	11,981
Kagaene	6	865	Mworoga	19	14,833
Kairuni	10	4,327	Naari	58	28,116
Kanjagi	4	1,613	Ngariama	5	2,411
Kanjoo	44	10,726	Nguruki	12	1,982
Kanyakine	16	5,837	Njorua	2	860
Karaba	6	1,752	Nkando	1	421
Katheri	31	12,368	Nthangathi	5	1,677
Kiamathaga	1	1,946	Ntugi	14	38,304
Kiamiogo	29	17,125	Ntumburi	2	6,268
Kiangua	8	2,803	Nyweri	3	1,960
Kianyaga	1	546	Ontilili	1	748
Kibirichia	38	18,693	Pondo	84	40,225
Kibui	49	9,798	Raichiri Podo	11	2,596
Kigucwa	1	1,571	Runyenye	4	2,468
Kiirua	23	11,931	Salama	2	1,693
Kinoro	10	2,988	Subuiga	23	6,649
Kiria	66	15,533	Thiira	21	4,553
Kirimaitume	12	2,455	Thuura	17	8,744
Kirindini	10	2,018	Urru	2	419
Kisima	14	7,208	Wiumiririe	1	605
Kithithina	11	1,540	Sum	1,068	430,972

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**Kimereu Version**

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**TIST Quantifiers: Help your Quantifiers to make your Cluster strong.**

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## Njira cia ikundi bibinini: Gukaranira gwa gikundi.

### a) *Ni njira iriku iri injega buru ya kubangania antu mucemanione jwa gikundi gikinini?*

Kithiururi gikinini ni njira iria njega buru. Gukethirwa kurina metha niuntu nitumaga gukagia kigitaria gati gati ka antu. Gukethirwa kurina giti kana giti gikinene kia muntu uria urina gitio kiria kinene buru. Ndene ya TIST, twinthe tukaraga nthi na njira imwe. Twinthe tukaraga nthi muthetune kana tugakarira iti

### b) *Niatia buumba kuthithia kethira antu nkuruki ya ikumi na bairi ibakwenda gutonya gikundine kienu?*

Kethira kurina antu nkuruki ya ikumi na bairi baria bakwenda gutonya gikundine kienu, ni bwega nkuruki kwambiria gikundi gikieru. Gikundi nokigaane jairi, kana amemba bathatu kana banna ba gikundi kiu gikuru baambie

gikundi gikieru. Iji ni njira injega nkuruki ya mumemba umwe kugeria kwambiria gikundi wenka. Ririkana kwambiria utongereria bwa kithiuruko orio.

### c) *Ni njira iriku umba gutumira kethira inya ya gikundi iri nthiguru?*

Gaana gikundi kie antu bairi bairi na antu bau bairi baririe ngugi iria irio. Matinda kinya jo nijatethagia. Rimwe na rimwe kurungamithia na kuuria o muntu auge gintu kimwe gikiega kiria gikundi kienu gikuthithia o gutethia gwekira antu motisha ingi. Ririkana kinya kumenyeera ati mucemanio jutarea mono. Na njira ya kwithirwa kurina muthetheria wa mutongereria wa gwika mathaa, bukomba kwerekeria inya ya gikundi kiri kumenyeera ati ngugi ikathithika ndene ya mathaa jaria ibangiri.

## TIST: Mitire imiega nkuruki ya gwitithia micemanio ya o kiumia.

### Mubango jwa mucemanio.

Kenda mathaa jatumika bwega, gikundi gikinini nikibati kwithirwa kiri na mubango jubangi bwega jwa gwitithia mucemanio. Bubu burina bata niuntu bugatetheria kumenyeera ati mathuganio nijerekerete mantu jaria jabangiri na mantu jaria jarina bata nkuruki. Kinya burina bata niuntu ndene ya TIST, nituciritahira gwitaniria ngugi amwe kenda igitene riraja tukura na twika miti yetu bwega niuntu bwa thoko ya ruugo. Nitugwitia kumenya amemba ba gikundi gietu gikinini bwega niuntu mathithio ja o muntu nijathithagia mwanya kiri gikundi na TIST yonthe.

Kairi burina bata gikundi giaku kinini gwita micemanio ya igita nyuma ya igita, mono o kiumia kana rimwe ndene ya biumia biiri. Bubu bukaa amemba bonthe ndene ya gikundi giaku kanya ga gwikira gikundi inya na kugaana na kuthoma mantu jameru.

Mucemanione, kurina bata kwerekeria mathuganio mantune jaria jarina bata nkuruki. Ikundi bibinini bibingi bia TIST nibionete njira iji iri mwitire juria mwega buru kiri kuthithia micemanio ya bata:

**Itagaria ria mbele. Gukethania na gucimenyanithia kwa amemba baaberu(Dagika ithano gwita ikumi na ithano):** Menyeera ati muntu wonthe nakwigua ang'anirite. Dagika inkai itumirwe indi umenye ati o muntu nakwimenyithania wengwa.

**Itagaria ria jairi. Iromba ria kwambiria (Dagika ijiri):**

Iromba ririkui noritethia kureta gikundi amwe.

**Itagaria ria jathatu. Ndwimbo (Dagika ithano):**

Iji nociithirwe ciandiki ni gikundi kienu kana ndwimbo cia gwikira antu inya ta ndwimbo cia kidini.

**Itagaria ria janna. Gwitikaniria ngugi na mathaa(Dagika ithano):**

Mutongereria naugaga jaria jakathithua mucemanione na amemba ba gikundi bagetikaniria kurita ngugi iu. Mathaa jaria jagatumika kuthithia o ngugi kana kwaraniria nijabati gwitikanirua nikenda mutetheria wa mutongereria agatetheria gwika mathaa ja mucemanio.

**Itagaria ria jatano. Gikundi gikarita ngugi iria irio (Ithaa rimwe):**

Kiri njira iria bwega buru, ngugi nicibati kwithirwa ciaariritue mucemanio jugikinya muthia. Ngugi nociithirwe ciri amwe na kugaana jaria o muntu athithitie gutethia mantu ja TIST, kugaana mitire iria miega buru, kuritana kwegie mantu jaria antu bakwenda na gintu kingi kiria kirina bata na kiria gigatethia gikundi giaku gwita na mbele.

**Itagaria ria jatantatu. Gwakana (Dagika ithano):**

O mumemba wa gikundi auge gintu kimwe gikiega kiri mutongereria wa kiumia kiu kwegie utongereria buria bwonekete ndene ya mucemanio. Kwongera, muntu omba kuuga kiewa kiria oonete ndene ya mutongereria ou.

**Itagaria ria mugwanja. Iromba ria kuthiria (Dagika ijiri):**





## Mitire iria miega buru ya ikundi bibinini: Matagaria na kubangira matagaria.

Ikundi bia TIST nibiritaga ngugi inyingi iria cionekaga: kuanda miti na kuthongomia njira cia kurima. Riria kurina ngugi inyingi cia kugita, nibwega kubangira matagaria. O mumemba wa gikundi nabati kwira gikundi nimbi bakomba gukinyira kiumia kiu. Tukaburitana na kuritana gikundi giaku uria matagaria jabangagirwa. Itu gaana bubu na amemba bangi ba gikundi giaku igitene ria mucemanio jwenu.

Itagaria ni gintu kiri:

- Gikwirungamira kiongwa
- Gikwonekana (ngi iri ruthingone yomba gukwona ukithithia!)
- Gikuthimika
- Kirina mwambirio na muthia
- Menyeera ati itagaria riaku rikombika na rikathithika!

Mung'uanano, kuuga 'Nkaanda miti' ti itagaria niuntu giki ni gintu gikiarie. 'Nkarita ngugi mithenya ithatu kiumia giki kuthamiria miti ya kuanda mirongo mugwanja na itano muundene jwetu jumweru' ni itagaria niuntu ni gintu gikwirungamira (kuthamia miti mirongo mugwanja na itano), gikwoneka (antu bagakwona ukithithia uju), gikuthimika (miti mirongo mugwanja na itano, mithenya ithatu) na kirina mwambirio na muthia (nyuma ya ntuku ithatu ukoona maciara).

Riria gikundi giaku gigatirimana kairi, ejana dagika ikumi muthiene jwa mucemanio jwa gikundi gikinini nikenda o muntu wonthe aejana ripoti ya itagaria riawe. O muntu wonthe nampwi:

- (1) **Eere gikundi itagaria riawe ria kiumia kiu kithiri.**
- (2) **Akauga nimbi yongwa athithirie.**
- (3) **Akauga itagaria riawe ria kiumia kiu kithingatite.**

Kethira muntu uju noombanire kiri itagaria riawe, gikundi nikigwiranagirua amwe.

Kethira, ja uria jaria maingi kwithagirwa gukari, mumemba wa gikundi nombire kuthithia gicunci kia uria eendaga, gikundi nikimwikagira inya na gitimthumbagia. Riria antu boomba kugaana batigukirana kuumbana na kugwa kwao, bagekirwa inyo kuthithia bwega nkuruki o kiumia. Ikira inya amemba ba gikundi giaku kuthuganiria matagaria

jaria boomba kujukia. Menyeera ati o itagaria nirikwirungamira, ni rikuthimika na rikooombika! Gaana na bugwirirue matagaria jaria gikundi kienu gikinini kijukitie.

### Matagaria riria bukubangira mantu jaria bukathithia

Njira ikwenda gukara uju no itumirwe kubangira. Aja mung'uanano nijuejani. Riria gikundi giaku gikubangira jaria gikathithia, menyeera ati mibango yenu iri:

**Specific-Yakuirungamira yongwa** (Gikundi gikinini gietu gia TIST gikaanda miti ngiri cibitari iria iri akui igikinya mweri jwa ikumi na jumwe tariki mirongo ithatu)

**Measurable- Ikuthimika** (Ing'ana? – Miti ngiri ikaandwa)

**Achievable/Realistic- Igakinyirika** (Gikundi gikinini gietu gia TIST kiomba kuanda miti ngiri ndene ya biumia bitano- miti igana o Jumanne na Alhamisi, miti ikumi o muntu o ntuku)

**Time-bound- Ithimiri mathaa** (Burina mwambirio na muthia – tukaanda miti gati gati ka Mweri jwa ikumi tariki ikumi na ithano na mweri jwa ikumi na jumwe tariki mirongo ithatu)

**Observable-Ikooneka** (Ngi iri ruthingone igatwona tukianda)

SMARTO!

Jaja nijo ubati kuthingata kiri kuthithia matagaria ja mubango jwenu nijagutethagia kuuga jaria jongwa bukwenenda jairungamirite:

- 1) **Nimbi-** (Kuanda miti ngiri imwe)
- 2) **Nuu** – (Amemba ba gikundi gikinini giia TIST)
- 3) **Rii** – (Oct 15 – Nov 30)
- 4) **Naa** – (Cibitari)
- 5) **Atia** – (Tugatirimana o jumanne na jumatano ugoro mwanki jwa ntuku jwathira na kwinja marinya, riu tuande miti)
- 6) **Niki-** (Kuthongomia aria kuthiurukite cibitari, kugia irundu bia aajii na ageni bibingi nkuruki, antu no bakare rungu rwa miti na kirundu gigatuma cibitari igie gapio)

Nandi, gerieni bubangire matagaria jenu ndene ya mucemanio jou jungi jwa gikundi gikinini.

## Gwakana: Bukaaga kitharimo kia gikundi kienu.

**G**wakana ni gicunci kirina bata mono ndene ya mucemanio 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 mucemanio. 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

Ariki gwakwa, mutongeria wa kiumia kiu naugaga, 'lbwega' nyuma ya o mumemba wa gikundi auga 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!

## **Gwakwa ruoko kwa ruuji: Niki burina bata na niatia tumba kuthithia?**

**R**iria antu bataa na banyua ruuji rutitheretue, rurina ruoko, nobaajue. Nitugwitia kuthomithia antu ndene ya cluster na ntuura kwegie uthuuku bwa ruuji rutitheretue nikenda bakamenya bwega nkuruki njira ya kutheria ruuji nikenda bakara na thiria ya mwiri.

### **Ruoko ruujine rwithagirwa ruumenie na mantu jamaingi:**

1. Kurekerua kwa ruuji rwa ruoko kuumania na kambuni na sewage.
2. Ngugi cia antu itibui akui na nduui (miuro iminene, ithima na marinya)
3. Kuremwa kuthithiria ruuji njira, nikenda ruoko rutonyaga nduujine na ruuji rukaigara. Ndawa, ja fertilizer na cia kuuraga maria, no ciume miundene na cikathuukia ruuji.
4. Kuthamba na kuthambia nguo nduujine.
5. Kuumaga na gwita kioro akui na nduui.
6. Nkuniki ciatuki cia marinya na ithima.
7. Kwaga biero bia kwinja ntuurene. Ruuji rwa ngai no rukamate ntaka ya antu igatonya nduujine.
8. Nyomoo kurithua akui kana nduujine iria igutumirwa ni antu kana bwaruguru ya antu.

### **Gwikira ruuji ruoko ni kiumo kia thina inyingi:**

1. Ruoko no rugitarie na kuuraga imera na nyomoo (amwe na antu) kana rukagitaria gukurukira njira ya fertilizer iria cirina nitrogen na matigari gutonya ruujine na gutuma imera bia ruuji bikura. Riria imera bibi biakua, nibitumaga ruuji rukaaga ruugo rurwega gintu kiria gitumaga nyomoo cia ruuji ikua.
2. Ruuji rurina ruoko rwatumirwa kuruga, kuthambia na kuthambia, nirutambagia mirimo

imungi kiri antu. Iji ni amwe na njoka cia kiu, thina cia ngozi, cholera na kuugia.

3. Ndawa imwe iria ciri ruujine rwina ruoko nociingie mwirine na nyuma ya igita, mpari cikathukia na cigatugitaria na kugitaria aana beetu.

### **Niatia tubati kuthithia kwegie gwakwa ruoko guku?**

1. Ugaata ruoko kana wituura ruoko naria nduui ciumaga. Ikira bangi inya kuthithia o uju.
2. Aanda miti nterene cia nduui na iriene. Miri ya imera ni imiega buru kiri kurita ruoko na kinya igatigithia mithetu gutonya nduujine na njira ya gukamatwa.
3. Ebera kuanda imera akui na miuro, iria kana ithima nikenda fertilizer itigatonye kiumo kia ruuji.
4. Ikira antu inya guaka kuraja na nteere cia nduui.
5. Menyeera ati ithima na irinya bia ruuji nibikumeneerwa bwega.
6. Irigira kiumo kia ruuji gutigithia nyomoo itikathukie ruuji.
7. Ugetikiria antu kuthambia akui na pampu.
8. Menyeera ati biero bia kwinja biri nkuruki ya mita mirongo itano kuuma kiri biumo bia nduui. Menyeera ati kurina njira ing'ani ya ruuji gukurukira na bwinje mitaro ya gwita ruuji rugatonya antu amwe, kirinya kiujuri maiga aria ruuji rukomba gutonya muthetune.
9. Thithia nkuniki wona yaambiria kuunika orio na uthambia antu au igita o nyuma ya igita.
10. Kethira utiiji bwega uria ruuji rukari, rutherukie mble e kunyua nikenda uuraga tunyomoo turia tutumaga wajua.



# Moringa: Aanda muti juju jwa bata niuntu bwa irio na thiria injega nkuruki.

*Ni Zakayo Kayuri*

**M**oringa ni muti jurina bata mono. Riria juandagwa muundene jwaku, nijuretaga kirundu na nojuejana into bibingi biria mwiri jwaku jwendaga. Kinya nojutethie kurita ruuko ruujine watumira mathangu jamoomu na jathiwi. Jurina kinya baita ingi cia kindawa, kimbeca na kiirio. Mathangu ja Moringa ni irio biendekaga mwirine mono, niuntu nijukuejaga:

1. Iron maita jathatu iria ithagirwa iri kiri spinach.
2. Proteni ing'ani ja iria ithagirwa iri kiri nkara.
3. Vitamin A maita janna iria ithagirwa iri kiri karati.
4. Calcium maita janna iria ithagirwa iri kiri iria.
5. Vitamin C maita mugwanja iria iri kiri machunkwa.
6. Potassium maita jathatu iria ithagirwa iri kiri marigu.

Moringa nijworagia mirimo, jukathambia ruuji na ni irio kiri baria barina mpara.

Kwaga ruuji rurutheru rwa kunyua ni imwe ya thina iria nene buru kiri thiria ya nthiguru yonthe. Mpindi cia moringa cikathiwa nicigaruraga ruuji rwina ruuko rukaa rurutheru utigutumira mbeca ja uria utumagira kiri

kugura ndawa cia kuthambia ruuji cia kuuma nthiguru cia oome.

Ungania iciko biiri bibinene bia mpindi cia Moringa ithii na liter mirongo iiri cia ruuji. Uruga kana winainie ruuji nainya dagika ijiri, riu mpaari dagika ikumi. Ruuko na tunyomoo tututhuku tukagua ruujine nthiguru amwe na Moringa na bibi biomba kuunirwa angi.

Ndawa kuumania na Moringa kinyacio niciejanaga wirigiro. Moringa jwomba gutethia mono thina cia ngozi, kwiamia cukari ndamune, kunyiyia kwimba, kworia irona bia kiu, kunyiyia rwiwo rwa ndamu na kinya gukiria thina cia mutwe.

Moringa ni nkuu injega, mboleo na irio bia ndithia.

Ni muti jumwe jwa iria iri mootumiri jamaingi, ja uria ukwona kuumania na baita iu ciri au iguru. Arimi ba TIST, niki bukwenda gwetera? Riria twaanda Moringa ndene ya TIST, nitwonaga mbeca cia kwendia ruugo na twomba gukinyirwa ni baita ingi iria ciandiki aja iguru. Ka o muntu ocietu aande no muti jumwe!

## Tetheria cluster yaku nikenda miunda yonthe ikirwa kiri rekondi cia TIST.

**A**ja turiariria gutonyithia munda rekondine riambere ti kuthiuruka munda. Mbicha cia mithiuruko ya munda kinyacio inyingi itiku.

Kurina miunda ngiri mirongo inna na imwe ndene ya gikundi kia iria ikurukithitue, ngiri inya na magana jatano iri gikundine kia iria igakurukithua riu ringi na ngiri mugwanja ititayari.

Miunda ngiri na mirongo itantatu na inana iri niyo ikwendeka kuritirwa ngugi mbele (buungwa, turitaara miunda iria irina nkuruki ya miunda magana janna riu tukongeeera iria iri gikundine kimwe nayo). Untu bubu bugatua miti nusu ya iria ikwendeka. To be clear, the remained will be ineligible for VCS). Bubu nibwathithirue niuntu kinya na ngugi yetu inyingi iria tuthithitie mwaka muthiru, uria tugwita, tutigwitikia timu ya Kenya ikomba kuthiria miunda yonthe ngiri mugwanja.

Ja kimwe kia jaria thoko ya ruugo itagia, ikundi bionthe biria biciandikithitie kiri TIST no mwanka kithirwe kirina rekondi ya uria munda jwakari mbele ya TIST na biakurukithua. Miunda no mwanka ithirwe irina track iria cirio ciongwa iria ikwonania naria miti iandi. Ategi ngugi ba oome nibo bakurukithagia, bagatega data kumenyeera ati ni iria irio yongwa na yujuri. Gukurukithua ni gintu kia bata na gikwendeka ndene ya thoko ya ruugo. Niiethagia kwonia aguri na arungamiri thoko ya ruugo ati ngugi ya arimi ba TIST ni yamma, irio na nigutirima jaria thoko itagia.

Narua kurina miunda ngiri mirongo inna na imwe ndene ya Kenya, ngiri mirongo iiri na kenda

nikurukithitue.

Imwe niikurukite buru. Gukuruka buru, ja uria riiwa rikuuga, ni gukurukithia kaboni iria miti ya arimi ba TIST ijukitie. Ni aki nyuma ya bubu TIST yendagia ruugo na kwona mbeca cia arimi. Indi-ri, TIST no mwanka yonanie jaria jario jongwa, weru na uuma nikenda data yumbe kurekebishwa.

Kiri miunda ngiri ikumi na ijiri iria itigeere, miunda ngiri inya na magana jatano iri tayari indi ngiri mugwanja ititayari mwankira au. Kiri ngiri mugwanja iria itigeere, ngiri na mirongo itantatu na inana niyo ikaamba gutegeerwa.

TIST kwou, nikuuria amemba bonthe gutetheria atari miti kiri utari miti amwe na baseline na track injega cia miunda iji ntuti uria kuumbika. Miunda yonthe yathirua muthia jwa mweri juju jugikinya (Octoba 2012), tukooria ategia ngugi beeje batege ngugi mweri jou jungi kana Decemba. Itu banganieni nikenda amemba ba cluster boonia atari miti naria miunda iri na bwithirwe buri tayari gucokia biuria biao.

Aja kurina mariitwa ja cluster na miunda iria ikwenda gutegangwa na kujukirua baseline tuti. Aririeni na cluster yaku kwegie njira iria buumba gutumira nikenda bukinyira miunda iji kiumia giki kana kiu kingi. Arieni kinya na mutari miti nikenda bumanya kethira namikinyirite kana kethira nakwenda utethio kumithiria. Atongerira ba TIST ndene ya Kenya na ba US baritayari kubutethia.



<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>	<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>
Ankamia	24	5,663	Kithoka	13	3,788
Barangu	12	2,684	Limauru	1	458
Burguret	3	1,218	Miathene	3	638
Buuri	1	1,885	Mikunduri	14	3,998
Chung'ari	20	3,908	Mithuri	6	869
Gachua	4	628	Mpuri	25	12,665
Gaturiri	19	5,146	Muhonia	7	589
Giaki	7	7,382	Mumbuni	1	402
Gikumene	16	4,216	Munyu	15	4,289
Githongo	70	21,090	Muragara	16	2,971
Gitimene	31	15,309	Murinya	21	5,689
Iriga	1	3,712	Mururune	24	3,617
Irindiro	12	2,842	Mweiga	2	839
Kaaga	19	3,321	Mwichiune	4	11,981
Kagaene	6	865	Mworoga	19	14,833
Kairuni	10	4,327	Naari	58	28,116
Kanjagi	4	1,613	Ngariama	5	2,411
Kanjoo	44	10,726	Nguruki	12	1,982
Kanyakine	16	5,837	Njorua	2	860
Karaba	6	1,752	Nkando	1	421
Katheri	31	12,368	Nthangathi	5	1,677
Kiamathaga	1	1,946	Ntugi	14	38,304
Kiamiogo	29	17,125	Ntumburi	2	6,268
Kiangua	8	2,803	Nyweri	3	1,960
Kianyaga	1	546	Ontilili	1	748
Kibirichia	38	18,693	Pondo	84	40,225
Kibui	49	9,798	Raichiri Podo	11	2,596
Kigucwa	1	1,571	Runyenye	4	2,468
Kiirua	23	11,931	Salama	2	1,693
Kinoro	10	2,988	Subuiga	23	6,649
Kiria	66	15,533	Thiira	21	4,553
Kirimaitume	12	2,455	Thuura	17	8,744
Kirindini	10	2,018	Urru	2	419
Kisima	14	7,208	Wiumiririe	1	605
Kithithina	11	1,540	Sum	1,068	430,972



# Mazingira Bora



# TIST

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

**Kikuyu Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**TIST Quantifiers: Help your Quantifiers to make your Cluster strong.**

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## Maundu ma ikundi: Uikarania wa ikundi.

**a) Ni njira iriku njega ya kubanga andu mucemano-ini wa ikundi?**

Githiururi kinini nikio kiega. Mutigakorwo na metha tondu niikoraga mikira andu-ini. Mutigakorwo na giti kinene kuri iria ingi kia mutongoria. Thiini wa TIST, ithuothe tuikaraga undu umwe. Tuikaraga thi kana tugaikarira iti.

**b) Twikaga atia riria andu makiria ma 12 magia na wendi wa kuingira gikundi?**

Riria kwagia na andu makiria ma 12 marena kuingira gikundi, niwega guthondeka gikundi kingi. Gikundi giki nokigayanio maita 2 kana 3 ona kana 4 na niwega andu a tene gikundu mambiririe icio ingi mari o. njira ino ni njega gukira amemba eru makigeria guthondeka

gikundi kieru mari oiki. Ririkanai guthiururukia utongoria.

**c) Ungika atia riria hinya wagikundi wathii thi?**

Gayania amemba eri eri na umere mariririe ugoro ucio. Geriai guthaka mithako ya ngerekano tondu niiteithagia. Maita maingi riria mundu umwe arugama kuga maundu maria mega muhotete gwika niguteithagia muno na gugekira hinya ringi. Na ningi ririkana ndukareke micemano inenehe muno. Riria muri na muteithia wa mutongoria uria uraiga mathaa, nouhote kuhuthira mucemano wega na mukaiguithaniria.

## TIST: mitarataya miega ya micemano ya o wiki.

### Mutaratara wa mucemano.

Niguo kuhuthira mathaa wega, ikundi ciagiriirwo nigukorwo na micemano mibang wega. Njira ino niya bata tondu niigutuma murumirire mutaratara na muhote kwaririria maundu maria ma bata. Nangingi niyabata tondu thiini wa TIST nitukoragwo twiheanite gukiria na gutungata miti gwa kahinda kanene niundu wa thoko ya carbon. Nitwagiriirwo nikumenya arimi othe a ikundi wega, tondu ciiko cia I mundu nicia bata kuri gikundi.

Niundu wa bata, na makiria kuri gikundi gukorwo na micemano ya o hindi na mungihota o wiki. Uu niukuhe amemba thiini wa gikundi kamweke ga gwikira gikundi hinya.

Riria muri na micemano, niwega mureore maundu maria ma bata. Ikundi nyingi nicionete mutaratra uyu ukimateithia muno.

**Ikinya ria I: Kugeithania na kumenyithania amemba eru(Ndagika 5-15):**

tigirira o mundu niaigua amukiritwo wega. Mutikoe kahinda kanene no utigirire andu nimemenyithania.

**Ikinya ria II. Mahoya ma kuhingura (Ndagika 2):**

Mahoya manini nimateithagia kunyithania giundi.

**Ikinya ria III Ruimbo(Ndagika 5):**

Ici nocikorwo iri nyimbo citungitwo

ni gikundi kana ciagwikira andu hinya na cia kugooa Ngai.

**Ikinya ria IV. Kuiguithania kiria gikwariririo na mathaa(Ndagika 5):**

Mutoingoria agatariria maundu maria makwariririo nao amemba magetikaniria. Mahida m a r i a makuhuthirwo kwaririria makaiguithanirio niguo muteithia wa mutongoria akahota kuiga mathaa.

**Ikinya ria V. Kwaririria maundu (ithaa I):**

Niwega maundu maria makwariririo makoragwo mathondeketwo mucemano-ini urcio ungi. Maundu maya nita uria andu mahotete gukuria TIST, guthomithania maundu na mitaratara bata iria iguteithia gikundi gukura wega.

**Ikinya ria VI. Kujengana(ndagika 5):**

O memba wa gikundi niaheanaga kaundu kega ka wiki iyo na akauga uria onete utongoria thiini wa mucemano. Na makiria, mundu o wothe akauga kiheo kiria onete hari mutongoria.

**Ikinya ria VII. Mahoya ma kuhinga (Ndagika 2):**



## Mitaratara miega ya ikundi nini: Makinya ma ciiko na makinya ma mibango.

Ikundi cia TIST niciikaga maundu maingi makwoneka: kuhanda miti na kwagirithia urimi. Riria kuri na wira muingi wa kurutwo, niwega guthondeka makinya ma ciiko. O memba wa gikundi niagiriirwo nikwira aria angi uria magiriirwo ni gwika kiumia kiu. Nituguguthomithia ohamwe na gikundi kianyu uria muguthondeka mubango wa ciiko. Menyithia amemba aria angi uhoro uyu mucemano-ini..

Mubango uyu ni kindu ta giki:

- Maundu ma bata.
- Maundu maria maroneka
- Maundu maria mangithimika.
- Maundu maria mari na kiambiriria na muthia.
- Tigirira makinya maku nomahoteke.

Kwa muhiano, kuga niukuhanda muti ti giiko. Kuga (giroko ithatu niguhanda miti 75 mugunda-ini) ni giiko tondu undu ucio uri na bata na niurauga kaundu(kuhanda miti 75), niuroneka (andu nimakuona) nouthimike (miti 75, irooko 3) na uri na kiambiriria na muthia(thutha wa matuku 3 niukuona maciaro).

Gikundi giaku giacemania ringi, itikiria ndagika 10 mucemano ugithira niguo o mundu aheane mubango wake wa ciiko. Omundu naihehny:

- (1) **Ira gikundi mubango wao wa kiumia kihituku.**
- (2) **Hutia maundu maria mekite.**
- (3) **Uga mibango iria igukorwo kuo kiumia giukite.**

Murimi anghota gukinyaniria mubango wa ciiko aria angi niagiriirwo ni kumukenerera.

Na angikorwo, ta uria maita maingi gukoagwo andu makiambiriria ati mukinyaniirie ciiko imwe, gikundi

niagiiriirwo gwikira murimi hinya na matikamurute mahitia. Riria andu mari na kamweke ga kwiyaria na kuga maria mahotete na maria matanahota nimahotaga kugia na hinya wa guthii na mbere a kiumia. Hinyiriria arimi a gikundi giaku makorwo na mubango wa ciiko unghoteteka. Tigirira ati mubango ucio niuraririria kindu! Araniriai na muonanie ciiko iria muhotete.

### Makinya ma mbango wa ciiko.

Njira ihanaine no ihuthirwo riria urehariria. Haha hari na cionereria.

**Kwaririria kindu**(gikundi gitu kia TIST nigikuhanda miti 1000 thibitari-ini tugikinyiria November 30)  
**mangithimika**(Miti iigana? Miti 1000 niyo ikuhandwo)

**inghoteteka** (Gikundi gitu gia TIST nokihande miti 1000 hari ciumia 5 – miti 100 o wakeri na wakana, miti 10 o mundu o muthenya.)

mahinda (turi na kiambiriria na muthia- nitukuhanda miti gatagati ka October 15 – November 30)

**Ingioneka** (nginya ngi niirakwona ukihanda miti) Smarto

Giki nikigeranio giakuonania kana niurarumirira mubango waku:

1. Kii?(Kuhanda miti 1000)
2. Uu?(Riitwa ria memba wa TIST)
3. O ri? (October 15 – November 30)
4. O ku? (Thibiari-ini)
5. Atia(tucemanagia o wa-keri na wa-kana miaraho thutha wa kuruta wira na tukenja marima na tukuhanda miti)
6. niki?(niguo kwagirithia thibitari niguo kuhe arwaru handu ha kiiruru)

## Riu ambiriria kurutithia mubango waku wira mecemano uyu ungi ukite.

**K**ujengana: Ndukahitukwo ni irathimo thiini wa gikundi kianyu. Kujengana ni gicunji kia bata thiini wa TIST micemano-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 mucemano. Kwa muhiano, atheka, aiga mathaa, akorwo na mubango mwega, ekira arimi hinya kwaria, angeithia na atuma njigwe ndi mucii, auga kaundu thiini wa mucemano



na gatuma mucemano 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 arathimiiro. 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 utungati 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 mucemano 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.

## Guthuka kwa maai: gutuhutagia na atia na tungika atia?

**R**iria andu mataha maai matari mathondeke na mari na giko no marware. Nitwagiriirwo niguthomithia andu thiini wa Cluster magwati maria mangimakora riria manyua maai matari mathondeka.

### Guthuka kwa maai kumanaga na njira nyingi:

1. kurekererio kwa giko kia iganda.
2. Kwaga kumenyerera kuria maai marahitukira.
3. Kwaga gutemera maai, niguu mai matikaume njira yamo. Chemicals ta fertilizers na ndawa cia tutambi nocitherere kuma mugunda ngiya ruui.
4. Gwithambira na guthambiria nguo ruui.
5. Gwiteithia hakuhi na ruui.
6. Kwaga kuhumbira marima ma maai.
7. Kwaga cioro matura-ini.
8. Kuriithia mahiu hakuhi na njuu

### Guthuka kwa maai kuri na mogwati maingi:

1. guthuka kwa maai no kurage mundu nyamu kana mimera
2. maai maria mari na giko mangihuthirwo na kuruga gwithamba kana kunua naomarehe mirimu miingi ohamwe na njoka na mirimu ya

ngothi na kuharwo.

3. Rimwe chemicals ciangiha mwiri ti njega kuri andu na ciana.

### Tungika atia niundu wa guthuka kwa maai?

1. Ndugate mahuti na giko maai-ini. Na uhinyiriria aria angi meke uguo.
2. Handa miti ruteere-ini rwa ruui kana iria-ini. Miri ya miti niitheragia maai na ikagiria tiiri wa iguru kuingira ruui.
3. Ndukahande mimera hakuhi na ruui niguu fertilizer ndigathii ruui.
4. Hinyiriria andu matigake hakuhi na ruui.
5. Tigirira ithima na marima ma maai nimatungatwo na mamenyererwo weega.
6. Irigira kuri maai marauma niguu mahiu matigathii kuo.
7. Ndugetikiria andu gwithambira ruui.
8. Tigirira cioro cia marima cira 50m kumaharia maai mari. Na ningi giko nigiatemerwo wega gitigathii maai-ini.
9. Cokereria miatuka yothe ya ithima o naihenya uria kwahoteka.
10. Angikorwo uri na nganja na utheru wa maai, therukia mbere ya umahuthirite.





## Muringa: handa muti uyu wa bata niundu wa ugima mweka wa mwiri.

Mwandiki: Zakayo Kayuri

**M**uringa ni muti wa bata. Riria wa uhanda mugunda-ini waku niugukuhe mawega maingi ta kiiruru. Nouhuthirwo gutheria maai kuhitukira mahuti maguo momu. Niukoragwo na dawa ohamwe na mawega magi maingi ma ki-mbeca.

Na nita maya.

1. Iron maita matatu gukira spinach.
2. Protein nyingi ta matumbi.
3. Vitamins maita 4 gukira carrots.
4. Calcium maita 4 ma iria.
5. Vitamin C maita 4 gukira macungwa.
6. Potassium maita 3 gukira marigu.

Moringa niuthondekaga mirimu, ugatheria maai na ukahunia andu.

Kwaga maai matheru niumwe wa mogwati maria marikuo thi yothe. Mdegu cia muringa

cingihinywoa nocitherie maai mari na giko. Tukania mbegu iciko 2 na maai 2olts. Uruga maai kwandagika 2 na umatige kwa ndagika 10. giko nigiguthii thi hamwe na mbegu cia muringa.

Dawa kumana na muringa ni njega na cia bata. Muringa nimwega guthondeka ngothi, kunyihia cukari, kunyihia kuimba, kuhonia irona cia nda na kunyihia guteng'era gwa thakame.

Muringa niuthonekaga maguta, fertilizer na mahuti ma mahiu.

Nimuti umwe wa bata muno, na ta uria wona kumana na mawega maya. Arimi a TIST, mureterera niki? Riria twakuria muringa thiini wa TIST, tugiaga na carbon credits na tukegwatira mawega maya mangi mothe.

Reke ithuothe o mundu ahande muringa!

## Teithiriria Cluster yaku niyatuika Baselined.

**G**icunji giki kiraririria uhoro wa baseline na ti tracks. Miti miingi niirora.

Kuri na miti 41,000 thiini wa KE, 29,000 thhini wa Pds thuthurie, 4,500 thiini wa PD iguka na ingi 7,000 itari miharirie.

Miti 1068 ni ya bata (tuoyaya ithaka iria iri na makiria ma miti 400 na ingi thiini wa gikundi. Uu nikuheana gicuji kia 50% kia miti iria itaroneka. Maundu maya mekirwo tondu ona thutha wa wira mweka na muingi wa mwaka muthiru, na muthire uria turi naguo, tutiretikia timu ya Kenya niikuhota kurikia miti 7000. na niguo tugie utheri, irria igutigara ndigetikirika kuri VCS).

Ari umwe wa ikiro cia thoko ya Carbon, ikundi ciothe ciandikithitio na TIST no muhaka cigie na ithaka ndare na cikahitukio. Ithaka niciagiriirwo kwonania kuria miti ihanditwo. Auditors a nja nimatewaga miti makarora rekodi mone kana nimatewaga. Validation ni kindu kia bata, gikiro kia thoko ya carbon. Niiteithagiriria kuonia aguri na arugamiriri a thoko ti miti iria arimi a TIST mahandite ni ya ma na niikinyirithitie ikiro.

Umuthi kuri na ithaka 41000 thiini wa Kenya na 29000 niciikitwo validation.

Imwe nicihitukitio. Kuhitukio ni guthima muigana wa carbon uria muti ungiruta. Ni thutha wa kuhitukio arimi mahataga kwamukira marihi. Ona kuri o uguo, TIST no muhaka yonanie democracy na uma hamwe na utheri na wihokeku hari mathabu mao.

Hari ithaka 12,000 iria itigarite, ithaka 4,500 ni njega na ingi 7,000 ti njega. Na hari icio ingi 7,000, 1,068 ni cia gwikirirwo hinya.

Kwa uguo TIST, niiroria amemba othe mateithiririe atari a miti hari utari wa ithaka ici na ihenya o uria kwahoteka. Ithaka ciothe cingitarwo tugikinyiria muthia wa October nitukuria validators moke na validate ithaka mwere wa December. Hariria amemba a cluster yanyu monie atari a miti kuria ithaka iri na ucokie ciuria ciao.

Haha muhuro ni maritwa ma cluster na ithaka iria ciagiriire gutarwo na ihenya. Aririria thiini wa cluster yanyu njira iria mungikorwo na atari a miti kiumia giki kana giki kingi. Na nowaranirie na atari a miti niguo umenye kana nimatewaga na kana niarabatara uteithio makiria kurikia. Kanju ya utongoria ya TIST hamwe na timu ya US nimehariire kumuteithia.



<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>	<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>
Ankamia	24	5,663	Kithoka	13	3,788
Barangu	12	2,684	Limauru	1	458
Burguret	3	1,218	Miathene	3	638
Buuri	1	1,885	Mikunduri	14	3,998
Chung'ari	20	3,908	Mithuri	6	869
Gachua	4	628	Mpuri	25	12,665
Gaturiri	19	5,146	Muhonia	7	589
Giaki	7	7,382	Mumbuni	1	402
Gikumene	16	4,216	Munyu	15	4,289
Githongo	70	21,090	Muragara	16	2,971
Gitimene	31	15,309	Murinya	21	5,689
Iriga	1	3,712	Mururune	24	3,617
Irindiro	12	2,842	Mweiga	2	839
Kaaga	19	3,321	Mwichiune	4	11,981
Kagaene	6	865	Mworoga	19	14,833
Kairuni	10	4,327	Naari	58	28,116
Kanjagi	4	1,613	Ngariama	5	2,411
Kanjoo	44	10,726	Nguruki	12	1,982
Kanyakine	16	5,837	Njorua	2	860
Karaba	6	1,752	Nkando	1	421
Katheri	31	12,368	Nthangathi	5	1,677
Kiamathaga	1	1,946	Ntugi	14	38,304
Kiamiogo	29	17,125	Ntumburi	2	6,268
Kiangua	8	2,803	Nyweri	3	1,960
Kianyaga	1	546	Ontilili	1	748
Kibirichia	38	18,693	Pondo	84	40,225
Kibui	49	9,798	Raichiri Podo	11	2,596
Kigucwa	1	1,571	Runyenye	4	2,468
Kiirua	23	11,931	Salama	2	1,693
Kinoro	10	2,988	Subuiga	23	6,649
Kiria	66	15,533	Thiira	21	4,553
Kirimaitume	12	2,455	Thuura	17	8,744
Kirindini	10	2,018	Urru	2	419
Kisima	14	7,208	Wiumiririe	1	605
Kithithina	11	1,540	Sum	1,068	430,972

# Mazingira Bora



# TIST

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

**Kiswahili Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**TIST Quantifiers: Help your Quantifiers to make your Cluster strong.**

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## Mbinu za vikundi vidogo: Mwingiliano wa kikundi.

### a) *Ni njia gani bora zaidi ya kuwapanga watu wakati wa mkutano wa Kikundi kidogo?*

Msiwe na meza kwa sababu inajenga vizuizi kati ya watu. Msiwe na kiti cha kukaliwa na mtu aliye na muhimu zaidi kati yenu. Katika TIST, sote twaketi kwa njia iliyofanana. Sote hukaa chini udongoni au sote kukalia viti.

### b) *Mtafanyaje kukiwa na watu zaidi ya kumi na wawili wanaotaka kujiunga na kikundi chenu?*

Kama kuna zaidi ya watu kumi na wawili wanaotaka kujiunga na kikundi chenu ni vizuri zaidi kuanzisha kikundi kipya. Kikundi chaweza kujigawanya na kuwa vikundi viwili, ama wanakikundi asili watatu au wanne wawe msingi wa kikundi kipya. Hii ni vizuri kuliko

mwanakikundi mmoja kujaribu kuanzisha kikundi peke yake. Kumbuka kuanza uongozi wa mzunguko kutoka mwanzo.

### c) *Ni mbinu zipi mwaweza kutumia ikiwa nishati ya kikundi iko chini?*

Gawanya kikundi kiwe wawili wawili na uulize kila jozi kujadiliana kuhusu kazi iliyopo. Michezo ya kuigiza husaidia pia. Mara kwa mara kuwasimamisha na kila mtu kusema kitu kizuri ambacho kikundi chao kinafanya husaidia kuwapa watu motisha nyingine. Pia kumbuka kuuachisha mkutano usiwe mrefu. Kwa njia ya kuwa na msaidizi wa kiongozi anayesaidia kuweka masaa, unaweza kuelekeza nishati ya kikundi kuhakikisha kazi inafanyika katika muda uliopangiwa.

## TIST: Mwenendo bora zaidi katika kuendeleza mikutano ya kila wiki.

### Ratiba ya mkutano.

Kutumia muda vizuri, kikundi kidogo chapaswa kuwa na ratiba ya mkutano iliyopangika vizuri. Hii ni muhimu kwa sababu itakusaidia kuzingatia yaliyo katika ajenda na mambo yaliyo muhimu zaidi. Ni muhimu pia kwa sababu katika TIST, tunajitolea kufanya kazi pamoja kwa muda mrefu ili kukua na kudumisha miti yetu katika soko la hewa. Tunahitaji kujua wanakikundi wenzetu vizuri, kwa sababu matendo ya kila mtu hushikilia kikundi chote na TIST yote.

Ni muhimu pia, kwa kikundi chako kidogo kuwa na mikutano ya mara kwa mara, ikiwezekana mara moja kila wiki au mara moja kila wiki mbili. Hili litawapa wanakikundi chenu nafasi ya kuimarisha kikundi na kugawana na kujifunza mafunzo mapya. Wakati wa mkutano, ni muhimu kuzingatia mambo yaliyo muhimu. Vikundi vingi vya TIST vimeona utaratibu unaofuata ukiwa mwenendo bora zaidi ili kuwa na mikutano ya kufanikiwa:

### Hatua ya kwanza. **Salamu na kujijulisha kwa wanakikundi wapya (dakika tano kufika kumi na tano):**

Hakikisha kila mtu anajisikia nyumbani. Hakikisha ni fupi lakini muache kila mtu ajijulishe.

### Hatua ya pili. **Maombi ya kuanza (Dakika mbili):**

Ombi fupi laweza kusaidia kuunganisha kikundi.

### Hatua ya tatu. **Nyimbo (Dakika tano):**

Hizi zaweza kuwa zilizoandikwa na kikundi chako, au nyimbo zinazowatia watu nguvu kama nyimbo za kidini.

### Hatua ya nne. **Kuitikiana kuhusu kazi na masaa (Dakika tano):**

Kiongozi anaeleza yatakayofanyika mkutanoni na wanakikundi waitikie kufanya kazi hiyo. Masaa yatakayotumika kwa kazi hiyo au mjadala yakubalianwe ili msaidizi wa kiongozi aweze kuweka masaa ya mkutano.

### Hatua ya tano. **Kazi ya vikundi (saa moja):**

Ili kufanya vizuri zaidi, kazi yapaswa kujadiliana mkutano wa mwisho ukiisha. Kazi zaweza kuwa pamoja na kugawana ni nini kila mtu amefanya ili kusaidia kazi za TIST, kugawana mienendo bora zaidi ya kufanya mambo tofauti, kufunza kuhusu vitu fulani na jambo lingine lolote la maana litakalosaidia kikundi chenu kukua.

### Hatua ya sita. **Kujengana (Dakika tano):**

Kila mwana kikundi anasema jambo moja nzuri kwa kiongozi wa wiki hiyo kuhusu uongozi wake ulioonekana katika mkutano. Kuongezea, mtu yeyote aweza kusema ni zawadi gani katika uongozi ameona katika kiongozi huyo.

### Hatua ya saba. **Ombi la kufunga (Dakika mbili):**





## Mienendo bora zaidi ya vikundi vidogo ya kufanya mambo tofauti: Hatua za kuchukua na kupangia hatua.

Vikundi vingi vya TIST hufanya kazi nyingi zinazoonekana: kupanda miti na kuboresha mbinu za ukulima. Wakati kuna kazi nyingi inayohitaji kufanyika, ni vizuri kufanya mpango wa hatua zitakazochukuliwa. Kila mwanakikundi afaa kuambia kikundi ni kitu gani wataweza kufanya katika wiki hiyo. Tutawafunza nyinyi na kikundi chenu jinsi ya kufanya mpango wa hatua zitakachochukulia kufanya kazi hiyo. Tafadhali gawana haya na wanakikundi wengine wakati wa mkutano.

Hatua ya Utekelezaji ni iliyo:

- Maalum
- Inayoonekana (Nzi iliyo ukutani yaweza kukuona ukifanya!)
- Inayopimika
- Iliyo na mwanzo na mwisho
- Hakikisha hatua yako ya utekelezaji ni itakayowezekana na unayoweza kufikia!

Kwa mfano, kusema 'Nitapanda miti' si hatua ya Utekelezaji kwa sababu ni taarifa ya ujumla. 'Nitafanya kazi asubuhi tatu wiki hii kupandikiza miche sabini na tano shambani letu jipya' ni hatua ya utekelezaji kwa sababu ni iliyo maalum (kupandikiza miche sabini na tano), inayoonekana (watu waweza kukuona ukifanya), inayopimika (miche sabini na tano, asubuhi tatu) na ina mwanzo na mwisho (mwishoni mwa siku tatu utaona matokeo).

Kikundi chako kitakapokutana tena, ruhusu dakika tano mwishoni mwa mkutano ili kila mtu aripoti kuhusu hatua yake mwenyewe ya utekelezaji. Kila mtu haraka:

- (1) **Aambie kikundi hatua yake ya utekelezaji ya wiki iliyopita.**
- (2) **Aseme ni nini chenyewe alichofanya.**
- (3) **Aseme hatua yake ya utekelezaji ya wiki inayofuata.**

Kama huyo mtu alifanikiwa katika hatua yake ya utekelezaji, kikundi kinasherehekea fanikio hilo.

Ikiwa, kama mara mengi inavyotokea, mwanakikundi ameweza kufanikiwa kufikia kiwango fulani cha lengo lake, kikundi kintie nguvu na kisimkosoe au kumtia lawama. Watu wanapoweza kugawana bila hofu kuhusu mafanikio na kutofaulu kwao, watahimizwa kufanya

vyema zaidi wiki inayofuatilia. Himiza wana kikundi chako kufikiria hatua za utekelezaji zinazowezekana. Hakikisha kila mojawapo ni maalum, inapimika na inawezekana! Gawana na msherehekee hatua za utekelezaji kikundi chako kilichotimiza.

### Hatua za utekelezaji unapofanya hatua za mipango

Njia sawa yaweza kutumiwa unapopangia kitu. Hapa ni mfano katika mabano. Wakati kikundi chako kinapopanga kitakavyofanya, hakikisha mipango yenu ni:

**Specific- Maalum** (Kikundi chetu cha TIST kitapanda miti elfu moja katika hospitali mtaani kabla ya tarehe thelathini, Novemba)

**Measurable-Inapimika** (Ngapi? - Miti elfu moja itapandwa)

**Achievable/Realistic -Inayoweza kufikiwa** (Kikundi chetu cha TIST chaweza kupanda miti elfu moja katika muda wa wiki tano- miti mia moja kila jumanne na alhamisi, miti kumi kwa kila mmoja kila kila siku)

**Time-bound- Inapimiwa muda** (Ina mwanzo na mwisho- tutapanda miti kati ya tarehe kumi na tano, Octoba hadi tarehe thelathini Novemba)

**Observable- Inaonekana** (Nzi ukutani yaweza kutuona tukipanda miti. )

SMARTO!

Huu ni mwongozo na kipimo cha hatua zako za utekelezaji na unakusaidia kuwa maalum:

- 1) **Nini** – (Kupanda miti elfu moja)
- 2) **Nani** – (Wana Kikundi kidogo cha TIST kwa jina)
- 3) **Lini** – (Oct 15 – Nov 30)
- 4) **Wapi**– (Hospitalini)
- 5) **Aje** – (Tutakutana kila Jumanne na Alhamisi alasiiri baada ya joto la siku na kuchimba mashimo, halafu tupande miti)
- 6) **Kwa nini**– (Kuboresha eneo linalozunguka hospitali, tuwe na kivuli zaidi kwa wagonjwa na wageni, watu waweze kukaa chini ya miti na kivuli kitafanya hospitali iwe baridi zaidi.)

Sasa, jaribu kujioesha kufanya hatua za mipango katika mkutano wako wa kikundi kidogo ujao.

## 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 kuwahusu 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!

## **Uchafuzi wa maji: Kwa nini ni muhimu na twaweza kufanyeje?**

**W**akati watu huchota na kunyua maji yaliyochafuka yasiyotibiwa, wanaweza kugonjeka sana. Twahitaji kusomesha watu katika cluster na katika jamii kuhusu hatari ya maji yasiyotibiwa ili waweze kujua vizuri zaidi jinsi ya kutibu maji ili wakae wenye afya.

### **Uchafuzi wa maji unasababishwa na mambo mengi:**

1. Usaha wa taka zisizotibiwa kutoka viwandani na wa maji taka
2. Kazi za binadamu bila kujali karibu na maji [mito, visima, visima virefu].
3. Mitaro duni, ivyo taka hubebwa hadi majini na maji yanafurika. Kemikali kama, fertilizer na viuatilifu, zaweza kutoka mashambani mwetu na kuchafua maji.
4. Kuoga na kuoshe nguo majini ( vyanzo vya maji).
5. Kukojoa na kujisaidia karibu na vyanzo vya maji.
6. Vifuniko vilivyopasuka visimani virefu au visimani
7. Ukosefu wa vyoo vya kuchimba maeneo ya vijijini. Maji ya mvua yaweza kubeba taka ya binadamu hadi vyanzo vya maji.
8. Wanyama wanaolishwa karibu au ndani ya vyanzo vya maji yanayotumika na watu ama ambapo mito inaanzia.

### **Uchafuzi wa maji husababisha shida nyingi:**

1. Uchafuzi waweza moja kwa moja kutia sumu na kuua mimea na wanyama (pamoja na watu) ama usababisha sumu kupitia mbolea za viwandani zilizo na madini ya naitrojeni na uchafu unaoosha hadi majini ambao husababisha kuongezeka kwa ukuaji wa mimea ya maji. Mimea hii inapokufa, inasababisha maji yanapoteza Oksijeni, jambo ambalo husababisha vifo vya wanyama wa majini.
2. Polluted water used for cooking, washing and

drinking, spreads many human diseases. Maji machafu yanayotumiwa kupika, kuosha, kunyua, hueneza magonjwa mengi ya binadamu. Haya ni kama Minyoo ya matumbo, magonjwa ya ngozi, kipindi pindu na kuhara.

3. Kemikali zingine katika maji machafu zaweza kuongezeka katika miili yetu, na pole pole kututia sumu na kusababisha madhara kwetu na kwa watoto wetu.

### **Twaweza kufanyeje kuhusu uchafuzi wa maji?**

1. Usitupe taka au kumwaga mabaki katika vyanzo vya maji. Himiza wengine kufanya vivyo hivyo
2. Panda miti karibu na pande za mito na maziwa. Mizizi ya mimea ni nzuri sana katika kutoa taka na kuzuia udongo kuingia majini kupitia mmomonyoko wa udongo.
3. Epuka kupanda mimea karibu sana na mito, maziwa ama visima ili kuepuka mbolea za viwanda kuingia katika vyanzo vya maji.
4. Himiza watu kujenga mbali iwezekanavyo kutoka kwa pande za mito.
5. Hakikisha visima na visima virefu vinasimamiwa vizuri.
6. Fensi vyanzo vya maji ili kuzuia wanyama kuchafua maji.
7. Usiruhusu watu kuosha karibu na pampu.
8. Hakikisha vyoo vya kuchimbwa vipo zaidi ya mita hamsini kutoka kwa vyanzo vya maji. Hakikisha kuna mitaro tosha na huchimbe mitaro ya kuelekeza maji kwa shimo la kulowa, shimo lililojazwa na mawe ambapo maji yatalowa.
9. Karabati nyufa zilizo vifunikoni haraka iwezekanavyo zinapotokea na safisha mahali hapo kila baada ya muda.
10. Kama hauna uhakika kuhusu usafi wa maji, yachemshe kabla ya kuyanyua kuua vijiumbe maradhi vinavyoweza kukufanya kuwa magonjwa.



## Moringa: Panda mti huu muhimu ili kuboresha lishe na afya.

### Umeletewa na Zakayo Kayuri

**M**oringa ni mti muhimu. Unapopandwa shambani mwako, unaweza kukupa kivuli na waweza kutimiza mahitaji yako mengi ya kilishe. Pia unaweza kusafisha maji yako kupitia majani yaliyokaushwa na kupodwa. Pia ina faida zingine za kidawa, kipesa na kilishe. Majani ya Moringa hupeana thamani ya kilishe ya kushangaza kwa kutupa:

1. Chuma mara tatu zaidi ya mchicha.
2. Protini kama katika mayai
3. Vitamini A mara nne zaidi ya iliyopo katika karoti.
4. Kalsiamu mara nne zaidi ya iliyopo katika maziwa.
5. Vitamini C mara saba zaidi ya iliyopo katika machungwa.
6. Potasiamu mara tatu iliyopo katika ndizi.

Moringa hutibu magonjwa, husafisha maji na ni chakula kwa walio na njaa.

Ukosefu wa maji masafi ya kunyua ni moja ya tishio kubwa zaidi duniani. Mbegu za Moringa zilizopodwa

zaweza kugeuza majimachafu kuwa maji masafi kwa kiuchumi kuliko kutumia kemikali za nchi za nje. Changanya vijiko vikubwa viwili vya mbegu za Moringa zilizopodwa na maji lita ishirini. Koroga au utingishe kwa nguvu dakika mbili, halafu pole pole dakika kumi. Uchafu na bakteria utatua kutoka majini pamoja na Moringa na waweza kuchujwa.

Sifa za kidawa za Moringa pia ni zenye kutia matumaini. Moringa waweza kusaidia katika maambukizo ya ngozi, kushusha sukari katika damu, kushusha uvimbe, kuponya vidonda vya tumbo, kushusha shinikizo la damu na hata kutuliza mfuma wa neva.

Moringa ni kuni fanisi, mbolea na chakula cha mifugo.

Ni mojawapo ya miti iliyo na matumizi mingi zaidi, kama unavyoona kutokana na faida zilizo hapo juu. Wakulima wa TIST, mbona kungoja? Tunapopanda Moringa, tunapata pesa kutokana na kuuza hewa na twaweza kufurahia faida zingine zilizoelzwa hapo juu.

Acheni kila mmoja wetu apande angalau mti mmoja!

## Saidia cluster yako Saidia Cluster yako kurekondiwa msingi wa mashamba yote.

**S**ehemu hii inahusu msingi na mbali si traki. Traki mingi pia hazipo.

Kuna mashamba elfu arobaini na moja katika Kenya, elfu ishirini na tisa yaliyopitishwa, elfu nne mia tano tayari kupitishwa ukaguzi ujao na elfu saba yasiyo tayari.

Mashamba hayo elfu moja na sitini na nane ndio mashamba yaliyo kipaumbele (hususan, tunachagua mashamba yote yaliyo na zaidi ya miti mia nne, halafu tunaongeza mashamba yaliyo katika kikundi kimoja. Hii inatupa asilimia hamsini ya miti isiyoonekana. Hii ilifanyika kwa sababu licha ya kazi nyingi iliyofanywa mwaka jana, kwa kasi tunayosonga, hatuamini timu ya Kenya itaweza kumaliza yote elfu saba. Kuwa wazi, mashamba yaliyobaki hayatastahiki kwa soko la VCS.

Kama sehemu ya mahitaji ya soko la hewa chafu, vikundi vyote vilivyojiandikisha katika TIST vyafaa kuwa na mashamba yaliyorekondiwa misingi na kupitishwa. Mashamba yafaa kuwa na traki sahihi zinazonyesha mahali miti imepandwa. Wakaguzi wa nje hupitisha mashamba, wakiangalia data kuhakikisha ni sahihi na kamilifu. Kupitishwa ni hatua muhimu na inayohitajika katika soko ya kaboni. Husaidia kuwahakikishia wanunuzi na wadhibiti wa soko kuwa kazi inayofanywa na wakulima wa TIST ni ya ukweli, sahihi na inafikia viwango vya soko.

Leo, kuna mashamba elfu arobaini na moja katika Kenya, elfu ishirini na tisa yamepitishwa.

Mengine yamehakikiwa. Kuhakikiwa, kama jina linavyoonyesha, uhakiki kiasi cha kaboni iliyonyonywa

na miti ya wakulima wa TIST. Ni tu baada ya kuhakikiwa TIST yaweza kuuza kaboni na kupata pesa za wakulima. Hata hivyo, TIST yafaa kuonyesha usahihi, uwazi na ukweli katika data inayorekondiwa.

Katika mashamba elfu kumi na mbili yaliyobaki, mashamba elfu nne na mia tano yapo tayari lakini mashamba elfu saba hayako tayari. Katika mashamba elfu saba yaliyobaki, elfu moja na sitini na nane yamepewa kipaumbele.

Hivyo basi, TIST inawauliza wana TIST wote kusaidia na kuwapa mkono wahesabu miti katika uhesabu miti pamoja kurkondi misingi (yaliyo shambani kabla ya TIST) na traki katika mashamba haya haraka iwezekanavyo.

If all groves are fully baselined by the end of this month (October, 2012), we will request Mashamba haya yote yakimaliziwa kazi mwisho wa mwezi huu (Octoba, 2012), tutawauliza wakaguzi kuja kuyakagua mwezi hujao ama Decemba. Tafadhali pangia kuwa na wanacluster yenu kuwaonyesha wahesabu miti yalipo mashamba na kuwa tayari kujibu maswali yao.

Jedwali lifuatalo laonyesha majina ya cluster na mashamba yanayohitaji kuchukiwa rekondi za msingi haraka. Tafadhali jadiliana na cluster yako njia ambazo mwaweza kufikia mashamba haya wiki hii au wiki inayofuata. Pia, ongea na wahesabu miti na mjue kama wameyafanyia kazi ama wanahitaji usaidizi nyongeza ili kuyakamilisha. Uongozi wa TIST katika Kenya na timu ya US wapo tayari kuwasaidia.



<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>	<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>
Ankamia	24	5,663	Kithoka	13	3,788
Barangu	12	2,684	Limauru	1	458
Burguret	3	1,218	Miathene	3	638
Buuri	1	1,885	Mikunduri	14	3,998
Chung'ari	20	3,908	Mithuri	6	869
Gachua	4	628	Mpuri	25	12,665
Gaturiri	19	5,146	Muhonia	7	589
Giaki	7	7,382	Mumbuni	1	402
Gikumene	16	4,216	Munyu	15	4,289
Githongo	70	21,090	Muragara	16	2,971
Gitimene	31	15,309	Murinya	21	5,689
Iriga	1	3,712	Mururune	24	3,617
Irindiro	12	2,842	Mweiga	2	839
Kaaga	19	3,321	Mwichiune	4	11,981
Kagaene	6	865	Mworoga	19	14,833
Kairuni	10	4,327	Naari	58	28,116
Kanjagi	4	1,613	Ngariama	5	2,411
Kanjoo	44	10,726	Nguruki	12	1,982
Kanyakine	16	5,837	Njorua	2	860
Karaba	6	1,752	Nkando	1	421
Katheri	31	12,368	Nthangathi	5	1,677
Kiamathaga	1	1,946	Ntugi	14	38,304
Kiamiogo	29	17,125	Ntumburi	2	6,268
Kiangua	8	2,803	Nyweri	3	1,960
Kianyaga	1	546	Ontilili	1	748
Kibirichia	38	18,693	Pondo	84	40,225
Kibui	49	9,798	Raichiri Podo	11	2,596
Kigucwa	1	1,571	Runyenye	4	2,468
Kiirua	23	11,931	Salama	2	1,693
Kinoro	10	2,988	Subuiga	23	6,649
Kiria	66	15,533	Thiira	21	4,553
Kirimaitume	12	2,455	Thuura	17	8,744
Kirindini	10	2,018	Urru	2	419
Kisima	14	7,208	Wiumiririe	1	605
Kithithina	11	1,540	Sum	1,068	430,972



# Mazingira Bora



# TIST

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

**Kikamba Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**TIST Quantifiers: Help your Quantifiers to make your Cluster strong.**

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## Nzia ila itumiawa ni tukundi tunini: Ta kulikangana na kukwatangana.

### a) Ni nzia yiva nzeo ya kuvanga andu tukundi yila mwi mbumbanoni?

Kilinge kinini nikiseo muno. vaikethiwe na mesa kati nundu noithukume ta ukuta kati wa andu vaikethiwe uvanthukanu wa kila kikwikalilwa ethiwa ni kivila ateo kwa mundu munengete ndaia mbee. Ingi nthini wa TIST ithyoo the twikalaa nthi undumwe ethiwa ni muthangani kana ivilani kwa kila umwe.

### b. Nata mutonye kwika ethiwa andu mbee wa 12 nimekwenda kulika kakundini kenyu?

Ethiwa ve andu aingi mekwenda ulikana nyenyu nikavaa kusevya kakundi kangi kana tungi twili vena mainyiva ene ana kana atatu kuma kakundini kala kambee (amemba ala akuu). Uu ni useo mbee

kwi mundu umwe kwenda kwambiia kakundi eweka. Lilikanai kwambiia utonoi na kusumia nzia ya utongoi wa kithyululu.

### c. Ni nzia myau utonya utumnia ethiwa vinya wa kakundi winthi?

Aanai withie ni andu eli eli na kila umwe ayosa undu uu ta muio wake. Ingi mathau ma malimano na nthekany'a ni matetheeasya kwongela ngwatanio vinya na uthangaau. Ingi kunee niea wia wenyu museo kwakwiyonany'a mwi mbee nikutumaa angi makwata vinya na thambuu. Lilikanai yila mwoombana kulea kuselewa na kumina mbumbano tene. Kwithiwa na munini wa muungamii imusyaisya wa masaa nokutume kila umwe ekia vitii na kuthangaa kwona wia ula walanitw'e niwathela masaani ala maile.

## TIST: nzia nzeo sya kukuna mbumbano sya kila kyumwa.

### Walany'o wa kukomana

Nikana musuvie ivinda tukundi tunini nitwaile kwia walany'o museo wa mbumbano. uu ni useo nundu nukumwia mwina mwolooto wa kila angyendani ya muthenya usu na mawia ala maile kwianiw'a muthenya usu. Ingi ni useo nundu nthini wa TIST nitweeyumisye kuthukuma vamwe kwa ivinda yiasa kuvanda na kuea miti yiane kuvikia soko wa nzave itavisaa. Nitukwenda kumanya tukundu tunini twitu na ena mwatw'o na kwona ni itambya yiva tutonya kwosa kuikiithya ithyotho na TIST nitweethiwa na kivathukany'o.

Ni undu wavata kumanya kakundi kaku kanini nikaile kumbana kaingi ona ethiwa ni keli kwa mwai. Kii nokiete kwosa vinya kwa kikundi kyenyu kwa kuthuthany'a na kila umwe kunenga ula ungi utao na undu wikite kwake omithenya ila mutela onana na kila kinakivathukany'o na kitonya uete ualyuku museo kwa kila umwe vamwe na uu mawoni meu.

Yila mwoombana niuseo kwia mbee maundu ala mavata. Tukundi tunini twingi nitwoonie kuatiia nzia ithi syi vaa nthi kwi kwavata nthini wa mbumbano, na matambya asu ni:

### Itambya 1. Ngethi na kwimanyithany'a kwondu wa andu ala eu kikundini (Ndatika 5-15):

Ikiithyayi kila umwe niweew'a e muthokye, kila umwe etavany'a kwa mituki.

### Itambya 2. Mboya sya kwambiia (ndatika ili (2))

Mboya nini nguvi noitethye kwa kwongela ngwatanio.

### Itambya 3. Wathi (ndatika itano 5)

Uyu no withiwe wi wathi usevitw'e ni kikundi kyenyu kana wathi wa Ngai wina uthuthio kwa kila umwe

### Itambya 4. Kwiw'ana undu mukwika na mwitumia ivinda yiana ata (Ndatika itano(5))

Mutongoesya akaeleany'a kila kikwikwa wumbanoni na ene kikundi mayitikila kwika. Masaa ala meutumika kwa kila undu nonginya mambe uneenewa na munini wa mutongoesy no ethiwe emusyaisya wa masaa.

### Itambya 5. Wia wa kikundi (Isaa yimwe 1)

Nonginya muimina kila wumbano nimwithiwa muneene wia ula mukoka uthukuma wumbanoni ula ungi. Ngelekany'o ethiwa no kila umwe kutunga livooti ya undu wikite kutetheesya TIST na mawalany'o na uthukumi wayo museo. Kumanyiany'a nzia nzau na maundu angi mavata ala matonya utuma kakundi kenyu keana na kwaila.

### Itambya 6. Kwakana (ndatika itano (5))

Kila mumemba kunengane ondeto imwe ya kwakana onaethiwa ni yiulu wa utongoi. ingi kinengo kila kikivathukany'o kyonekete kwa mutongoi nikyaile uwetwa ethiwa kivo.

### Itambya 7. Mboya ya kumina/ kuinga wumbano (ndatika ili (2))



## Mawiko maseo ma tukundi tunini, matambya maosa na walany'o wa meko/wiko.

**N**gwatanio na ikundi sya TIST nisyikaa maundu maingi ta kuvanda miti na kwongela utuika wa nima. Yila kwina wia mwingi ni useo kwosa matambya na kutavya kila umwe kila wailwe nikwithiwa avikiite kyumwa kiithela. Nituu mumanyisya undu wa kuvanga na matambya maosa. kwandaia neenanisyai kana utavye angi ma kakundi kenyu yila mwakomana mbumbanoni.

Itambya ya meko ni kindu:-

- Kiamuitwe nikiva
- Kitonya kwoneka
- Kitonya uthimwa
- Kina mwambiio na muthya
- Ikiithya itambya na wiko yila woosa noyivikike na yina kitumi.

Kwa ngelekany'o 'Ni nguvanda miti' usu nuneeni ti wiko. "Kyumwa kii nithukuma mithenya itatu kumya miti 75 kivuioni na kumivanda vala yaile" yii ni itambya ya meko nundu niwinengete nginya ivinda ya kukuna wia uu. No yoneke nundu nukwoneka uivanda, ve kwambiia na kumina nundu itina wa ila mithenya itatu nitukwona undu wikite.

Yila kakundi kenyu koombana mwiikithya nimwoosa ndatika ta 20 kila umwe kuweta itambya ya meko yila wosete okwa mituki.

Kila umwe akaweta:- Itambya yila wosete kyumwani kiu kithelu Mawete kila mekite Na maiweta ni itambya na wia ungi mwau mekwika kyumwa kiatii.

Kethiwa umwe ni wa vitukiwa ni itambya yake kikundi kyothe kikatana nundu wa kwithiwa niwikite nesa.

Na ethiwa mundu akivikia yusu ya walany'o wake kikundi kikamuthuthya kumina indi ti kumutula muti na kumutalila makosa. Nundu yila andu meyelene

na ukethia useo kwa umwe kana uvaluku nomawetanie na kuthuthania kwindu wa kwika nesa mbee. Thuthania tukundi tunini na kutaana iulu wa matambya na mawalany'o ala mutonya kwika kwona kila umwe akitana na kuvikia mawendi ma TIST kwa vamwe.

### Itambya ya wiko na walany'o wa itambya

Nzia ino no itumike kwia walany'o ta wa mbee kwa ngelekany'o yila kakundi kenyu ke kwia walany'o ikiithya

**Amuai undu mukwika** (Kakundi kaitu ka TIST nikevanda miti 1,000 tuivika November 30th)

**Kithimo** (Yiana? - 1000 miti nikuvandwa)

**Niuvikiika** ( kakundi kaitu no kavande miti 1000 kwa ivinda ya sumwa itano - 100miti kila wakeli na waka, miti ikumi kwa kila umwe kwa muthenya mithenyani isu)

**Ivinda** (vena kwambiia na kumina - ta twivanda miti kuma Oct. 15 kinya Nov. 30)

**Kwoneka** (wia uyu no woneke ona ni kaki ke ukutani)

**UI!** Kii ni kithimi kya matambya na mawiko na ni kitetheasya kwithiwa na kuamua

1. **Ata** - Kuvanda miti 1000

2. **Nuu** - Kakundi kanini ka TIST - ene kwa masyitwa

3. **Indii** - Oct 15 - Nov 30

4. **Va** - kiwanzani kya sivitali

5. **Kwa nzia yiva** - Kukomana kila wakeli na wakana iya mawiyoo na kwisa maima naindi kuvanda miti

6. **Niki** - Kwailya mawithyululuko ma sivitali ,kwithiwa vena muunyi awau na ala mavika vau sivitali matonya kwikala na kuikiithya ona sivitali niyeethiwa na uthithu kumana na nzeve ila ikuma mitini.

Yu tatai kwosa itambya ya kwika itambya ya wiko yila muukomana ingi wumbanoni.

## Kwakana: Ndukavitukwe ni uathimo wa kakundi kaku kanini.

**K**wakana 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 mwisu/kuinga 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 akeethiwa akikite nundu kinengo kyake kila kitena ungi akeethiwa 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 kwoondu wa utongoi ula wanengwa.

## **Kuthokoany’a kiw’u: Niki ni nthina kwitu na nata tutonya kwika?**

**Y**ila andu mauta kiw’u kite kiite, kikiko nimatonya uwaa, nitwaile kumanyisya andu maitu muisyo wa kutumia kiw’u kite kiite nikana mamanye undu matonya kwikala mena uima wa mwii na kuiita kiw’u.

### **Kiw’u nikikiawa kiko na nzia mbingi na imwe ni ta:-**

1. Kiko kuma kambunini
2. Mawiko matemaseo ma mundu vakuvi na kula kiw’u kii ta utee wa mbusi, silanga, ndovoi
3. Kiw’u kwithiwa kiteuthi kwoou syindu ta mbolea ya kuaa (fertilizer), ndawa sya mimea na syakuaa tulinyu noikuwe ni kiw’u na kutwawa mbusini ila tuutaa kiw’u na kwoou kukithokoany’a.
4. Kuthamba na kuvuia ngua vala kiw’u kyumaa
5. Kumaa na kumia/kwika kyoo vakuvi na kula kiw’u kii
6. Kwatuka kwa nguta sya ndovoi na masilanga
7. Kwithiwa kutena syoo munamuno misyini ila yi lisaavu (itemataoni)
8. Indo kuya vakuvi na kiw’u kana kula kii.

### **Kiko kya kiw’u nikietae manthina maingi ala nita:-**

1. Kiko kya kiw’u no kyuae miti, nyamu na andu ethiwa kina sumu kana kwa nzia ya (Eutrophication). yila mbolea yina nzeve ya nitrogen yalika kiw’uni nitumaa mimea ya kiw’u imea kwa wingi na yila mimea isu yooma kiw’u kyu nikikosaa nzeve ya oxygen (ila ila ivevawa ni tusamu) kwoou nyamu sya kiw’u iikw’a
2. Kiw’u kikiko kutumiwa kuaa, kuvua na kuw’a nikitumaa mowau mamaundu manyaiika. Ala ni

ta:- kwituuu, kutavika, uvee, mowau ma kikonde na minyoo ya nda.

3. Yila kemikoo imwe syalika kiw’u na syalika mwii itiaa kunyi na kwikala mwiini na kuendeeaa na kumya sumu na kutuumisya ithyi vamwe na syana.

### **Nata tutonya kwika iulu wa kuko / kuthokoana kwa kiw’u?**

1. Ndukekye mavuti kana kiw’u kikiko kiw’uni kila kyautumia, na uthuthya angi kwika uu.
2. Vanda miti nguumoni sya mbusi na utee wa maiia. Miti nitetheeasya kusunga kiko na mavuti na kusiiia kukuwa kwa muthanga ni kiw’u.
3. Eka uvanda liiu vakuvi muno na usi nikana usiie ndawa/sumu ula wi mboleani ya fertilizer kulika usini.
4. Thuthya andu kwaka vaasa na mbusi kana na kiw’u
5. Ikiithya masilanga na ndovoi nisyatumiwa nesa liia kana ikia wiio kula kwi kiw’u kusiiia indo kuthokoany’a kiw’u
7. Nduketikile andu mavuiie vakuvi na vala mukuuta kiw’u
8. Ikiithya ethiwa kyoo nikikwiswa kyenzwa mainyiva matambya mbee wa 50 kuma vala ve kiw’u kya utumia. Ikiithya niwooneleeelya kiw’u ngaliko ya kuthi vala wisite yiima ya kiw’u kuma kyooni kuny’aia.
9. Ethiwa ukutani wa ndovoi kana silanga wina mwalika linda na mituki undu vatonyeka nauyiikiithya kisio kiu nikitheu.
10. Ethiwa ndwina muikiio na utheu wa kiw’u, kitheukye mbee wa kunywa kuaa tulinyu na tusamu tula tuetae mauwau.





## Moringa: vanda muti uyu wavata kwondu wa useo wa uima wa mwii na kwithiwa wi liu wavata?

**M**oringa ni muti wavata muno, yila wavandwa niunenganae muunyi na nuvikiiaa kwithiwa uyianisya mawendi maingi ma liu wa mwii. Ingi nutetheeasya kuthesya kiw'u kwa matu maw'u mooma na mathiwa. Ingi nimuiito. Kwa ngelekany'o amwe ma ala muti uyu wa Moringa moseo maw'o kwa mwii nita vamwe na kuete:-

1. Iron - Kuma mutini uyu ni kutatu kwi ula tukwataa kuma kwa spinach
2. Proteins - ila sumaa mutini uyu syianene na ila tukwa taa kuma matumbini (Eggs)
3. Vitamins A - Kundu kuna kwa undu tukwataa kuma kwa kalati (carrots)
4. Calcium - kundu kuna kwa undu tukwataa kuma yiiani (milk)
5. Vitamin c - Kundu muonza kwiundu tukwataa kuma masungwani (oranges)
6. Potassium - kundu kutatu kwa undu tukwataa kuma maiuni (bananas)

Moringa no uiite miimu, kuthesya kiw'u na kuithya ala mena nzaa.

Kukosa kiw'u kitheu kya uw'a ni kindu kimwe kithiitwe kiithiny'a nthi yoonthe. Ngii sya

moringa syithiie nitheasya kiw'u kikiko na nimuseo mbee kwi kutumia ndawa. Vilany'a isiko ili nene sya mbindi/ngii nthie sya Moringa kwa kiw'u kya lita 20 kwakya, nthuka kiw'u kii vandu va ndatika ta ili kwa mituki na ndatika ta ikumi ombola. Kiko na tulinyu vamwe na mutu uyu wa mbindi/ngii sya moringa nikuluila na indi nousunge kiw'u kyaku na kutumia kikitheu.

Moringa kwa ndawa nimuseo nundu nuiitaa kaingi uwau wa kikonde, kutheesya sukali, kuola wimbu, kuvosya miimu, kutheesya kwambatwa ni nthakame na kwailya mikiva ya mwii.

Moringa nuseuvasya ngu na vuu vamwe na uithyo wa indo.

Ni umwe kati wa miti ila itumikaa muno twasisya vaita waw'o. Aimi ma Tist niki kweteela? yila twavanda Moringa nthini wa Tist ni tukwataa mbesa twata nzeve itavisaa (Carbon credits) and notutanie mauseo angi ma muti uyu tondu twaelesya.

Eka kila umwe witu avande iiyuva muti umwe wa Moringa!

## Tetheesya ngwatanio yaku ikwate laini wa mwambiio wa miti itena ikuthu/uthui ungu.

**T**a nzia imwe kati ka mawendekethyo ala mendekaa nthini wa soko wa uta nzeve itavisaa kila ngwatanio yi ungu wa TIST niyailwe ithiwa na miti ivanditwe yina mwambiio utonya kwonanw'a na ukaikiithw'a. Miti ino niyaille ithiwa itonya kuatiiika ila ikwonany'a vala ivanditwe. Athuimi/athiani kuma nza nimokaa kumithiana na kuvitukithya, kusisya livoti na mavuku kuikiithya nisya w'o. Kuvitukithya ni tambya ya kuthiana na kuvitukithya niya vata muno nthini wa soko ya uta nzeve itavisaa. Nzia ino ikiithasya kana ala mekuua nzeve itavisaa na ala twaiiasya wia wa kumisuvia soko ino kana aimi ma TIST nimekwika undu vaile na wa w'o na kuvikiia walany'o na kulasi kya soko ino.

Umunthi kwina miti ivanditwe itena uthui/ ikuthu wungu isioni mbee wa 41,000 Kenya onakau ila mbitukithye ni 29,000.

Imwe nisya thianiwe, na syakunilwa na kuikiithya ni aimi ma TIST na miti. Ni itina wa kuikiithywa TIST itonya kuta nzeve itavisaa and kukwata mbesa kwondu wa aimi. Onakau no muvaka TIST yonany'e w'o, utheu wa mavuku, na

ukiikiku kwa livoti ila menasyo.

Kati wa miti 12,000 ila itiele 4,500 yotayali lakini 7,000 ndinamba kwithiwa tayali. Kati wa ino 7,000 itieke 1,068 ni ya vata wa ethiwa vakaumila ivuso.

Kwoou TIST nikukulya kila muimi akwate mbau Athiani/Athuimi yila mewiani woo (Quantifiers) uu ni vamwe na kumonya vala miti ino yambiie na lekoti syayo mituki undu vatonyeka. Ethywa miti yoothe ikeethiwa yonanitw'e mwambiio wayo tuivika October 2012, tukeeta aikiithya (validators) moke meke masavu mwaini wa December. Kwandaia umbany'a andu ma kikundi kyaku na uyony'a athiani/ athuimi (Quantifiers) vala miti iii na kwikala metiyali kusungia makuly'o ala matonya ukulw'a kwa w'o.

Musolo uyu wivaa nthi wionany'a isyitwa ya ngwatanio na miti yayo ila ikwenda kwonanw'a mwambiio wayo. Kwa ndaia neenany'ai nthini wa ngwatanio yenyu undu mutonya kwika kyumwani kii. Ingi neenany'ai na muthiani/muthuimi wenyu (quantifier) na muimatha kana niwikite undu vaile kana niwithiwa ayenda utethyo wenyu kumina wia wake. Utongoi wa kanzu wa TIST na kikundi kitu twi tayali kumutetheesya.



<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>	<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>
Ankamia	24	5,663	Kithoka	13	3,788
Barangu	12	2,684	Limauru	1	458
Burguret	3	1,218	Miathene	3	638
Buuri	1	1,885	Mikunduri	14	3,998
Chung'ari	20	3,908	Mithuri	6	869
Gachua	4	628	Mpuri	25	12,665
Gaturiri	19	5,146	Muhonia	7	589
Giaki	7	7,382	Mumbuni	1	402
Gikumene	16	4,216	Munyu	15	4,289
Githongo	70	21,090	Muragara	16	2,971
Gitimene	31	15,309	Murinya	21	5,689
Iriga	1	3,712	Mururune	24	3,617
Irindiro	12	2,842	Mweiga	2	839
Kaaga	19	3,321	Mwichiune	4	11,981
Kagaene	6	865	Mworoga	19	14,833
Kairuni	10	4,327	Naari	58	28,116
Kanjagi	4	1,613	Ngariama	5	2,411
Kanjoo	44	10,726	Nguruki	12	1,982
Kanyakine	16	5,837	Njorua	2	860
Karaba	6	1,752	Nkando	1	421
Katheri	31	12,368	Nthangathi	5	1,677
Kiamathaga	1	1,946	Ntugi	14	38,304
Kiamiogo	29	17,125	Ntumburi	2	6,268
Kiangua	8	2,803	Nyweri	3	1,960
Kianyaga	1	546	Ontilili	1	748
Kibirichia	38	18,693	Pondo	84	40,225
Kibui	49	9,798	Raichiri Podo	11	2,596
Kigucwa	1	1,571	Runyenye	4	2,468
Kiirua	23	11,931	Salama	2	1,693
Kinoro	10	2,988	Subuiga	23	6,649
Kiria	66	15,533	Thiira	21	4,553
Kirimaitume	12	2,455	Thuura	17	8,744
Kirindini	10	2,018	Urru	2	419
Kisima	14	7,208	Wiumiririe	1	605
Kithithina	11	1,540	Sum	1,068	430,972

# Mazingira Bora



# TIST

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

**Kipsigis Version**

An Environmental, Sustainable  
Development and Community Forestry  
Program.



**TIST Quantifiers: Help your Quantifiers to make your Cluster strong.**

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# Mitindoishék chepo groupishék che meng'echen: Kotuyet tap ke en Groupishék.

**a) Ne oret ne kimuche kepanganen pik en tuyoshek chepo groupit?**

Oret ne kararan ko kechop circle. Matonde mezoshek amun iku koimutyet. Matochop ngecherok che echen anan ko ngecherock alak tugul chebo pik che bo maana. En TIST, ketibotosi tukul kokerkeit. Kimuche ke toboten tugul en ng'echerok anan ketobote en ng'weny.

**b) Nen ne iyoe yon moche kochut pik che ite taman ak oeng' grouit?**

Angot komi pik che sire taman ak oeng' che moche kochut groupit kokararan inda kichope groupit ake. Imuch kebchei groupit

koyop oengu,anan konget membaek somok anan ko angwan chebo goupit neta kochop core nebo gropit ne kitou. Inoni ko kaikai kosir koto membayat ageng'e. Obwat oboishen zungganet ab kandoinatet kobore konam.

**c) NE oret ne omuche oboishe yon kiten inguvut nebo gropit,?**

Bchei gropit korop pairishék. Toreti kora drama. Saaishek alak ketononi, ak kekas komwa chi tugul ki ne ibwate agobo groupit .Obwat kora orib saaishek asimakoit tuyet. Yomeke kecheng' netoreti kondoindet en ripet 'ab saaishek ,Imuche igeshi nguvushek chepo groupit iger ile kakai kasit nekokitokchinke.

## TIST: Practice ne kararan yon kiyoe tuyoshek chebo wikit.

**Ole kiyoi to tuyet.**

Asi kerip sait komye, Groupit ne kiten koyoche kotinye schedule nebo tuyet. Inoniton koba maana angamun kere kole kotar agendas chebo maana koron .Kora koba maan en TIST angamun, kikekonu ke en boishet nebo minet 'ab ketik ,kemin ak kerip ketik chebo carbon markets. Yoche kora kenai membaekchok en groupishék che meng'echen komye, angamun chitukul kotinye jukumu en groupit ak en TIST kotugul.

Bo maana kora koyai groupishék tuyoshek kila mara , sana sana en kila wikit anan ko oeng' en wikishek oeng'. Inoniton kokochin membaek koneteke en grouitit ak kotech groupit ko mugul ak konai tuguj che imbya.

En tuyoshek chuton ,k obo maana keker tuguk che bo maana . Groupishék che chang' en TIST kokoker kole boishe mtindo ne isubu en tuyoshek .

**Stepit neta; Kokotiet ak Tachet 'ab membaek che imbya(5 - 15 minutes):**

Hakikishan ile kokas chitugul komi komye. Ingonwakit lakini bokokchin chitugul komwa ge.

**Stepit nebo oeng;. Saet ne kiyoten tuyet (2 minutes):**

Saet yon kinome tuyet kotoreti groupit koik kibageng'e.

**Stepit nebo aomok; Tyenwokik (5 minutes):**

Imuche koik tyenwokik che kisire membaek,anan ko tyenwokik che ituitos pik kou chepo kanisa.

**Stepit nebo angwan; kiyonchindos sait ak boishonik(5 minutes):**

Ororu kondoindet boishonik che kiyoe en groupit ak koyon chin membaek koyai kasishek choton. Kasarta neki boishen en kasit ake tugul koyoche kiyonchin asi kong'et co-leader kotoret korip saishek en tuyet.

**Stepit nebo mut. Kasishek ab gropit (1 hour):**

Yoche kokidiscussen boishonik en tuyet ne kikobata. Boishonik komuch koik tuguk che kikitoret chitugul groupit groupit anan ko TIST, training en tuguk che bo maana, ak ki ake tugul ne imuch kotoret groupit kota kwo taa kosir ole mi.

**Stepit nebo lo. Tchet 'ab ke (5 minutes):**

Kila membayat koyoi teset en TIST . En teset komuche kobor chei kit ne talenta en kandoindet.

**Stepit nebo tisab. Saet ne kikeran tuyet (2 minutes):**





# Practice che koron en Groupishek che meng'ech: Steps chebo boishonik ak panganet.

**G**ropishek en TIST koyoe kasishek che hchang che practical: minet'ab ketik ak ripetnywai, ak koimproven temishet. Yon miten kasit newo ne keyoe, ko kararan kechob **action steps**. Membayat ake tugul komwoi ki neyochin groupit wiki noton. Kipendi kinetok ak groupishek kwok o;e kichopto action planing. Kaikai omdech in membaek alak chebo groupishek chemeng'echen yon omi tuyet.

Action step ko kit ne:

- Mwoe direct.
- Tokunot.
- Pimonoshek.
- Tinye kanamet ak mwisho.
- Yoche ko itchinoshok panganet!

Yon kotuyo kora gropitngung', ichomchi minutishek tamain ko aror chitugul agobo action plan nenyinet. Chi ake tugul en harak:

- (1) **Kit ne kiu action plan nenywan .**
- (2) **komwa tuguk che kiyai.**
- (3) **Komwa action plan che tinye en wikit ne isupu.**

Ango ko kibor chito en action plan nenyinet koboiboyenchin groupit.

Angot koimuch kotimisan membayat action plan nenyinet, kokochin muguleldo groupit inendet. Yon kakomuch pik kopchei kabutoshechwaik ak siroshekchwai koibu kibageng'e en groupit. Igil membaek chebo groupishek che meng'echen koker ole tot kochopto action steps chechwaget. Yoche ko pimonoksek, itchinoksek alak tugul en action steps ichuton. Yon kokotar chi tugul, obchei chuton akityo oboiboyenchi chuton.

## Action Steps chebo Action Planning

Kimuche kora keboishen oret noton yon kiyoe planning. Ne isubu ko koborunet. yon yoe groupit neng'ung pang' Janet iker ile pangonuti choton kou ni:

**Chetotoyotin** (Groupishek che meng'ech en TIST ko mine ketik 1000 en sipitalishek chebo karibu kotomo koit November 30)

**Pimanoksei** (Ata? – Ketik 1000, che kemine) **Itchinoksei**, (Groupishek che meng'ech komuche komin ketik 1000 en 5wks – 100 ketik en Tuesday ak Thursday, ketik 10, chito age tugul kila petut)

**Tinye kanamet ak mwisho** (Oct. 15 agoi Nov. 30)

## Togu.

SMARTO!

Inoni ko kit ne iborun ako testen action plan ne karo chob:

- 1) **Ne** – (Minet'ab ketik 1000)
- 2) **Ng'o** – (TIST membaek 'ab groupishek che meng'echen)
- 3) **ou'** – (Oct 15 – Nov 30)
- 4) **Ano** – (En sipitali)
- 5) **namna gani** – (kituitosi kil Tuesday ak Thursday jioni yon kokobata asita nepele ketik, akityo kemin ketik)
- 6) **Amune** – (Kikararanit compound nepo sipitali ak kechopchi uronok pik che mionidos ak pik chenyokokotisie)

Ingunon jaribunanan oyai action planning en tuyet ne isubu nebo groupit.

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

**T**egat '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 saet 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'elepwozik 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 echek!

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'

## Wechet 'ab bek: Ene asikobo maana akokimuche keyai ne?

**Y**on kae pik , bek che mokinde kerichek anan ko chemakiyo, komuch komyonso. Yomeke kinet pik en cluster ak kokwotinkwachok akopo yet 'ab bek che kokinde kerichek asi kebos mianwokik che ireu bek.

### **Wechet 'ab bek koibu tuguk che chang':**

1. Yon mokinde kerichek waste chebo factoriishek.
2. Yon kowech bek pik en kibu olemi ,oinoshek ak ny'anchoshek.
3. Koreitoet 'ab bek ne ya, neyoe koba waste ole bunu bek.tuguk cheu mbolea ak chemicals alak chemi imbarenikchok, komuch kochut oinoshek.
4. Mwetet 'ab ingoroik in ole inomen oinoshek.
5. Yaaet 'ab bek ak haja kubwa en ole negit ak oinoshek.
6. Slabit ne kikobetes en borehole.
7. Rorunet 'ab toilets ak latrines en rural areas.imuch komwet robta waste chebo pik koba oinet.
8. Tyongik cheu tug ache ogete en ole negit ak oinoshek.

### **Wechet 'ab bek koreu tuguk che chang':**

1. Imuch kobar tyongik anan ko bpik yon mi chemicals.anan koib poisoning yon kochut fertilizes oinet neyoe kochanga plants oinoshek.Yon komiyo plants ichuton kobose oxygen chemiten bek, neyoi komeyo tyokik en bek.

2. Bek chewechotin yon kakiboishen en chobet ab omitwokik ,mwetet 'ab ingoroik, ak yon kakiye kotese mionwokik en pik. Mianwokik che cholera , skin disease, diarrhea ak intestinal worms.
3. Alak en chemicals chemiten bechuton kotesoksei en porwekchok, neyoe kopoisonech , echek ak lokok chok.

### **Ne nekimuche keyai akobo weget 'ab bek?**

1. Matkewirchi saratik anan kinde waste alaktugul bek.
2. Kemin ketik en tobonwokik 'ab oinoshek ak lakes.Tikitik 'ab ketik kochukchukoni bek ak koter ng'ung'unyek ama ba bek.
3. Matkeminse en olenekit ak oinoshek , ak lakes asi koter komaba ferterlizes bek.
4. Keamdechik pik kotechzo en ole lo en oinoshek.
5. Keker kele koribok boreholes ak tabaita.
6. Kinde ng'otwet en tobonwokik 'ab oinoshek ak boreholes.
7. Matkichomndechhi pik komwetis en ole nekit ak oinet.
8. Keker kele latrines komi en ole sire 50M kongeten oinet .kechop drainage ne yamat ak ketesta channel.
9. Kerepairen cracks chemiten slabishek 'ab boreholes .
10. Yoche kiyo bek koron asi keyee, anan kinde kerichek si kobar tyong'ik che ireu mianwokik.



# Moringa: Min keti bo maana en nutrition ak Health.

By Zakayo Kayuri

**M**oringa ko ketit nebo maanan. Yon kakemin en compound negunget koibu urwet nekararn ak kokoni nutrition newo. Kora kotilile bek koboishen sokek che kakaiyamsi. Tinye kora borate nebo kerichek, economical ak nutritional value. Sokek 'ab moringa kokonu manfaa chbo nutrition :

1. Nyilen somok iron chebo spinach.
2. Proteins cheten chebo maayat.
3. Nyilen angwan vit A, chebo carrot.
4. Nyilen angwan calcium chemi cheko .
5. Nyilen tisab Vit C chimeten orange.
6. Nyilen angwan potassium chemiten en indizinik.

Moringa ckomuche konya mianwokik, koun bek ak kokon omitwodik.

Ndenderek 'ab Moringa che kakichil komuche kotilil bek kobose rabinik okot kosir okot chemicals che kiibu en bitonin. Mixen kijikok oeng chebo ndenderek che kakechil ak bek 20 litres . isacsac bek chuton . Simto ak bacteria, kong'etu en ngweny en teret yon kakechukchukan.

Moringa kimuche kinyaen skin diseases , bost 'ab blood sugar, kanyaet 'ab gastric ulcers, boset 'ab blood pressure ak kitulisan nervous system.

Moringa kimuche kiboishen koik kwenik , organic fertilizer ak omitwoki 'ab livestock.

Agenge en ketik chebo maana kabisa,. Temik 'ab TIST enen asi tekany? Yon kakemin moringa en TIST, kesiche credits chebo carbon, ak manufaa chu kakemwa.

Ingomin okot agenge chitugul en ehek!

# Toret cluter nengung konyor Groves Baselined.

**S**ectionit ni korefereni agobo baseline mo tracks. Misen tracks che chang' kora. Miten 41,000 groves en KE, 29,000 chemi en PDs, 4,500 kochopotin kobo PD nerube ak 7,000 chetomo kochobok.

1068 groves ko "priority" groves (Kichakuani grooves en ketik che sire 400, ak ketesy grooves chemi grooves negerge. Inoniton kokonech 50% chebo ketik che miseni. Kikiyai inoniton angamun en speed nebune gtteamit 'ab Kenya kokikikker kele matot konyit 7000 che mogotin. che ng'etunotin ko matun ko togunotin en VCS).

Ko maget 'ab carbon market, groupishek tugul chemiten en TIST koyoche kotinye groves ikchwak baselined ak ke validaten. Groves ichoton koyoche kotinye tracks che choton ch iboru ole kikiminchi ketik . External auditors cheyoe validation , ichek che kere kole boiman ng'alek choton . Validation kobo maana , ne machat en carbon business. Toreti koyanak en olik ab carbon credit ak carbon market regulators kole kasit ne yoe temik 'ab TIST ko bo iman, ak koitchin markets standards.

Raini , komiten 41,000 groves en Kenya, 29,000 groves kokikivalidaten.

Ala kokikeverifien. Verification, koconfirmeni

carbon sequestered ketik 'ab temik 'ab TIST. Yon kakeyochi verification ole imuche TIST koalda carbon credits aka k kisich income chebo temik . Lakini , TIST koyoche kobor kayanet , togunet ak konunet 'ab ke en data chkakecorrectan.

En 12,000 groves che kokonget , 4,500 groves ko chobotin akini 7,000 groves kotomo kochobok . En 7,000 groves ichoton , 1,068 groves ko "priority" groves.

TIST en ingunon , kosome membaek tguL kotoret Quantifiers en Quantification che nomege ak baselines ak tracks chebo groves ichuton en haraka . Angot kebaselinen grooves tugul kotomo kobek arawaniton (October, 2012), kimuche kesom Validators kobwa koyochoi audit en arawa non isubu anan ko December. Kaikai opangan' kotuyo cluster neng'ungeet ak Quantifiers en olemi grovesak kochopok kowol tebutik.

Tablit ne isubu koboru cluster ak groves tchemokchin ke baseline en haraka. Kaikai ongalalen en cluster ole kimuche keshughulikianda komabek wiki ni, anan ko nanyone. Kora onyuru quantifier akotepen angot kokoyai inendet quantification. TIST Leadership Council ak US Team ko tayari kotoretech.



<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>	<b>Cluster</b>	<b>No. of Groves</b>	<b>No. of Trees</b>
Ankamia	24	5,663	Kithoka	13	3,788
Barangu	12	2,684	Limauru	1	458
Burguret	3	1,218	Miathene	3	638
Buuri	1	1,885	Mikunduri	14	3,998
Chung'ari	20	3,908	Mithuri	6	869
Gachua	4	628	Mpuri	25	12,665
Gaturiri	19	5,146	Muhonia	7	589
Giaki	7	7,382	Mumbuni	1	402
Gikumene	16	4,216	Munyu	15	4,289
Githongo	70	21,090	Muragara	16	2,971
Gitimene	31	15,309	Murinya	21	5,689
Iriga	1	3,712	Mururune	24	3,617
Irindiro	12	2,842	Mweiga	2	839
Kaaga	19	3,321	Mwichiune	4	11,981
Kagaene	6	865	Mworoga	19	14,833
Kairuni	10	4,327	Naari	58	28,116
Kanjagi	4	1,613	Ngariama	5	2,411
Kanjoo	44	10,726	Nguruki	12	1,982
Kanyakine	16	5,837	Njorua	2	860
Karaba	6	1,752	Nkando	1	421
Katheri	31	12,368	Nthangathi	5	1,677
Kiamathaga	1	1,946	Ntugi	14	38,304
Kiamiogo	29	17,125	Ntumburi	2	6,268
Kiangua	8	2,803	Nyweri	3	1,960
Kianyaga	1	546	Ontilili	1	748
Kibirichia	38	18,693	Pondo	84	40,225
Kibui	49	9,798	Raichiri Podo	11	2,596
Kigucwa	1	1,571	Runyenye	4	2,468
Kiirua	23	11,931	Salama	2	1,693
Kinoro	10	2,988	Subuiga	23	6,649
Kiria	66	15,533	Thiira	21	4,553
Kirimaitume	12	2,455	Thuura	17	8,744
Kirindini	10	2,018	Urru	2	419
Kisima	14	7,208	Wiumiririe	1	605
Kithithina	11	1,540	Sum	1,068	430,972