



THINK NAMIBIA
Sustainable Forest
Management

SIMBAPIRA SOUSILI KUHAMENA KO:

Unandimakwatakano

Sitambo sosimbapira esi yipo si gave nombudi nomapukururo kuhamena Unandimakwatakano wiza, nombuto noyimuna, ntani nomauwa gamo moNamibia.

ETWAROMO

Unandima moNamibia, awo kuurugana pampo, ndi kukwama ngendeseso zimwe tupu mokukuna rudi rumwe tupu nombuto mepya. Nye yangesi kuninkisa vanafarama va hepe, unene po pomalisintompepo.

Unandimakwatakano ou una runduruka mokulima mbuto zimwe tupu, u ze melipakerero lyoyitji, nombuto kumwe noyimuna. Unandimakwatakano wangesi wa tompoka momaruha gomanzi monauzuni, rambangako ruha rw'Afrika vana kutumbura asi Sub- Sahara. Pwaneina ngesi, Mbanga zoUzuni (World Bank) kuna kungungunikira asi sivaro sovantu wokusika koBiliyuna kuna kuruganesa elikwamo lyounandimakwatakano ou.

YINKE YINA KUTANTA UNANDIMAKWATAKANO (AGROFORESTRY)?

Efwatururo

Unandimakwatakano kutanta asi: unandima wonombuto, yimuna kumwe noyitji. Yangesi kukuna ndi kutapeka yitji kumwe nonombuto yipo yitji yi gave mauwa gomanzi konombuto, ano omu nombuto nadi vhura kupita noudigu womalisintompepo, ntani nombuto yipo di vhure nokukura nawa mevhu vana wapayike pwa hana sitangalimba momaruveze gelisintompepo. Ntani mokuvatera mokukuna mbuto zorudi rumwe tupu mevango yikando yokuruguruka nkenye mumvho. Yitji pwayene ayo kugava mauwa gomulyo ngwendi: enyango, yipirangi nayimwe ngoso. Ngoyitji yina kara nomulyo mokuyiruganesa kutunda Muzogo dogoro Mbindakano, mokutupopera konohonga dezuya.

Malisigo gomanene pokatji kounandimakwatakano nounafarama umwe, momaruha gane:

- **Edirokuwaperu:** Elipakerero lyounadima kumwe nowiza, kwa yi tulisa po nye kapiso yohararasi.
- **Evhongakano:** Nombuto, yitji kumwe noyimuna kuyitura mumwe. Eyi kuvatera evhu likare lina pama ntadi muzangu gu gwanene momarunone nagenye gokulisiga-siga.
- **Egwanekedeso:** Unandimakwatakano ou kwa kara nomauwa gopokuyirugana; yonombuto, yimuna kumwe noyitji. Sihonena yitji kugava yikulya koyikorama, ntani yikorama kukwafa yinamwenyogona yi paruke.
- **Edameko:** Unandimakwatakano ou, ngendeseso zakuza komeho nokuvhukisa muzangu. Edamekogendeseso eli lyoyiviyauka ngwendi: kuherera, kudipaga uli (yimbumburu), kutetako nomutayi dokupira kuwaperu koyimeno, kudura mo yimeno yimwe yipo asi ya kara muhoke, ntani kupaka evhu mboresa yipo asi elikwamo lyounandimakwatakano litompoke.

MARUHA GOUNANDIMAKWATAKANO

Unandima woyitji nonombuto

Ruha oru nombuto kumena monda (medi) zoyitji kulivhongakana mepya limwe. Sinzi sonombuto edi kukura pankedi zokulivhongakana ezi va tulisa po, yipo asi yi livatere kumwe nokulikwatakana ngamoomu ya hwa kukura pansitwe.

Unandima woyitji noyimuna

Ngendeseso zeruganeno ndi zeturo kumwe yitji noyimuna. Yitji ndi yihwa yiyo ntetinsume (muhowo) mokukura yipo yi gave nondya koyimuna, yi gave enyango, yipirangi, makara kumwe nokupaka evhu mboresa. Yimuna ayo kuyiwekera nositambo sokugwana ko: Nyama, mauta, usi, nomasini. Elikwamo eli kuvhura kuretesa po nondya doyimuna moNamibia; yoyinzi nayi fwaturaka kouhura wosimbapira esi.

Nsene egano lyopomuhowo asi lyokukuna nondya doyimuna, twa hepa nye kuzangura yirwenge nowayi woukukutu, mokuyitura kumwe monohektera/masunda dononzi dina gwanene pwanamwetu. Eyi kusesupika mpumbwe zoyiruganeso ngwendi nomahina dononene ngoso yipo asi nondya doyimuna va di rugane.

Unandima woyitji, yimuna nonombuto

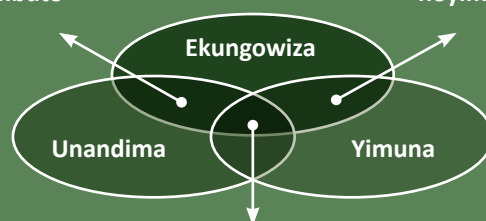
Elikwamo eli alyo kukwatakana maruha nagenye omu muna kara nombuto, yitji, ntani yimuna. Unandima welikwamo eli hambara damu kwa lifana kumwe nounandima woyitji noyitji, omu ayi vhuru kukwafa yimeno yi vhure kupita moudigu welisintompepo, kumwe nokukandana vanamukunda koukaro wina womalisintompepo. Elikwamo eli lyounandimakwatakano ou lina pe ukonentu vantu wokusika komamiliyuna 320 womoAfrika va kare varugani nomutji kumwe noyitji yokurugana maholi.

Yikuninogona yomomambo

Yikunino yomomambo yiyo yimwe ayi vhuru kulikida unandimakwatakano, omu amu pitire kuzangura yitji, nombuto ntani epakerombili yimuna membo. Elikwamo lyangesi alyo kulirugana yipo va zangure mo nondya dokureresa mapata gawo. Mapata kukambadara mokupakera sinka yitji noyihwa, kumwe nonombuto di kure komurokwa gomvhura ntani kuweka yimuna mevango. Unene wevango noruha rosikunino yiyo yina kugava elisigo kumwe nounandima woyitji, yimuna nonombuto. Sinzi sovanafarama novanamukunda kwa kara noudivi wopampo mokulima, eyi yiyo yimwe ayi ninkisa yitji notutjigona yi kare netokoro lyopwayene mokuparuka.

Unandima woyitji
nonombuto

Unandima woyitji
noyimuna



Unandima woyitji, yimuna nonombuto

MAUWA GOUNANDIMAKWATAKANO

Vakonakoni awo kwa divisa asi unandimakwatakano mulyo, ntani muzangu kukara gomuwa mokuguruganesa sivhulise wiza tupu, ndi unandima wokurugurura kukuna mbuto zimwe mepya lyoge.

Mauwa goyikweparu/yiwizamo

- Yiwizamo yemepata:** Vanafarama kugwana mo yiwizamo mokurandesa eyi vana zangura.
- Muteku goyimuna:** Unandimakwatakano kuninkisa vanafarama va gwane nondya doyimuna paureru omu yimuna tayi vhuru kukara nomarutu gomakanguke nokugava muzangu gomuwa gokuzeruka.
- Yiwizamo gwedereroko:** Vanamukunda kugwana ko yiwizamo gwederero ko yokutunda koyihongagura, enyango, makara, ntani usi.

Mauwa gonomukunda

- Eligwederero lyonondya:** Nondya dokulisiga-siga ngamoomu yikwahidi nenyango tayi vhuka.
- Ewapukururo ukanguki:** Yitji yoyinzi kugava enyango lyovitamine, kumwe nomagadi, enyango lyomarudi ngwendi: Yikuvava (Yigwava), Mawongo, Maguni gomowiza.
- Ewapukururo pautungi:** Muzangu gokuzeruka kuninkisa vanamukunda va randese yipo va wapukurure mambo gawo.
- Ewapukururo kuhamena malisintompepo:** Kuwapeka ukaro wevhu yimo noyinamwenyo yemevhu moNamibia moruveze oru romalisintompepo.

Mauwa gonsitwe

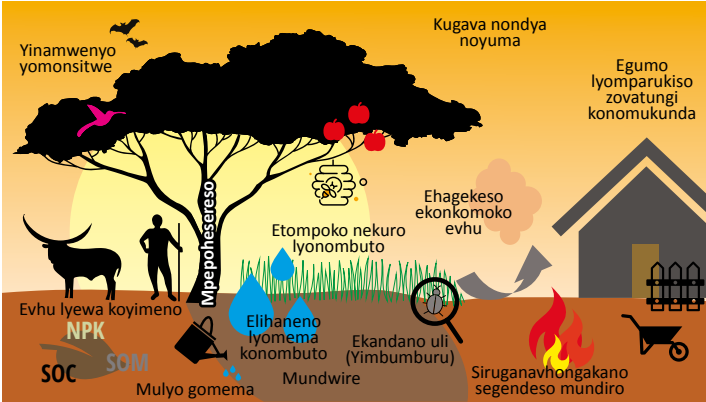
- Ewapukuro evhu:** Kupaka evhu likare nononkondo dokukara nomema, nokukwama maruha gevhu.
- Ekandano kukonkomoka evhu:** Nondandani doytiji noyimeno yikwawo kukondera mema, nokupaka evhu lilikwate yipo asi lya ha pirukira komema gokupupa.
- Eligwederero mpepo (Carbon) zoyitji:** Yakara nomulyo gomunene mokugwederera mpepo zoyitji, mokulivatera moudigu womalisintompepo nokusiga evango lyounandima ligave muzangu gokuzira mo.

Simbangutafura sina kukwama ko tasi likida mauwa goUnandimakwatakano:

Maruha goUnandimakwatakano				
MAUWA	Y-N	Y-Y	U-S-N	YM
Kugava mauhwi gomanzi ngamoomu ngwendi nondya, yikwahidi, enyango, nondya doyimuna, makara,yipirangi, nomborsa.	X	X	X	X
Kuwapeka nokupakesa nombuto noyimuna muzangu gwayo gu zeruke yipo asi yiwizamo yomunafarama yi mu pe mo ndando zokuzeruka.	X	X	X	
Kupakesa yimuna yi kare yikangure morwa nondya dokuwapera yina kugwana.	X	X	X	X
Elikwamo eli ewa mokuwapeka evhu likare mboresa, sivhulise kuruganesa ruhoho rokuranda.	X		X	X
Kuwapeka maruhakwatakano gofarama mokusesupika ekonkomoko evhu, ntani nezumbaneso mulyo gevhu.	X	X	X	X
Kuwapukurura maukarompepo ntani kugwederera evhu likare nonkondo koyimeno.	X	X	X	X
Kusesupika udigu komavango gekungowiza nomarunone gowiza, mokuyitura yi kare nondya doyimuna, makara noyipirangi.	X	X	X	
Kuninka evango limwe va kune mo rudi rombuto zimwe nye alyo simpe kuna kugava nondya doyimuna.		X		
Kukandana mpepo kumwe nokugava mundwire koyimuna yipo ya ha fa.		X		X

* U-YN: Unandima woyitji nonombuto; U-YY: Unandima woyitji noyimuna; U-S-N: Unandima woyitji, yimuna nombuto; YM: Sikuninogona semembo

Sitafurafaneko 1: Mauwa gokulisiga-siga goUnandimakwatakano



Ruhafano 2: Unandimakwatakano: Nkediwapero nevhuliko komalisintompepo koMbindakano zAfrika (Sheppard, 2020)

NGAPI NO TULISA PO UNANDIMAKWATAKANO?

Wa hepa kudimburura egano lyawapere

Nsene tu tara moruhasirongo Omusati, muzangu gwamo gonombuto kwa sesupa, morwa usesu womvhura eyi ya ninkisa yitare noyipirangi yi kare mulyo. Makura, pwangesi sirongo saNamibia yiyo sa kwatesa ko unandima wounafaramagona yipo vantu va zangure va rere mapata gawo.

Siturwapo soUnandimakwatakano tasi ka sesupika mpumbwe zonondya, ntani muzangu tagu ka ligwederera. Nontambo ntatu no vhura kudiworoka pokurugana matokoro:

- Mulyo gevhu;** Wa hepa kukoneka nawa-nawa asi mbuto ndi sitji musinke nasi vhura kumena mevhu lina omu muna kara nare yimeno.
- Yininke yomulyo neyi yompumbwe;** Sihonena, nsene ono pumbwa zonondya doyimuna wa hepa kurugana makonakono gopausimbu yipo o yi kune.
- Ekaropo lyomarunone;** Omu muna kwatere evhu, varugani, siruwo ntani silingaruganeso.

Kutambura Unadimakwatakano

Pwa hepa etarururo, udivi, neyombereso lyoyimeno yokuvhura ndi ya kara hepero kuparuka, melikwamo lyoUnandima ou. Sihonena sitji soUhoru; sitji esi siwa, aso kupaka mboresa kevhu ntani kuwapeka evhu likare nawa.

Moyihorokwa yimwe, vanafarama vamwe nare va tura mo mahundi goUnandimakwatakano, nye kapi vana kudimburura suma songandi. Ngosihonena unafarama woyimuna mevango/ mepya lya kara maUwongo. Yangesi wa hepa tupu kuwapukurura elikwamo, sivhulise kuwapukurura egendeseso nalinnye lyoUnandima. Unandima wopampo awo ngava u tambura paureru, nampili ngomu ngayi digopa nokuyirugana. Vanafarama womonomukunda nawo konyara kuna hara kuwapukurura elikwamo lya kara po ngesi sivhulise kureta po elikwamo lya hana divilisa ngava dire kulikwata egano.

Mokutambura elikwamo lyoUnandima eli, alyo wa hepa kuhorowora nokurongilikida maruha gatatu ga manampata. Ago yigo aga:

- Yitji nayimwe hena:** Horowora sitji ndi yitjigona naye vhura kukupa enyango, nondya doyimuna, yipirangi, mundwire nayimwe ngoso. Sihonena sitji soUguni omu no vhura kugwanako maguni, ano mahako gaso to pe yimuna yi lye.
- Nombuto ndi wayi:** Wa hepa kuhorowora mbuto ndi wayi wina nau vhura kumena mevhu lina ndi kuvhura si paruke momundwire gositji. Ayo hena ya hepa kugava ko nondya koyimuna ntani nokukara mulyo momatjingiso. Sihonena poruveze rorukukutu ya hepa kuyizangura mokuwoko kokasupi momakwedi gavalu (2) ndi gatatu (3) kusikura ukaro womalisintompepo moNamibia.
- Yikorama:** Nsene eweko yimuna nalyo tali kara moUnandimakwatakano wa hepa kudimburura asi mulyo gwayo momatjingiso ngapi kukwama kweyi vana hara, (sihonena., nyama ndi mauta) mokuyitura kumwe tupu melikwamo.

Etuliso po Unandimakwatakano

Kuwapeka evango kusikura maruha gevhu omu ga kara ntani ngendeseso zoUnandimakwatakano. Ayo kuvhura kuyiyereka (sihonena kusima tukero tokukunina, kuherera) yimo noku hamesera mo ezeroso evango, emango ndarate, kutekera, nokutura evhu mboresa.



Efano 1: Evangotapekero yitji

Nontanga doytiji kuvhura kudiranda komavango gokutengwira yitji monomukunda ndi kovanafarama, kusikura nsene hepero nompumbwe zayo. Mbuto ezi simpe kuvhura o zi gwane koyitji yene yomowiza ngoso. Sitji ngwendi Usimba nositji soUguni ureru kugwana mbuto zayo kwayene.

Yimeno yina ya kara asi yapama ntani kapi ya kara noudigu norukukutu yiyo yoyiwa kutapeka. Vanafarama vamwe va kara nomafwaruro ndi udivi wongandi asi mbuto zi pi zokuvhura kuruganesa.

Yimuna nayo kuyitwara komarandesero ndi matjingiso, nye yimuna yomarutu goukanguki yiyo nava ka randesa, ntani ya hepa kuyipaka momavango gomawa gomundwire kumwe nokuyipa nondya yi lye yipo asi marutu ga ha tengura si (ruswake).



Efano 2: Sitji soMaguni (Eyi va pulisra: Fruitpedia)

Egendeso IyoUnandimakwatakano

Wa hepa kukara nosinka sokunomena asi Unandimakwatakano tau horoka moomu yafira;

Maruha no nomena asi elikwamo eli tali gendi:

- Kulya koyimuna; ngendeseso ezi kuninkisa yikurerupe mokupopera yitjigona koyimuna yipo asi va ha yi lyata, ndi va yi lye ayo simpe yinona.
- Mboresa zevhu; yihako yokukukumuka kumwe noyimutayigona poruveze rokuwapeka sitji ayo kugwira pevhu yipo yi ka pake po mboresa pevhu lina.
- Kutekera yimeno; ngamoomu nombuto noytiji ya kara pevango lyokupira murokwa.
- Kupena/kugusa mo yimeno yimwe; wa hepa kugusa mo yimeno yimwe yipo asi ya kara muhoke; yi ligaunuke yipo yi kure kunenepa.
- Kuteturura nomutayi; eyi kuvatera nombuto di kure ntani yipo asi yitji yi kare nonomutayi dononene.
- Yitji noytjigona ya hepa kuyitetera pedi yipo yi wape kuhoka nokukura.
- Kuzangura; muzangu gwa hepa kugupungura nawa mevango lyewa yipo gwa ha zonauka koyinke peke.

EGANO LYANAMIBIA

Kusikura makonakono, yitji yimwe va yi nongonona asi ayo kuvhura yi paruke moukaro woUnandimakwatakano. Yitji ngwendi: Maugongo, Uguva, Muzwe, Mupapama, Munkudi, Muparara, ntani Simpeke.

Muteru-teru nonoMusu ayo yitji yomulyo sili, ayo kwa kara noyiyimwa ayi vhuru kulya yimuna. Ako kugwana ko nomutjeketera eyi ayi li yimuna. Ano Muhengeva sitji simwe asi kuru usimbu esi sa kara noyiyimwa yovitamine koyimuna. Ugongo noytiji yimwe hena ngoso ayo yimwe ayi gava enyango lyetovara eli ali tundu magadi gomawa.

Yitji yina ayi kuru kuliwora ayo hena kاپisi yinene, yawapera momavango gonomusitu yipo yi vhure kuparuka mo naw, yi dire kugwana uli wokuvhurumukira.

Muhusi noMbunze yitjigona eyi ya kara nomboresa zongwa konombuto, sihonena yilya.



Efano 3: Uguva (Eyi va pulisra: C. Mannheimer)

EHAGESO

Sivaro sovanamvharerwa vaNamibia kurugana unafaramagona womonomukunda omu va huguvara komema gomvhura naga va pungura komavangopungwiro gomema.

Moku ka kwama ndi kurugana unandimakwatakano mosirongo (Namibia) ngayi vatera vanafaramagona vena va gwane mauwa goyiwizamo paparu, ntani kuwapeka nsitwe yipo va gwane mo muzangu gokuzeruka. Ngayi pa udivi eruganeso mbuto, sivhulise unandima wokukuna mbuto zimwe tupu ndi kufira sinka wiza tupu wangoso. Vanafarama vena tava kara nendindiro nehuguvaro lyokugwana mo muzangu gomunzi, momapya gawo. Unandimakwatakano ou, kuna kara upungwiro weparu mosiruwo sosire, ngayi kwafa mokureta po malitjindjo paparu moNamibia kovanafaramagona ntani novanamukunda poyiruwo yopasupi.

MAFWATURONKANGO

Mbatero konombuto [Crop resilience]:

Kugava mbatero konombuto ndi yimeno, ngwendi nondya ngoso, nsene asi udigu worukukutu una kara po ndi murokwa guna sesupa.

Ruhansitwe [Ecosystem]:

Evango lyoutungi omu mwa kara yinamwenyo yokulisiga-siga paparu.

Yikulya [Forage]:

Nondya doyimuna ngwendi wayi, wokulya nonkambe nonon-gombe.

Kulihamesera [Intervention]:

Kulihamesera mosirugana oso sina kuhoroka ndi sina kara mondika.

Ukarompepogona [Micro-climate]:

Ukarompepo pomavango gomanunu, u lisige noukarompepo wa hwa kukara kevango lina.

Unandimawombuto zimwe [Monoculture]:

Kulima nokuzangura mbuto zimwe tupu zokulivafana mepya limwe, nkenye mumvho.

Ewapaiko maremo [Precipitation]:

Murokwa gwina agu gu, nsene maremo gomema gana liwapaika.

Ekonkomoko evhu [Soil erosion]:

Kutanta asi evhu lina ali mene yimeno tali konkomoka komema gononkondo nompepo.

Mafanowapeko gevango [Topography]:

Kutarurura nokuwapeka yikara yonsitwe noyiturwa pevango.

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