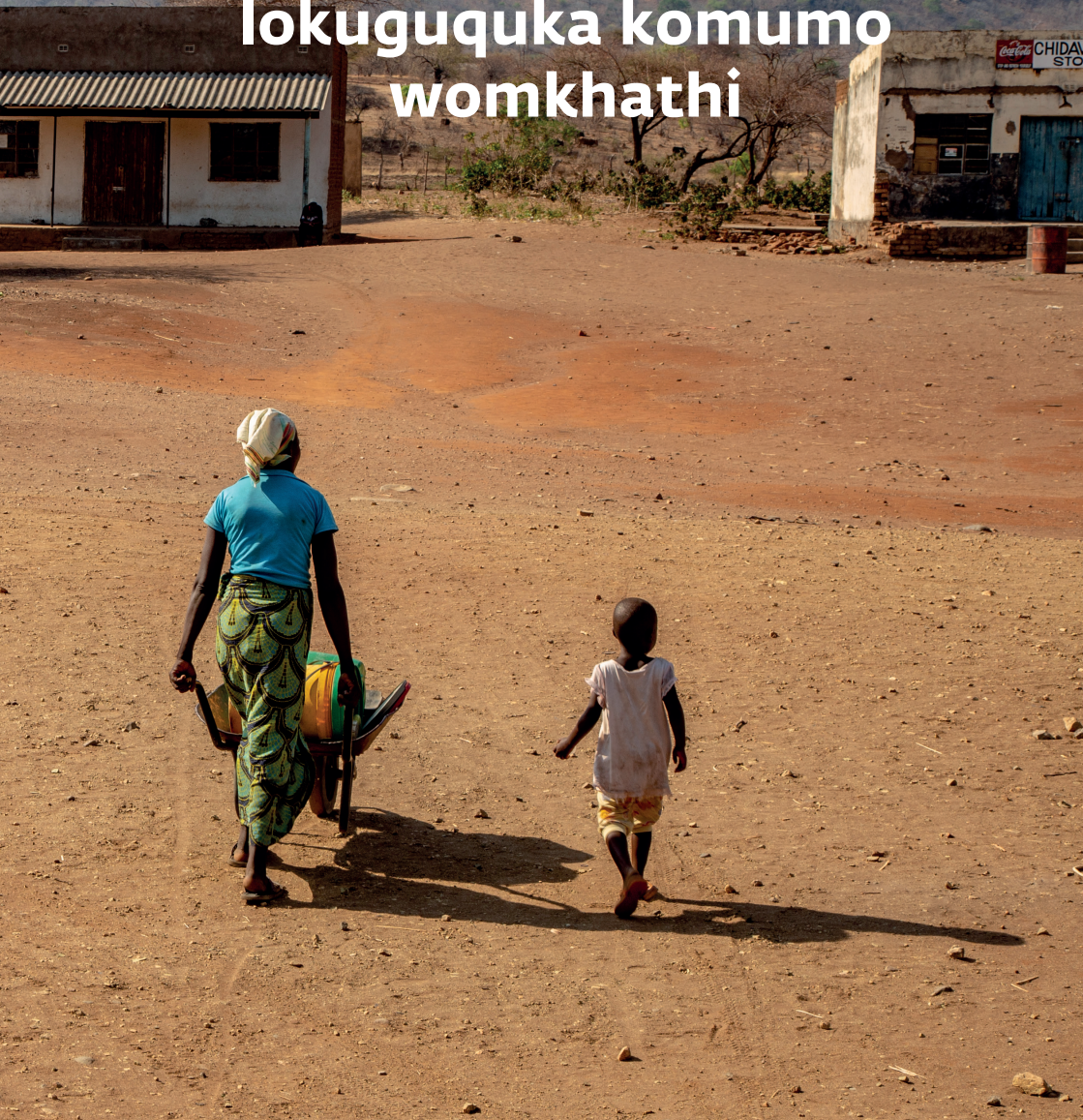


Imibuzo evame ukubuzwa kweZimbabwe mayelana lokuguquka komumo womkhathi



Isibongo

Sithanda ukubonga labo abazipha ithuba lokuthi bathumele imibuzo yabo emayelana lokugquka komumo womkhathi, ikakhulu: iqembu labalimi ele-*Humana People to People*, i-*Zimbabwe Climate Action group*, Udokotela *Leonard Unganai* (abalimi be-Buhera lase-Chimanimani), iqembu le-facebook le-*Zimbabwe Small Scale farmers* kanye le- *Climate Change Working Group*. Sithanda ukubonga njalo i-COMALISA ngokukhangelisisa ugwalo lolu iluhluzo. Sibonga uTendai Bodzo ngokuqoqa ukuhlola ukwamukeleka kogwalo ngaphambilini lokuthi lukhutshwe.

Njengenhlayenza ugatsha olubona ngezomumo womkhathi (Meteorological Services Department) lusiphathisile ngolwazi olumqoka esilubonga kakhulu.

Isibongo esimqoka siya ku-Elisha N Moyo owogatsha lukahulumende olukhangela ngokugquka komumo womkhathi (Climate Change Management Department) olungaphansi kogatsha olubona ngezomhlabathi, ezokulima, amanzi, umumo womkhathi kanye lokuhlaliswa kuhle kwabantu emaphandleni yena owahluzo isigaba sinye ngasinye sogwalo ngobunono obukhulu endimini ezintathu! Siyabonga njalo inhloko yogatsha lukahulumende olukhangela ngokugquka komumo womkhathi uWashington Zvakata ngosekelo kanye lenkuthazo yakhe phezu kwalumsebenzi.

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Liphirintwe ngabe: Printworks, 2018

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Imibuzo jikelele

1. Kuyini ukuguquka komumo womkhathi?

Ukuzwisisa ukuguquka komumo womkhathi kudingeka ukuthi siqale sazi umahluko phakathi komumo womkhathi wesikhatshana kanye lomumo womkhathi wesikhathi eside.

Umumo womkhathi wesikhatshana utsho inguquko yesikhatshana emumeni womkhathi (njengezinga lokutshisa, izulu, ubumanzi obusemoyeni, umoya kanye lokugubuzela kwamayezi) ngesikhathi kumbe ngelanga elithile.

Umumo womkhathi wesikhathi eside yilowo ovame ukubakhona endaweni ethile (okwesikhathi esivame ukuba yiminyaka engamatshumi amathathu kumbe esedlula lapho).

Ukuguquka komumo womkhathi yinguquko ebakhona emumeni womkhathi ngemva kwesikhathi eside. Kumatshumi lamatshumi eminyaka esanda kwedlula umumo womkhathi emhlabeni usuguquka masinyane kulalokho obukwenza phakathi kweminyaka eyinkulungwane. Uphawu olumqoka lwalinguquko yikutshisa kakhulu komhlaba- ukuqansa kwezinga lokutshisa emhlabeni wonke jikelele. Lokhu sokukhokhelele ekuguqukeni kwendlela izulu elina ngayo, ukuguquka kwezigaba/izikhathi zomnyaka, ukusweleka kwezulu, isikhukhula, izulu elina ngolaka kanye lokuncibilika kweqhwa kanye lama-ayisi okubangela ukuphakama kwezinga lolwandle.

Umumo womkhathi weZimbabwe

Ngemvama iZimbabwe ilomumo womkhathi okhudumalayo, oelanga njalo owomileyo olezinga lokutshisa eliphezulu kusukela phakathi laphakathi kukaMfumfu kuze kuyekuba phakathi laphakathi kukaMbimbitho kanye lezinga lokutshisa eliqandelelayo phakathi

Iyini i-El Niño?

I-El Niño yindlela yokwenza komkhathi eyimvelo evame ukwenzeka ngemva kweminyaka emibili kusiya kweyisikhombisa sikhathi sonke. Ibaluleka ngokukhudumala okwenzeka olwandle lwe-Pacific. Ukukhudumala kwakhona ngokwezinga eliphezulu okokuthi kuyathinta umumo wokhathi emhlabeni wonke jikelele kubangela ukoma kwezinye izindawo (njengaseZimbabwe) kanye lezikhukhula kwezinye indawo. Ngakwelinye icele le-El Niño kule-La Niña yona ebalulwa yikuqandelela olwandle lwe-Pacific. Ngomnyaka we-La Niña iZimbabwe ivame ukuba lezulu elinengi. Ngokuchwayisisa izinga lokutshisa eliselwandle abezesayensi bayanelisa ukusixwayisa mayelana le-El Niño loba i-La Niña ezayo. Ingcitshi zesayensi ezinengi zikholelwa ukuthi ukukhudumala komhlaba kuzengeza umfutho we-El Niño kanye le-La Niña.



kukaNkwenkwezi kanye loNcwabakazi. Kujwayelekile ukuthi umumo womkhathi wesikhathi eside uguquguquke okweminyaka lanxa kuyabe kungakabi lenguquko ebakhona okwangempela. IZimbabwe ithola izulu elitshiyeneyo ngobunengi ngeminyaka leminyaka njalo obunye ubusika buyaqanda kulobunye. Kweminye iminyaka singaba lokutshisa okwedlulisileyo kanye lokoma kukanti kweminye kungaba lezulu.

Ukutshiyana kokuna kwezulu eZimbabwe kuvame ukubangelwa yi-El Niño - indlela yemvelo yokwenza komkhathi eyenzeka ngemva kweminyaka emilutshwana sikhathi sonke.

Eminyakeni elikhulu edluleyo iZimbabwe ngokwemvama isihlangane lokukhwela kwezinga lokukhudumala ngesilinganiso esidlalela kubo 0.4°C ngenxa yokuguquka komumo womkhathi. Ezinye indawo sezihlangane lenguquko zezinga eliphezulu kumbe eliphansi kwaleli. Inani lamalanga atshisayo ngomnyaka liyanda njalo inani lamalanga aqandelelayo liyehla. Ubunengi bezulu esilitholayo labo buyehla.

2. Kuyini okubangela ukuguquka komumo womkhathi?

Ingcitshi zesayensi ezinengi ziyavumelana ukuthi imbangela emqoka yokuguquka komkhathi masinya esikubonayo zintuthu ezitshiyeneyo ezibangelwa yimisebenzi yabantu ezisuka zisiya emkhathini. Intuthu lezi zinqabela isikhudumezi ukuthi siphume emkhathini khona okubangela ukukhudumala komhlaba jikelele.

Intuthu ezibamba isikhudumezi (Greenhouse gases)

Intuthu ezibangela ukukhudumala emhlabeni wonke jikelele zibizwa kuthiwe ngama-greenhouse gases (intuthu ezibamba isikhudumezi). Zigoqela i-carbon dioxide (umoya ophefumulwa uphuma ebantwini), i-nitrous oxide kanye le-methane. Loba yini eyenziwayo esebenzisa iphethulo, idizili, amalahle okwenjiwa loba igasi yemvelo etholakala ngaphansi komhlaba ibangela ukuthi intuthu ezibamba isikhudumezi ziye emkhathini. Intuthu lezi ziyaphuma njalo zisukela emililweni yasendle engalawulekanga, ekugamuleni izihlahla, ekukucenteni umhlaba, ekulimeni lekufuyeni, ekubaseni umlilo ngenkuni, endleleni okuphathwa ngayo izibi, kweminye imithi esetshenziswa emafirijini kanye lemisebenzini eminengi yama-indastru. Intuthu ezibamba isikhudumezi eziphuma kweyinye ingxenye yomhlaba zicina zithinta wonke umhlaba.

Intuthu ezinengi eziya emkhathini zihlala khonangale okwesikhathi eside.



Nxa intuthu ebamba isikhudumezi ilokhu iphuma iba yisembeso (esifana lengubo) esembese umhlaba. Nxa lesa sembese silokhu sisibaqatha umhlaba lawo uya ulokhu utshisa ngamandla. Yikho ke ukukhudumala komhlaba jikelele okubangela ukuguquka komumo womkhathi.

Amatshathi angaphansi atshengisa imisebenzi emqoka ebangela ukuphuma kwentuthu ebamba isikhudumezi emhlabeni wonke jikelele kanye laseZimbabwe. Ukwenziwa kwamandla okusebenzisa kanye lezokulima yikho okumqoka kulokhu.

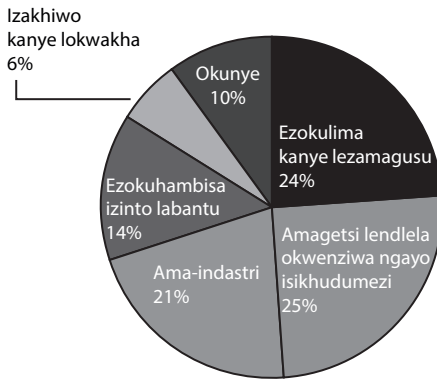


Figure 1 Imisebenzi yabantu emqoka ebangela ukuphuma kwentuthu ebamba isikhudumezi ithathelwe kumthombo we- IPCC oka2014

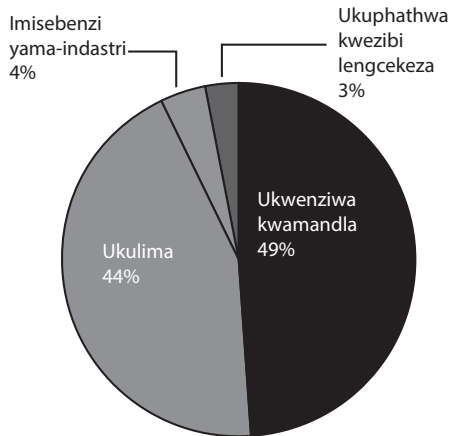


Figure 2 Imisebenzi yabantu emqoka eZimbabwe ebangela ukuphuma kwentuthu ebamba isikhudumezi. Government of Zimbabwe 2016 Third National Communication to UNFCCC

Ezinye Imbangela zokuguquka komumo womkhathi

Ezinye inguquko zemvelo ezifana lenguquko ekutshiseni kwelanga kanye lentaba ezilavuka umlilo lomlotha (volcanoes) lazo ziyaguqula umumo womkhathi kodwa zona ziphambanisa ngendlela encane kakhulu njalo azisingcazelo yokukhwela kwesikhudumezi

ngokuphangisa esesihlangane lakho eminyakeni elikhulu edluleyo. Ukukhutshwa kwezicucwana ezibizwa ngokuthi ngama-aerosols (njengentuthu esukela ezimoteni, emafekithari, ukubasa umlilo ngenkuni loba kusukela emvelweni nje) zingenza umkhathi uqandelele. Loba kunjalo izicucwana lezi zama-aerosols zenza abantu babelenkinga ezinkulu kwezempilakahle njalo ziyaguqula inhlelo zemvelo eziphathelane lokuna kwezulu kanye lokuvunguza komoya.



Abanye abantu abakholwa ukuthi umumo womkhathi uyaguquka lanxa kulobufakazi bonke obukhona

3. Kambe umumo womkhathi uyaguquka ngempela?

Yebo! Ingcitshi zesayensi bezilokhu ziqoqa ubufakazi bokukhudumala komhlaba wonke jikelele okweminyaka engaphezu kwekhulu. Ngokuqoqa ulwazi olusuka emithonjeni eminengi sezikhombise ukuthi ngaleso sikhathi imisebenzi yabantu esikhuphe intuthu enengi ebamba isikhudumezi ibanga lesikhudumezi emhlabeni selengezelekile. Lokhu kokubili kuncikelene. Lanxa kulabantu abala ukuthi imisebenzi yabantu ibangela ukuguquka komkhathi inani labo lilutshwane kakhulu. Kunjalo nje isilinganiso sengcitshi zesayensi esingamatshumi ayisitshiyagalolunye lasikhombisa ekhulwini (97%) siyavumelana ukuthi umkhathi uyaguquka njalo inguquko le incikelene lemisebenzi yabantu.

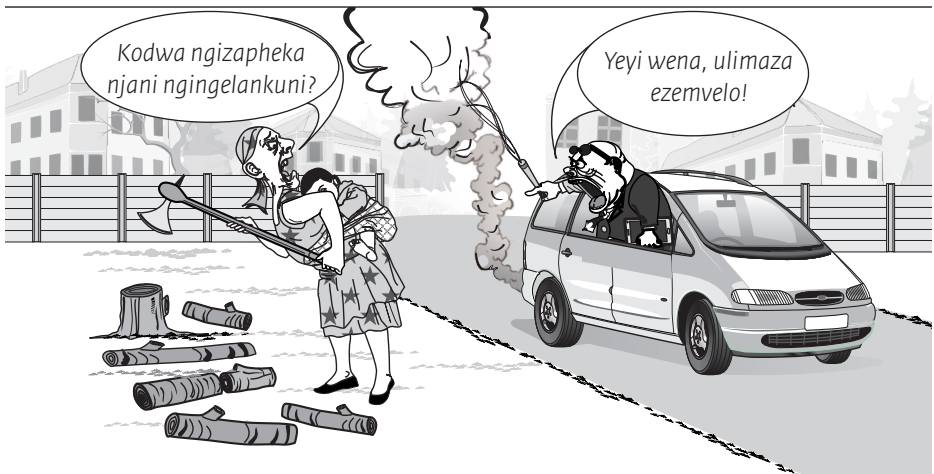
4. Ngubani obangela ukuguquka komumo womkhathi?

Amazwe athuthukileyo e-Europe, eNyakatho yeMelika kanye le-Australia yiwo abekhuphela inthuthu ezinengi ezibamba isikhudumezi emkhathini. Amazwe athuthuka masinyane njenge-China, India, South Africa kanye le-Brazil lawo angezelela kakhulu. Okwakhathesi ilizwe lase-China yilo elikhuphela intuthu ezinengi ezibamba isikhudumezi emkhathini. Loba kunjalo singahlanganisa yonke iminyaka yokukhupha intuthu ezibamba isikhudumezi ilizwe leMelika yilo eselikhuphele enengi okudlula onke amazwe.

Nxa umnotho weZimbabwe lowamanye amazwe asathuthukayo ukhula lawo uyengeza intuthu ezibamba isikhudumezi. Ngenxa yalokhu wonke amazwe asedinga indlela zokuthuthuka engengezanga ubunengi bentuthu ebamba isikhudumezi.

5. Yiyiphi impumela yokuguquka komumo womkhathi?

Ukuguquka komumo womkhathi vele sokuphambanisa amazwe amanengi. Eminyakeni elikhulu edluleyo izinga lokutshisa emhlabeni jikelele seliqanse ngemvama phose nge 1°C. Lokhu akukhanyi engathi yinto enkulu kodwa ingcitshi zesayensi zisitshela ukuthi nxa



Sonke silomlandu ekuguqukeni komumo womkhathi ngendlela ezitshiyeneyo

izinga lokutshisa lingakhwela ngesilinganiso esingaphezu kwe 2°C ukulima akusoze kuvume endaweni ezinengi ze-Africa njalo lokhu kungabangela ukulamba okukhulu kanye lokuthutha kwabantu besiya kwezinye izindawo. Okwakhathesi nxa kungelamanyathelo aqinileyo athathwa nguhulumende, abamabhizimisi kanye labantu nje ukwehlisa ukwanda kwentuthu ezibamba isikhudumezi izinga lesikhudumezi somhlaba lingaqansa ngesilinganiso se 3°C . Vele sesifake intuthu ezinengi ezibamba isikhudumezi emkhathini okokuthi kulebanga lokuguquka komkhathi elingasavikelekiyo. Impumela izagoqela:

- Ukukhwela kwezinga lokutshisa, okufaka engozini impilakahle yabantu lezinyamazana, ezokulima kanye lezimila zemvelo kanye lokwanda kwemililo yasendle.
- Ukuphunguka kobunengi bezulu, okukhokhelela ekusileleni kwamanzi khona okuthinta impilakahle yabantu, ukulinywa kwezilimo kanye lokufuywa kwezifuyo, inyamazana zasendle kanye lezimila zasendle.
- Ukwanda kwengozi ezincikelene lezomkhathi, njengeziqhotho, ukutshisa okwedlulisa amalawulo kanye lesikhukhula.
- Ukukhwela kwezinga lolwandle, okubangela ukulahlekelwa ngumhlaba wokulima kanye lokucwilisa amanye amadolobho amakhulu emhlabeni.
- Ukuqhela kwezinkangala, okuphungula umhlaba okhona wokulima kanye lezinyamazana zasendle.

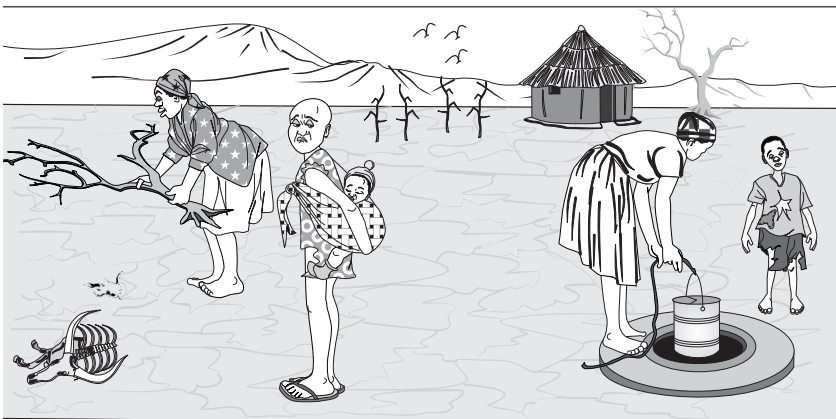
6. Ngubani ozaphanjaniswa kakhulu yikuguquka komumo womkhathi?

Impumela yokuguquka komumo womkhathi izazwakala emazweni amanengi eAfrica, eAsia kanye lezansi yeMelika. Esinye isizatho salokhu ngesokuthi indawo lezi zivele zilomkhathi okhudumalayo, oquququkayo kanye lokuthi amanengi akhona ayaswela ngakho awenelisi ukubhadalela indlela zokwehlisa impumela yokuguquka

komumo womkhathi. Njengomzekeliso uma ukukhwela kwezinga lolwandle kungathinta amazwe anothileyo, ayenelisa ukufaka ama-air conditioner ezakhiweni lasezimoteni. Ngakwelinye icele amazwe asathuthuka njengeZimbabwe angeke enelise lokhu. Ngenxa yokuthi amazwe athuthukileyo yiwo asenze ukuthi umumo womkhathi uguquke kakhulu kanye lokuthi anothile, amazwe asathuthukayo awacela ukuthi awasize ukuthi amelane lempumela zokuguquka komumo womkhathi.

EZimbabwe abantu abasemaphandleni labasemadolobheni bazathintwa ngendlela ezitshiyeneyo. Abantu abasemaphandleni ikakhulu labo abasezansi kwelizwe bazahlangu lobunzima obukhulu. Lokhu kungenxa yokuthi lezi ndawo vele zihleli zitshisa njalo zomile. Ukuguquka komkhathi kuzenza lomumo wengezeleleke. Abantu abahlala emadolobheni bazahlukunyezwa kakhulu yikutshisa okwedlulisileyo kanye lempophoma zamanzi. Umumo womkhathi owedlulise amalawulo njengeziqhotho, izulu lamatshe kanye lomoya omkhulu uzakwanda njalo uthinte indawo ezintsha.

Abantu abaswelayo bazaphambaniseka kakhulu ngoba benganelisi



Abesifazane kanye labantwana bazahlangu lobunzima obubi kakhulu obubangelwa yikuguquka komumo womkhathi

ukuzivikela kumpumela zenguquko yomkhathi. Njengomzekeliso imuli ezinothileyo ziyenelisa ukugebha izibholane njalo zakhe amatanka okugcinela amanzi ukuzivikela ekuswelakaleni kwezulu kodwa imuli eziswelayo azisoze zenelise ukwenza lokhu. Kulamathuba aphezulu okuthi abesifazane basemaphandleni bazaphanjaniswa kakhulu yikuguquka komumo womkhathi njengoba beyibo abathwele umlandu omnengi kwezokulima kanye lokutheza inkuni lokukha amanzi. Ukuguquka komumo womkhathi kuzenza konke lokhu kubenzima. Loba abesilisa bengahamba baye emadolobheni loba kwamanye amazwe ukuthi badinge umsebenzi ngesikhathi sokoma, abesifazane bavame ukukhangelelwa ukuthi basale bekhangele umuzi njalo benakelela abantwana labakhubazekileyo, asebekhulile labagulayo.

7. Kambe singenqabela ukuguquka komumo womkhathi sibuye sibelomkhathi owawukhona kudala?

Nxa ohulumende bamazwe onke bengasebenzelana ndawonye njalo bakhuthaze abantu nje kanye labamabhizimisi ukuthi bathathe amanyathela ngokuphangisa okuphungula ukuphuma kwentuthu ezibamba isikhudumezi silethuba lokumisa ukuguquka komkhathi ekubhidlizeni ezokulima, indawo okuhlala abantu kanye lendawo zemvelo. Lokhu kuzadinga:

- Ukwengeza ukusetshenziswa kwamandla athi angasetshenziswa abuye avuseleleke (renewable energy)
- Ukuphungula ukusetshenziswa kokubasisa umlilo okwenjiwayo (fossil fuels)
- Ukuguqula indlela zokwenza amandla okusebenzisa, ezokulima, ezokuhambisa, ezama-indastri, izakhiwo kanye lokwakha kanye lokuphatha izibi
- Ukwenza imitshina emitsha
- Ukubumba imithetho emitsha
- Ukwenza indlela zokupha imvuzo yemali kulabo abayabe benze inguquko.

8. Kambe ukuguquka komkhathi kuzabangela ingxabano phezu kwezemvelo na?

Nxa ohulumende kanye lomphakathi bengekela ukuthatha amanyathelo okuvikela ezemvelo khathesi kanye lokuphathisa umphakathi osweleyo ukuthi umelane lokuguquka komkhathi ingxabano elodlame phezu kwezemvelo ezifana lomhlaba kanye lamanzi kanye lokudla njalo ingaba lethuba eliphezulu lokubakhona. Lezingxabano vele sezikhona kwezinye izindawo ikakhulu kubangwa ukufinyelelwa kwamanzi kwezinye indawo zeZimbabwe kanye laphezu kwamadlelo kwezinye indawo ze-Africa. Ingxabano phakathi kwabantu lenyamazana layo iyanda ngenxa yokuguquka komkhathi kanye lokuncintisana phezu kwezemvelo ezilokhu zitshalalala.

9. Kambe ubuhle bokuguquka komkhathi bungakhulela ububi bakho?

Hatshi! Ukukhwela kobunengi bentuthu ezibamba isikhudumezi, njengomoya we-carbon dioxide (ophefumulelwa phandle ngabantu) kungenza izimila zikhule masinyane kodwa nxa kuyikuthi lamanzi samanengi njalo lomhlaba uvundile. Kwezinye indawo ukuguquka komhlaba kuzengeza izulu njalo lezi indawo zizaba lezilimo lezinye izimila zemvelo ezikhula kakhulu. Kuyadingeka olunye uchwayisiso ukubona ukuthi ubuhle buyakhulela ububi na. Endaweni eziqandayo ezifana le-Europe izilimo ezintsha zingahlanyelwa ngenxa yokukhudumala okuyabe sekukhona. Njengomzekeliso amapulazi alima amagirebusi asevama e-UK eminyakeni elitshumi edluleyo.

Kwezinye indawo zase-Eastern Highlands eZimbabwe izulu kanye lezinga lokutshisa konke kukhanya kukhwela. Lokhu kungaletha amathuba okulima izilimo ezintsha endaweni lezi. Loba kunjalo, indawo ezinengi zelizwe leZimbabwe zizahlangana lempumela embi yokuguquka komkhathi ikakhulu kwezokulima.



Sonke kumele sisebenzelane ndawonye ukuze siqobe ukuguquka komumo womkhathi

Eyinye impumela enhle ebingakhangelelwanga eyokuguquka komkhathi kungaba yikukhuthaza umphakathi labohulumende ukuthi basebenzelane ndawonye ukuthi balungise loluhlupho olukhulu abanye abathi lungaba yingozi enkulu kulazo zonke abantu asebake bahlangana lalo. Lokhu kungatsho ukuthi sokuqala isikhathi esitsha esiguqula umphakathi ngendlela enhle.

Yiyiphi impumela yokuguquka komkhathi eZimbabwe?

Ukuguquka komumo womkhathi sokuvele sokuphambanisa ilizwe leZimbabwe. Ukuna kwezulu akusaqondakali. Ukusweleka kwezulu sokubonakala kanenginengi. Izulu seliphuza ukusewula njalo isikhathi sokuna kwezulu sesande ukuphela masinyane. Ngesikhathi sokuna kwezulu sokuvame ukuba lezikhathi ezinde lapho izulu elihamba khona lingasani kanye lokuna kwezulu elilolaka. Ubunengi bezulu elina ngomnyaka lomnyaka buya buphunguka. Ukuna kwezulu okudala impophoma zamanzi lakho sokusiya kuvama.

Kwelizayo impumela zokuguquka komumo womkhathi zizaya:

- Ngobukhulu bengquko yomkhathi kanye lokuthi uguquka njani
- Ngokuthi abantu benelisa ukufunda ukumelana lomumo omutsha masinyane kangakanani njalo ngempumelelo enganani. Lokhu sikubiza sithi yikuzijwayeza umumo omutsha (adaptation) njalo
- Ngokuthi ohulumende kanye labantu baphungula ukukhutshwa kwentuthu ezibamba isikhudumezi emkhathini kangakanani. Lokhu sikubiza sithi yikwehlisa amathuba (mitigation).

10. Yiziphi indawo ezizaphambaniseka kakhulu?

Ingxenyane zaseZimbabwe ezisezansi kanye lentshonalanga (njenge Matabeleland North, Matabeleland South le Masvingo) yizo ezizaphanjaniswa kakhulu yikuguquka komumo womkhathi kwelizayo. Lokhu kungenxa yokuthi lezi indawo zivele ziyatshisa njalo ziphansi futhi zithola izulu elilutshwana elingathembakaliyo okwenza ukulima okokuthembela ezulwini kubenzima.

Ukuguquka komumo womkhathi kuzenza lumumo ubemubi. Kulethuba eliphezulu lokuthi inkangala yeKalahari izasabalala isuka eBotswana ilubhekise empumalanga ingena kweleZimbabwe okuzenza ezinye indawo zaseMatabeleland North leMatabeleland South ziwome kakhulu.

11. Umumo womkhathi waseZimbabwe uzaguquka kangani kwelakusasa?

Kudingakala olunye uphando ukuze ingcitshi zesayensi zenelise ukutsho ukuthi yiziphi ezinye impumela ezizenzakala kwelakusasa. Zisebenzisa umhlahlo wamakhompiyutha ingcitshi zesayensi zinakanela ukuthi kusiyafika umnyaka ka2100 imvama yezinga lokutshisa ilethuba elikhulu lokukhwela ngesilinganiso esingafika ku 4°C (kumbe esingafika ku 6°C nxa ubunengi bamagasi abamba isikhudumezi emkhathini bungaphungulwanga) kwezinye indawo zaseZimbabwe.

Izindawo
ezizaphanjaniswa
kakhulu yikuguquka
komumo womkhathi
eZimbabwe



Indawo ezivame ukuba lezulu
lesikhukhula.
Indawo ezivame ukuhlaselwa
yikoma.

Lokhu kutsho ukuthi iHarare leBulawayo zizakuba lomumo womkhathi ohambelana loweKariba kanye leBinga kukanti iKariba leBinga zilamathuba aphezulu okuhlangana lezinga lokutshisa elingaphezu kwe40°C ngesikhathi sokutshisa.

Izulu lizaguquka njani?

Umhlahlo wamakhompiyutha utshengisa ukuthi ubunengi bezulu elivame ukuna eZimbabwe bulehuba elikhulu lokuphunguka ngesilinganiso sokuhlanu (5%) kusiya kokulitshumi lasitshiyagalombili ekhulwini (18%). Ukuphunguka okukhulu kuzakuba sezansi kanye lasentshonalanga yezansi yelizwe. Kungaba lokwanda kwezulu eNyakatho kanye laseMpumalanga yelizwe.

Izigaba zomnyaka zizaguquka njani?

Kuzakuba lokutshisa okwedlulise amalawulo ngesikhathi sokutshisa kanye lenguquko ekuqaleni kanye lekupheleni kwesigaba sokuna kwezulu. Kuzakuba lokwanda kwezikhathi zokungani kwezulu phakathi laphakathi kwesigaba sokuna kwezulu zona eziyabe sezithatha isikhathi eside

Ukuguquka komumo womkhathi kuzathinta njani i-El Niño le-La Niña?

Kulamathuba amakhulu okuthi ukuguquka komumo womkhathi kuzengeza ukwanda kanye lomfutho we-El Niño le-La Niña okuzenza impumela ze-El Niño ezaziwayo zibesezingeni eliphezulu kulenjwayelo. Lezi zigoqela ukwanda kokusweleka kwezulu kanye lethuba lokwanda kwezulu lesikhukhula ngeminyaka okuyabe kule-La Niña.

12. Abantu bazaphambaniseka njani?

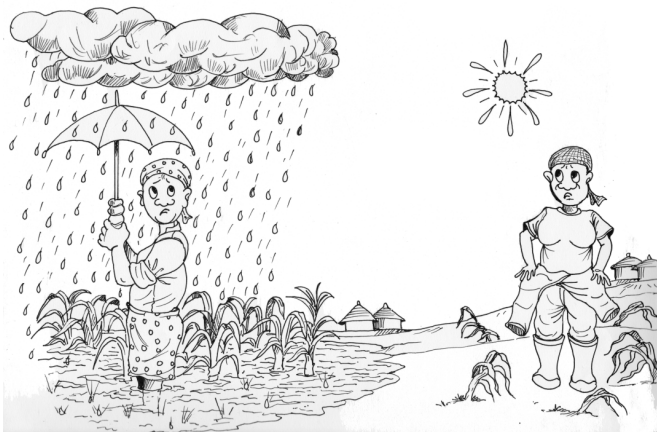
Ukukhwela kwezinga lokutshisa

Ukukhwela kwezinga lokutshisa kuzathinta impilakahle yabantu. Umkhuhlanewoquhuqho (malaria) uzakwanda lapho iminyane ethwala umkhuhlane woquhuqho (yona edinga umumo okhudumalayo ukuthi iphile) isanda ngobunengi njalo isisabalala isiya kwezinye indawo ezintsha. Kusiya fika umnyaka ka2050 indawo zonke ngaphandle kwe mpumalanga yelizwe lethu (Eastern Highlands) zingabe zesisengozini yomkhuhlane woquhuqho.

Izinga lokutshisa eliphezulu lengeza ukwanda kwezinanakazana kanye lemikhuhlane yezilimo kanye lezifuyo kubuye kwehlise ukuvunda komhlabathi. Lokhu kungaphoqa abalimi ukuthi basebenzise indlela zemithi edulayo zokulawula kanye lamafethalayiza.

Ukutshisa okwedlulise amalawulo kwengeza ingozi yemlilo yasendle yona engatshabalalisa impahla, amasimu, amadlelo, kanye lamagusu kugoqela lokwengeza ukukhukhulwa komhlabathi.

Amaqembu abuthakathaka afana labantwana abancane, abagulayo kanye lasebeluphele bangaphanjaniswa kakhulu yikutshisa okwedlulise amalawulo. Ukufa kwabantu abphakathi kwalamaqembu kungabakhona ngaphandle nxa bethe bavikelwa.



Ukusabalala kwezulu
lakho kuzabe kulokhu
kuguquguquka kakhulu.
Njengomzekeliso,
ngesikhathi somnyaka
sokuna kwezulu esisodwa
esigabeni esifanayo
kungaba lesifunda
esisodwa esithola izulu
elinengi kukanti isifunda
esiseceleni kwaleso sona
singela izulu elihle.

Ukwengezeleleka kwezinga lokutshisa kuzaphungula ubukhulu bomhlaba olungele ukulima izilimo kanye lokufuya izifuyo. Umumbu kanye lamabele kuyazwela kakhulu izinga lokutshisa eliphezulu kulokuswelakala kwezulu ngakho kungadingakala ukuthi abalimi batshintshe balime inyawuthi kanye lokuntshintsha izifuyo abazigcinayo kwezinye indawo.

Imihlobo eminengi yenkomo ayenelisi ukumelana lezinga lokutshisa eliphezulu ngakho kwezinye izindawo abalimi bangatshintshela embuzini, inkukhu kumbe bafuye inyamazana zasendle. Lokhu kungaphungula ukudla okusukela lapha eZimbabwekhona okwengeza ukwethembela kwethu ekudleni okuvela phandle kwelizwe.

Intengo yokudla eZimbabwe izaphanjaniswa yinguquko yomkhathi emhlabeni wonke. Njengomzekeliso ukusweleka kwezulu e-China kungatshabalalisa isilimo serayisi okungathinta intengo yerayisi evela ngaphandle kwelizwe eZimbabwe kukanti isikhukhula sezulu eCanada zingaphambanisa intengo yengqoloyi okungenza intengo yesinkwa ikhwele eZimbabwe.



Amabhezimisi ayeyame kakhulu ezisebenzini ezingabantu (njengezokwemba izenjiwa, ezokulima kanye lama-indastru amanengi) azaphambaniseka ngoba kungatshisa kakhulu ukuthi abantu basebenze ngezinye izikhathi ezithile. Izinga eliphezulu lokutshisa lizengeza isidingo sokusebenzisa amafiriji lama air-conditioner.

Ukuphunguka kobunengi bamanzi

Ukuphunguka kwezulu kuzakhokhelela ekuphungukeni kwamanzi angaphansi langaphezu komhlabathi okuzenza kubelamanzi amalutshwana okusebenzisa ngekhaya, ekulimeni, ema-indastru, ekwembeni izenjiwa kanye lakwezokuvakatsha asemithonjeni, ezibholaneni, emifuleni kanye lemadamu. Ukuphunguka kobunengi bamanzi aseKariba kanye lamanye amadamu lemifula kungaphambanisa ukuphekwa kwamagetsi kusetshenziswa amanzi. Uhlonzi lwamanzi okuthiya inhlanzi, ukulima kanye lokusebenzisa ngekhaya luzayehla lalo ngenxa yokuphunguka kwezulu.

Ukufinyelela amanzi ahlanzekileyo okupheka kanye lokuwatsha kungaba yinkinga okukhokhelela ekwandeni kwezehlakalo zemikhuhlane efana lesihudo se-cholera kanye le-typhoid. Izulu elilutshwana lizakhokhelela njalo ekuguqukeni kwezihlahla lotshani kanye lokuphela kokudla kwezifuyo kanye lenyamazana zasendle.

Iziquhotho kanye lempophoma zamanzi

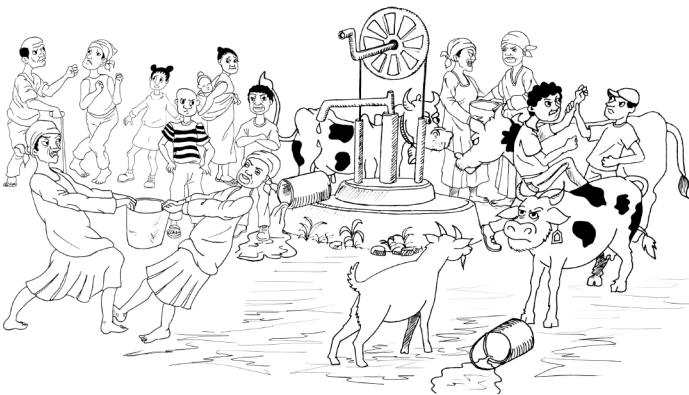
Ngeminyaka lapho izulu elina khona kakhulu iziquhotho kanye lempophoma zamanzi kungabhidliza izakhiwo, imigwaqo, amadamu, amabhulohu, igusu kanye lamasimu phezu kokufaka impilo engozini. Ezinye izinanakazana kanye lemikhuhlane ezithinta abantu, inyamazana kanye lezilimo ziphila ngcono endaweni ezimanzi ngakho lakho kungaba kungangezeleleka.



Iziphepheli zokuguquka komumo womkhathi

Ukuthutha

Ngenxa yempumela kwezokulima kanye lengxabano phezu kwezemvelo kulengozi enkulu yokuthi abantu abahlala endaweni ezithile bangatshiya lezindawo baye kwezinye ukuze babalekele lezi ngozi. Indawo zasemadolobheni zingakhula ngokuphangisa ngenxa yokwanda kwabantu ababalekela inguquko yomumo womkhathi. Lapho abantu bedinga indlela ezintsha zokuphila imisebenzi yabo



Ingxabano zingabakhona ezibholaneni kanye lemithonjeni njengoba kungaba lokuncintisanela ukuthola amanzi phakathi kwezidingo zezifuyo, inyamazana zasendle, ukulima kanye labantu.

ingafaka engozini indawo ezivikelekileyo ezifana lamaxhaphozi, amaphakhi kanye lamagusu khona okuzengeza ingxabano phakathi kwabantu lezinyamazana. Kulengozi enkulu yokuthutha kwabantu lezinyamazana besiya kwezinye indawo phakathi kwelizwe kumbe besiya phandle kwelizwe khona okufaka indaba zokuphepha emikhonweni yezwekazi

Kuyini okwenziwayo ngokuguquka komumo womkhathi?

Kulomsebenzi owenziwa nguhulumende weZimbabwe, ingatsha ezibona ngezentuthuko kanye lemiphakathi ukuzijwayeza umumo womkhathi omutsha kanye lokulungiselela inguquko lezingozi ezingabakhona kwelakusasa.

Ohulumende emhlabeni wonke jikelele laseZimbabwe kugoqela basebenza nzima ukubumba indlela zokuphungula ukukhutshwa kwentuthu ezibamba isikhudumezi emkhathini kanye lokukhupha lamagasi emkhathini (ukuphungula ingozi)

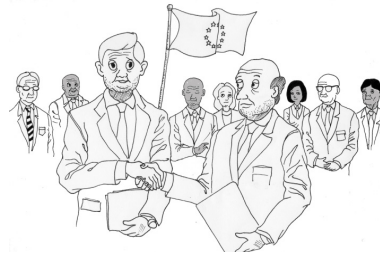
13. Kuyini okwenziwa zingcitshi zesayensi kanye labez-epolitiki?

Inhlanganiso emqoka yengcitshi zesayensi ezicwayisisa ngokuguquka komumo womkhathi yi-Intergovernmental Panel on Climate Change (IPCC). I-IPCC ikhupha izethulo phezu kwempumela yokuguquka komumo womkhathi kanye lokunakanela impumela yakho kwelakusasa emazweni atshiyeneyo. I-IPCC kanye lenhlanganiso yamazwe omhlaba wonke jikelele i-United Nations zithi ukukhwela kwezinga lokutshisa lemvama ngesilinganiso se-2°C emhlabeni jikele kuzakuba lempumela ezinzima njalo kumele kwenqatshelwe ngendlela zonke.

Ngomnyaka ngomnyaka abameli babohulumende bamazwe omhlaba jikelele bayahlangana ukuze bakhangele ubufakazi obutsha obusuka ku-IPCC kanye lokuthi baxoxe phezu kokuthi kwenziweni ngokuguquka komumo womkhathi. Limihlangano ibizwa ngesilungu kuthiwe ngama-Conference of Parties (COP). Kudala imihlangano le yayilokuphikisana kakhulu phezu kokuthi amazwe aphumeleleyo alama-indastrri (wona akhupha intuthu ezinengi ezibamba isikhudumezi emkhathini) amanengi kumeleancedise kangakanani amazwe asathuthuka (wona akhuphe igasi ebamba isikhudumezi emkhathini enlutshwane kodwa azathwala ubunzima obunengi).

Isivumelwano sase-Paris (Paris Agreement)

Ngomnyaka ka 2015 kwaba lokuphumelela lapho ohulumende abanengi abasayina isivumelwano saseParis esibizwa ngokuthi Paris Agreement. Ngalesi sivumelwano amazwe athembisa ukwenqabela ukuqansa kwezinga lokutshisa emhlabeni jikelele ngesilinganiso esidlula iz°C. Amazwe athuthukileyo abuya avuma njalo ukuphathisa amazwe asathuthuka ukuthi amise amanyathelo okuphungula intuthu eziya emkhathini kanye lokujwayela ukuguquka komumo womkhathi.



*Isivumelwano sase-Paris
(Paris Agreement)*

Isivumelwano saseParis sidinga ukuthi amazwe akhuphe izitatimende (ezibizwa ngesilungu ngokuthi nationally determined contributions loba ama-NDC) ezikhombisa ukuthi azaphungula njani ubunengi bentuthu ebamba isikhudumezi emkhathini ekhutshelwa emkhathini kusiyafika umnyaka ka2030 ngokuphila khale umumo uguquka. IZimbabwe layo isayinile isivumelwano sase-Paris yabuya yayethula izitatimende zayo ezakuqala.

Isivumelwano sase-Paris linyathelo elikhulu lokuyaphambili kodwa ingcitshi zesayensi ezinengi kanye labanye bathi kasiqinanga njalo ohulumende kanye labamabhizimisi kabasoze bagcine izithembiso zabo. Phezu kwalokho ilizwe leMelika (elinye lamazwe amqoka ekudaleni ukuguquka komumowomkhathi) lithi lonakalisozelilandele lesi sivumelwano. Ngeshwa ingcitshi zesayensi zithi zona wonke amanyathelo amisiweyo lathethweyo phezu komumo womkhathi kuze kufike lesi sikhathi kawenelisi ukwenqabela ukuqansa kwezinga lokutshisa ukuze lihlale lisebangeni elingalimaziyo.

Uhulumende waseZimbabwe usebumbe isimiso phezu komkhathi kanye leqhinga lokumelana lokuguquka komumo womkhathi ukuze kuqondise ilizwe ekumelaneni lenguquko yomumo womkhathi (National Climate Change Response Strategy). Ilizwe le-Zimbabwe selithembise ukuphungula intuthue bamba isikhudumezi emkhathini ngesilinganiso samatshumi amathathu lantathu ekhulwini (33%) kusiyafika umnyaka ka2030.

Uhulumende usezinikele ukumelana lokuguquka komumo womkhathi ukuze aphungule ukuphambanisa kwakho impumelelo yeZimbabwe kwezentuthuko.

14. Imali yokulwisa ukuguquka komumo womkhathi ivela ngaphi?

Kulemithombo eminengi etshiyeneyo yemali (kugoqela esuka kuhulumende, amabhanga kanye lezinye inhlanganiso) ejongane lamacele atshiyeneyo okuguquka komumo womkhathi. Sokuqoqwe imali evela emazweni kanye laphakathi kwelizwe ukwengeza ukwejoyela (adaptation) kanye lokuphungula (mitigation) ukuphambaniseka okubangwa yikuguquka komumo womkhathi. Izikhwama ezinkulu zakhona ngeze-Green Climate fund (GCF) yona esekelwa yi-Adaptation Fund kanye le-Global Environmental Facility

Ungathola ulwazi olunengi phezu kwemali ephathelane lokuguquka komumo womkhathi kuma-website la:

<https://www.greenclimate.fund/home>

<http://africanclimatefinancehub.net/>

<http://ndcpartnership.org/funding-and-initiatives-navigator/africa-climate-change-fund-accf>

https://southsouthnorth.org/portfolio_page/southern-africa-climate-finance-partnership-sacfp/

www.climatechange.org.zw

Climate Change in Zimbabwe, Facts for Planners and Decision Makers, 2nd Edition:

https://www.kas.de/c/document_library/get_file?uuid=d26c2473-28e4-ee4d-fdef-ec12a72f0a09&groupId=252038

(GEF) leSpecial Climate Change Fund (SCCF). Kulesikhwama se-National Climate Fund esisungulwayo ukusiza ukubhadalela indleko zokujwayela (adaptation) kanye lokuphungula (mitigation) ukuphambaniseka okubangwa yikuguquka komumo womkhathi. IZimbabwe iyathola njalo imali emithonjeni yaphetsheya.

Abantu abazimele bodwa, amaqembu, imiphakathi kanye labamabhizimisi banga apulayela imali yokuqhuba amaphurojekithi abo okujwayela (adaptation) loba ukuphungula(mitigation). Ukuze si-apulayele limali kumele sibumbe sibuye sibhale phansi umcabango olomsoco ogoqela indlela zokuqapha iphurojekithi njalo kumele kubelohlelo olucacileyo lokutholakala kanye lokusetshenziswa kwemali.

15. Abantu base-Zimbabwe bangazijwayeza njani kun-guquko yomumo womkhathi?

Ngenxa yenguquko kumumo womkhathi eZimbabwe abantu bezimele bodwa, umphakathi kanye labamabhizimisi kuzamele baguqule indlela abenza ngazo izinto. Ukuzejwayeza inguquko zomumo womkhathi kuzagoqela amanyathela amanengi atshiyeneyo njengo:

- Kwengezelela ulwazi lobuthakathaka bencezu ezithile kanye

lamasu akhona okuzejwayeza angasetshenziswa

- Kusebenzisa indlela zokwakha izakhiwo ezingaphanjaniswi ngomumo womkhathi kanye lokusebenzisa okokwakha okuzenza izakhiwo ziqandelele
- kwenza amabholoho lemigwaqo kuqine kakhulu ukuze kumelane lezikhukhula kanye lokutshisa okwedlulise amalawulo
- kuguqula isikhathi sokusebenza ukuze abantu bengasebenzi emini lapho okuyabe kutshisa khona kakhulu
- kutshintshela ezilimeni lezifuyweni ezenelisa ukumelana lokuswelakala kwezulu kanye lezinanakazana kanye lokuqala ukusebenzisa indlela zokulima ezinanza umumo womkhathi kanye lokulima ngokuthelela.
- kwethula imibiko engcono mayelana lomumo womkhathi ukuze wonke umuntu enelise ukulungiselela inguquko emumeni womkhathi efana leyokusweleka kwezulu, isikhukhula, iziqhotho kanye lokutshisa okwedlulise amalawulo.
- kudinga ezinye indlela zokuphila kanye lokugxila kulezo ezingathintwa kangako yikuguquka komumo womkhathi.

Ukunakelela ezemvelo

Njengoba ingxenye enkulu yezomnotho wakuleli yeyame kakhulu kwezemvelo ukuzejwayeza ukuguquka komumo womkhathi kutsho ukunakelela lezi zinto. Impumela zokuguquka komkhathi zizabambi kakhulu nxa singatshaphaza amanzi, silimaze umhlabathi, sidale ukungcola komhlaba sibuye silimaze izimila zemvelo kanye lenyamazana zasendle. Ababusi bomdabu benza umsebenzi omqoka ekuvikeleni ezemvelo

Imphakathi eqinileyo eyanelisa ukumelana lobunzima

Kuqathaniswa lamanye amazwe e-Africa iZimbabweIsesimeni esingcono ngendlela ezinengi zokuyinceda ukuthi ijwayele ukugoqela ezemvelo ezinengi, abantu abafundileyo, izakhiwo ezinhle (imigwaqo, indawo ezihlala abantu, iziphala zokugcinela amabele,



Ababusi bomdabu benza umsebenzi omqoka ekuvikeleni ezemvelo

izikolo kanye lezibhedlela) kanye lomnotho oweyame encezwini ezimbalwa (oweyame encezwini ezinengi ezigoqela ezokulima, ukwemba izenjiwa kanye lezokuvakatsha).

Imiphakathi eqinileyo eyenelisa ukumelana lobunzima izabe ihlonyiswe ngcono ukuze yenqabe, imelane njalo ivuseleleke ngemva kokuhlangana lobunzimba kanye lezingozi zokuguquka komumo womkhathi. Nxa singabumba imiphakathi yabantu abalempilakahle, ukuthula, ukusebenzelana ndawonye belezemvelo ezipheleleyo njalo eziqinileyo (ezigoqela umhlabathi olokudla, amanzi ahlanzekileyo kanye lezihlahla lotshani obunengi) kanye lendlela ezinengi zokuthola imali sizabe silungele ngcono ukumelana lokuguquka komumo womkhathi. Nxa silemiphakathi yabantu abaswelayo, abangelampilakahle, abahlukumezekileyo belezemvelo ezingaphathekanga kuhle kutsho ukuthi uhlupho lokuguquka komumo womkhathi luzakuba lubi kakhulu.

Kulamaphurojekithi amanengi eZimbabwe azama ukwakha ukuqina lokumelana lempumela zokutshintsha womkhathi. Amanengi agxile ekuphathiseni abesifazane kanye labasakhulayo njengoba lawa amaqembu ezathwala imithwalo eminengi ephathelane lokuguquka komumo womkhathi.

Ayakhuthaza njalo amadoda ukuthi asekele abantu ababuthakathaka emiphakathini yabo.

Umsebenzi wolwazi lomdabu

Emakhulwini eminyaka abantu beZimbabwe sebeqoqe ulwazi olulusizo mayelana lokuthi kumelwane njani lomumo womkhathi oquququkayo



Abantu abadala kunengi okumele bakufundise abancane mayelana lolwazi lomdabu

njengokuthi kumelwane njani lokusweleka kwezulu kanye lokuhlaselwa yizinanakazana. Kulendlela zomdabu zokunakanela ukuthi umumo womkhathi uzakube unjani njalo ababusi bomdabu badlale indima eqakathekileyo ekuvikeleni ezemvelo kanye lekuxazululeni ingxabano.

Kuhlanganiswa lolwazi lwesayensi yesimanjemanje kanye lolwazi lokusebenzisa imitshina ulwazi olunengi lomdabu luyinsika ekumelaneni lenguquko yomumo womkhathi. Abantu abadala kunengi okumele bakufundise abancane mayelana lolwazi lomdabu

16. Abantu beZimbabwe bangaphungula njani intuthu eya emkhathini?

Ukuphungula kugoqela ukuphungula ubunengi bentuthu ezibamba isikhudumezi ezikhitshwa zisiya emkhathini kanye lokuphungula ubunengi bentuthu lezo ezivela isisemkhathini.

Ukuphungula ubunengi bentuthu ebamba isikhudumezi iZimbabwe kuzamele itshintshele kumnotho okhiphela i-carbon dioxide enlutshwane (eyinye yamagasi amqoka abamba isikhudumezi

emkhathini) emkhathini. Ngesilungu lokhu kubizwa kuthiwe yi-low carbon economy. IZimbabwe izaqhubeka ikhula njalo ithuthuka kodwa kuzamele:

- Iphungule ukusetshenziswa kwamandla okubasa umlilo asukela kuzenjiwa ezifana lamalahle, iphethuroli, igasi, idizili
- Itshintshele kumithombo yamandla ehlanzekileyo njalo evuselekayo (njengelanga, umoya kanye lentuthu esukela ezintweni ezivundekiweyo/ezibolayo) ukwenza amandla, ukuphatha i-indastru kanye lokuthwala impahla labantu.
- Isungule indlela ezisebenza ngcono ezidala ukungcola okulutshwane kanye lengcekeza njalo
- Iphathe ngcono ama-indastru, ezokulima kanye lokuphathwa kwezibi lengcekeza.
- Iphungule ukutshabalala kwamahlathi, ukuguqulwa kokusetshenziswa komhlaba kanye lemililo yasendle
- Ihlanyele izihlahla ezinengi

Lumhlobo wentuthuko ubizwa ngesilungu kuthwe yi-green growth njalo usebenzisa indlela zokuthuthuka ezilokuhlazeka ezilungele umhlaba njalo ezingangezeleli ekuguqukeni komumo womkhathi.

Amanyathela amanengi okujwayela (adaptation) ayasiza njalo ukuphungula intuthu ebamba isikhudumezi emkhathini. Njengomzekeliso, ukwenqabela ukutshabalaliswa kwamahlathi kanye lemililo yasendle kumisa umoya ophefumulelwa phandle ngabantu (carbon dioxide) ukuthi ungakhutshwa njalo kuwugcina uphakathi kwezimila. Ukusebenzisa uga tshompo endaweni yokulima ngokuphendula kwenqabela ukukhutshwa kwe-carbon dioxide isuka emhlabathini. Ukulondoloza amaxhaphozi (kulokuthi kukhutshwe amanzi kuwo loba kwakhiwe phezulu kwawo) lakho kuyenqabela ukukhutshwa kwe-carbon dioxide isiya emkhathini. Hlanyela izihlahla Ukukhupha intuthu ezibamba isikhudumezi emkhathini Izihlahla ziyahotsha i-carbon dioxide esemkhathini ziyigcine.

Nxa singahlanyela izihlahla ezinengi sikhupha umoya omnengi ophefumulelwa phandle ngabantu (carbon dioxide) emkhathini. Izihlahla ziyasiza njalo ukuphungula izinga lokutshisa kanye lesiqubu somoya njalo ziyengeza ubumanzi emhlabathini kanye lasemoyeni. Ngakho izihlahla zidlala indima emqoka kakhulu ekujwayeleni kanye lekuphunguleni ukuguqukuka komumo womkhathi. Izihlahla ezisemaphandleni lemadolobheni ziqakathekile kakhulu ekulwisaneni lokuguquka komumo womkhathi.

Nxa sizabalekela ingozi enkulu yokuguquka komhlaba ukuphungula ukuphambaniseka okusukela ekuguqukeni komumo womkhathi (mitigation) kumele kwenziwe ngomunye lomunye wethu (abantu abazimele bodwa, inhlanganiso, imiphakathi, amabhizimisi labohulumende).

Imibuzo esuka emaphandleni eZimbabwe

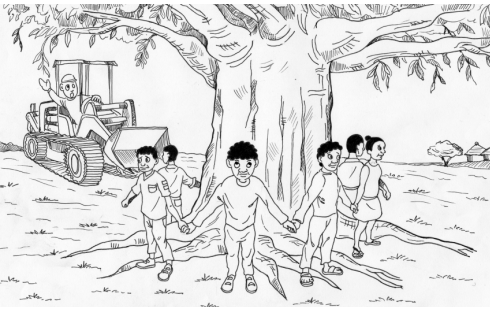
Abantu baseZimbabwe abahlala emaphandleni bazaphanjaniswa kakhulu yikuguquka komumo womkhathi ngoba beyame kakhulu emvelweni ukuze bathole ukudla, inkuni lokukhanyisa kanye lendlela zokuphila nje jikelele. Ukukhwela kwezinga lokutshisa kanye lokuguquka kwendlela izulu elina ngayo kanye lobunengi balo kutsho ukuthi indlela zokulima kumele ziguquke kumbe imiphakathi kuzamele ingezelele indlela zokuphila isiya kulezo ezingeyamanga ekulimeni kumbe kwezemvelo.

17. Abalimi bangazi njani ngokuthi bakhangelele isikhathi sokuna kwezulu esinjani?

Ngenxa yokuthi isikhathi sezulu silokhu sisiya singaqedakali, abalimi badinga ukuthi babelolwazi abaluthola ngezikhathi lezikhathi njalo lululwazi lwaleso sikhathi mayelana lomumo womkhathi wendawo yabo. Ugatsha lwezomkhathi olubizwa ngokuthi Meteorological Services Department (MSD) yilo umthombo wolwazi lomkhathi



*Ukusebenzisa amandla elanga
kuyaphungula ukukhutshwa
kwentuthu ezibamba isikhudumezi
emkhathini*



*Kumele sivikele izihlahla
zingabhidlizwa kungelangingeko ukuze
kumphungulwe ukukhutshwa kwentuthu
ezibamba isikhudumezi emkhathini*

oluthembekileyo njalo olwaleso sikhathi. Abanye abasizayo ezigabeni njengabalimisi be-Agritex kumele benelise ukulipha umhlahlo phezu komumo womkhathi kuleso sigaba somnyaka sokuna kwezulu ukuze lazi lokuthi kulezulu elijwayelekileyo, eledlulisileyo kumbe elilutshwana kulemvama endaweni yenu. Kumele benelise njalo ukulicebisa mayelana lamanyathela okumele liwathathe kumumo munye ngamunye.

Umhlahlo wesimo somkhathi

Ungathola umhlahlo okhona phezu kwesimo somumo womkhathi sansukuzonke kugatsha lweMSD kungelambadalo kuWhatsApp ngokuthumela umbiko kunombolo yocingo u0778125911. Ulakho ukutshayela ucingo kunombolo ethi +263 242 778 176/8 loba ubavakatshele noma liphi ilanga kugoqela langempelaviki kanye lamalanga ekhefu. Nxa usenelisa ukufinyelela iintanethi ulakho ukuthola umhlahlo wezulu wansuku zonke kuwebhusayithi yeMSD ethi <http://www.msd.org.zw/>.

Kuleminye imithombo yolwazi ngomumo womkhathi embalwa esukela kwababomakhalekhukhwini (ngembadalo) besebenza ndawonye labe-MSD. Leyi igoqela i-Ecofarmer Club efinyeleleka ngokubotoza u-*144# ubuye ubhalise. Lumthombo upha ulwazi olutshiyetshiyeneyo olugoqela oluphathelane lomumo womkhathi. Ulakho ukuthapha ulwazi esiphaleni sabomakhalekhukhwini lapho owenelisa ukuthola i-Kurima Mari app yona epha ulwazi ngomumo womkhathi kanye lokuzejwayeza kwabalimi phezu kokuguquka komumo womkhathi. Indaba emisakazweni yerediyo kanye le-TV zande ukucina ngomhlahlo womumo womkhathi.

18. Abalimi bangenzani ukulungiselela iminyaka elezulu elilutshwana?

Ukulungiselela ingozi yokuna kwezulu elilutshwana loba ukuswelakala kwezulu abalimi kumele basungule indlela zokuphatha umhlaba:

- Ezengeza ubumanzi emhlabathini;
- Eziphathisa amanzi ukuthi angene emhlabathini; kanye
- Lokwenqabela ukulahleka ukuphuma kwamanzi emhlabathini ngenxa yokutshisa lomoya esiya emkhathini eseyintuthu yamanzi.

Abalimi bengenza lokhu ngokusebenzisa indlela ezilokukhalipha zokudlelana lomkhathi ezibhalwe ngaphansi:

Ukuphatha umhlabathi kanye lamanzi ngendlela ezilokukhalipha nxa kukhangelwe ezomumo womkhathi.

Balekela ukucenta izimila kanye lokugamula izihlahla okungadingakaliyo. Hlanyela izihlahla emaceleni kwamasimu uwagombolozela ngazo kanye laphezu kwamagandiwa ukuze zenelise ukuvimba umoya kanye lokuba yikudla kwezifuyo. Yekelani ukuqala imililo yasendle.

khongozela ngokuvimba amanzi lamagandiwa angavumeli amanzi ukuthi ageleze, imibundu ehlanganisiweyo (tied-ridges) kanye lamagodi okukhongozela amanzi phakathi kwamagandiwa (infiltration pits) ukubamba kanye lokutshonisa amanzi emhlabathini eyehlileyo.

Phungula ifethalayiza. Ukwenziwa kwamafethalayiza angasiwemvelo kuyengeza intuthu eziphuma zisiya emkhathini ezibamba isikhudumezi. Amafethalayiza la kawenzi umhlabathi ubelokudla okwesikhathi eside.

Sebenzisa i-compost, ukwembesa umhlabathi ohlanyele kuwo ngotshani kumbe okunye okufanayo (mulch) kanye lokulima izilimo utshintshanisa lalezo eziyingxenye yemuli yendumba, amazambane, indlube njalonjalo. Lezindlela ziphungula ukukhutshwa kwentuthu ezibamba isikhudumezi ezisuka ziye emkhathini zibuye ziyengeze ukwenelisa komhlabathi ukuthi ugcine ukudla kanye lamanzi.

Faka umquba ube ususembesa umhlabathi ohlanyele kuwo (ngamahlamvu awomileyo kumbe utshani) emizileni kumbe embhedeni ohlanyele kuwo. Ngemva kokuvuna isilimo esimqoka tshiya okusaleleyo okwaleso silimo emhlabathini. Nxa lokho okuseleyo ukusebenzisa njengokudla kwezifuyo vumela izifuyo ukuthi zidlele emasimini ukuze zifake umquba ensimini.

Tshintshanisa isilimo esimqoka (njengomumbu, isanifulawa, igwayi loba utshinda) lesilimo sohlobo lwendumba (legume): indlube loba amazambane. Lezi ziyengeza ukuvunda komhlabathi njalo okusaleleyo ngemva kokuvuna kungasiza ekwembeseni umhlabathi. Phungula ukulima ngokuphendula umhlaba njengoba lokhu kudiliza isimo somhlabathi kubuye kudale ukulahleka kokudla okusemhlabathini. Lokhu kukhokhelela ekukhutshweni kwe-carbon dioxide yona eeyintuthu ebamba isikhudumezi emkhathini.

Lima ngo ga tshompo – lapho izilimo ezihlanyelwa emagodini njalo ukuphendula umhlaba kuyaphungulwa kakhulu sibili.

Lima isilimo sokwembesa umhlabathi (cover crop) esifana lendumba kumbe amathanga phakathi laphakathi kwemifolo okulinywe kuyo isilimo esimqoka. Izilimo lezi zokwembesa umhlabathi ziyavikela umhlabathi ekutshiseni kwelanga njalo ziyancedisa amanzi ezulu ukuthi angene phansi. Hlanyela isilimo somhlobo wama-legume esinjengaleso esibizwa ngokuthi sunhemp ngeziqa ngeziqa phakathi laphakathi kwesilimo esimqoka. Isilimo se-sunhemp silakho ukuqunywa sitshiywe emasimini ukuthi sibole.

Ukophatha kuhle amanzi kanye lokulima ngokuthelela

Indlela zokulima ngokuthelela zizaqakatheka kakhulu kubalimi lapho ukuguquka komumo womkhathi kusenza ukuna kwezulu kungaqedakali. Ukuze siphumelele ekulimeni ngokuthelela kumele sisebenzise kakhulu izulu lapho lisina. Amanzi asemadamu lemachibini ayalahleka masinyane ngenxa yokutshisa kwelanga kanye lomoya okwenza alahlekele emkhathini ikakhulu nxa kutshisa njalo komile. Endaweni yalokho amanzi kumele aphantswe ukuthi angene phansi emhlabathini ukuze angezelele ubunengi bamanzi agcinwe ngaphansi komhlaba. Lokhu kuzavuselela imithombo kanye lezibholane.

Indlela ezifaneleyo zokulima ngokuthelela

Nxa kusetshenziswa indlela yokuthelela, indlela zokuthelela ngokuthontisela yizo ezingcono kakhulu lanxa zidula. Abalimi abasebenzisa imigqomo ukuthelela bangalondoloza amanzi ngo:

- Kwendlalela utshani loba amahlamvu omileyo phezu komhlabathi;
- Kuthelela ekuseni kanye lantambama kuphela;
- Ukusebenzisa okufakwa emlonyeni webhakede okwenza; amanzi aphume kancane kancane okuwenza angene emhlabathini ;
- Kuhlanyela izihlahla ezilomthunzi omncane (njengomoringa) eceleni kwengadi;



Endaweni ezincane abalimi bangasebenzisa amambondlela epulasitiki amadala agcwaliswe ngamanzi angeniswa emhlabathini eceleni kwezilimo. Amanzi asemambodleleni azangena emhlabathini kancane kancane ethelela isilimo.

- Kwenza izinto ezokumisa umoya ezigombolozele ingadi- njengoba umoya ubangela ukuthi umbhida wome masinyane.

Iziqondiso zokulima ngendlela enanza umumo womkhathi

- Hlanyela imihlobo eminengi yezilimo okuvunyelwa ngumhlabathi wakho ukuphungula ingozi yokulahlekelwa yizithelo. Lokhu kungenxa yokuthi imihlobo yezilimo etshiyeneyo ithinteka ngendlela ezitshiyeneyo yikusilela kwezulu
- Phezu kwezilimo zokulimela ukuthengisa, hlanyela izilimo zokudla ezenelisa ukumelana lokoma ezifana lamabele, inyawuthi, uphoko, imbambayila kanye, indlubu, amazambane kanye lendumba). Endaweni ezivame ukuba lesikhukhula ngomnyaka lapho izulu elina khona kakhulu kungalinywa irayisi kumbe i-yam kulokulima umumbu.
- Hlanyela imihlobo evuthwa masinyane kanye laleyo eyenelisa ukumelana lokuswelakala kwezulu. Nxa uhlanyela umumbu khetha imihlobo evuthwa masinyane.
- Lungisa umhlaba kusesesikhathi ukuze nxa izulu liqala uhle uhlanyele okuhlanyelweyo okunengi kumile.
- Hlanyela izilimo utshiyanisa ngesikhathi ukuphungula ukulahlekelwa. Hlanyela isilinganiso samatshumi amathathu lantathu ekhulwini sezilimo ngokuqala kwezulu elizwayo, esinye isilinganiso esifana lalesi phakathi laphakathi kuthi esiseleyo ekuqaleni kukaZibandlela.

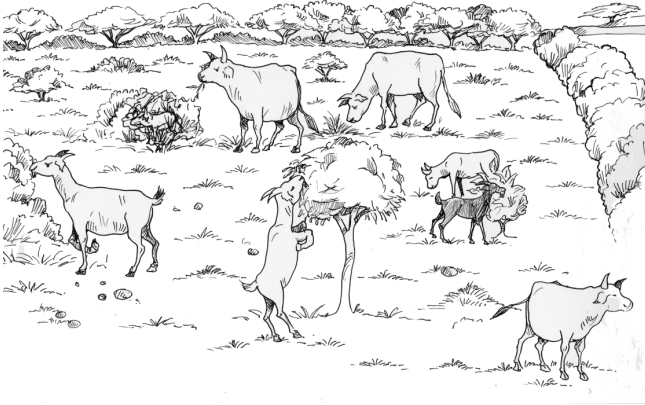
- Yakha indawo yokugcinela amabele eqondileyo njenge ziphala ubuye uthathe amanyathelo okwehlisa ukulahlekelwa ngemva kokuvuna.

Iziqondiso zokufuya ngendlela enanza umumo womkhathi

- Khetha imihlobo yezifuyo eqondileyo. Imihlobo yomdabu wakuleli yiyo efaneleyo endaweni ezilezulu elilutshwana lezinga lokutshisa eliphezulu. Izifuyo ezetshisayo (okugoqela inkomo, imbuzi kanye lezimvu) kanye labobabhemi zibangela intuthu ebamba isikhudumezi emkhathini njengensalela yokugaya kwazo ukudla. Ingulube lenkukhu (lokunye okomhlobo wenkukhu) kazidali leyonkinga kodwa ukufuya ingulube lenkukhu okunengi kakhulu ndawonye kukhIpa lakho intuthu ebamba isikhudumezi emkhathini ngenxa yezakhiwo, ukukhudumeza kanye lokukhanyisa, izinto ezisetshenziswa ukuhlanza, ukudla kanye lemithi edingakalayo.
- Yekela ukugamula izihlahla okungadingakaliyo kanye lemililo yasendle emadlelweni kanye lemaguswini.
- Faka amagandiwa angavumeli amanzi ukuthi ageleze emadlelweni akho ukuqiniseka ukuthi amanzi ezulu ayangena phansi enze amadlelo abengcono.

*Insimu ka
ga tshompo
egonjolezelwe
yizihlahla zokuvalela
umoya Amadlelo
enziwe abangcono
ngezihlahla
lezihlahlakazana
eziyikudla
kwenkomo*





Amadlelo enziwe
abangcono ngezihlahla
lezihlahlakazana
eziyikudla kwenkomo

- Hlanyela izilimo zokuncedisa ekudleni okufana le-rhodes grass, i-bana grass, indumba, i-lablab bean, i-velvet bean, i-pigeon pea kanye lezihlahla ezifana le-sesbania, isinanga kanye le-leuceana. Lokhu kungahlanyelwa kuyiziqa kugombolozele amasimu kumbe phezu kwamagandiwa loba phakathi laphakathi kwezilimo.

Ama- genetically modified organisms (GMOs) ke?

Ama-GMO yizilimo loba inyamazana ezenziwa ngobuciko obulobunono obukhulu. Amakhampani ayenza izilimo zama-GMO athi wona zilesivuno esiphezulu njalo zilomsoco wokudla omnengi njalo ziyamelana lokusweleka kwezulu. Ayaphinda athi zifuna ukufakelwa izinto ezilutshwana kulezilimo zomdabu.

Abantu abanengi bayakhathazeka ukuthi ama-GMO angaba lempumela ezimbi kulabo abawadlayo loba izilimo kanye lezinyamazana ezikwezemvelo. Abanye bayakhathazeka ukuthi ukukhuthazwa kwama-GMO kuzakhokhelela abalimi ukuthi bathembele ekuthengeni inhlangano yama-GMO edulayo okungayisikho ukuthi iyahambelana lendawo yabo njalo engeke iyenze lokho abamakhampani abayithengisayo abathi iyakwenza. Okwakhathesi ama-GMO kawavunyelwa ukuthengiswa loba ukulinywa eZimbabwe.

Ngokwanda kwenani labantu, ukusilela kokudla okubangwa yikuguquka komumo womkhathi abaxwayisi kudingeka benze imihlobo yezilimo elesivuno esiphezulu kanye lezifuyo ezilenzuzo ephezulu. Lokhu kwenelisa ukumelana lengozi eziphathelane lokuguquka komumo womkhathi ngasikhathi sinye igavuna impumela ezimbi ebantwini, ezinyamazaneni kanye lasemvelweni.

Ezinye inkuthazo ezinanza umumo womkhathi

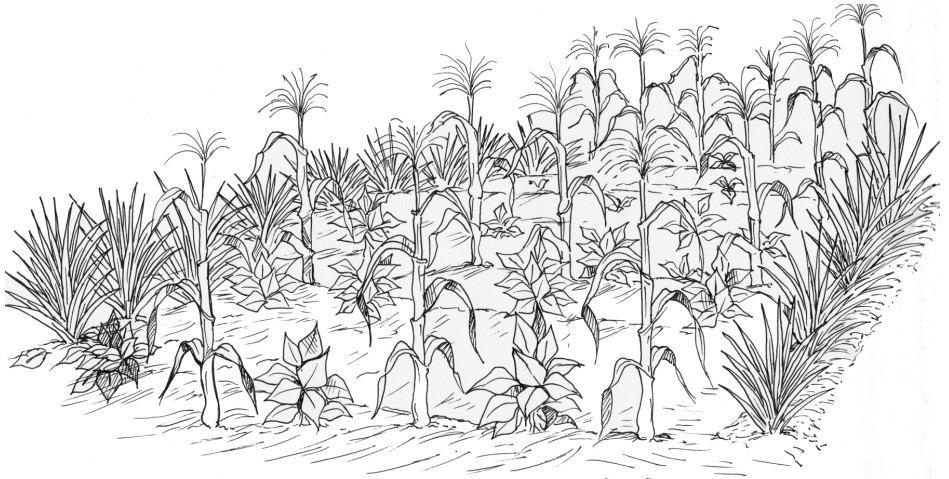
Abalimi kumele bathathele i-inshuwarensi izilimo zabo ezilenzuzo ephezulu kanye lezilimo besenzela ingozi eziphathelane lomumo womkhathi kanye lomkhathi. Kumele njalo bandise indlela abaphila ngazo ukuze bengathembeli emasimini abo ukuthi bathole ukudla kwabo lemali yabo yonke.

19. Kambe ukuguquka komumo womkhathi kuyengeza izinanakazana lemikhuhlane ehlasela izilimo lezifuyo na?

Yebo. Ukukhwela kwezinga lokutshisa kwengeza ukubonakala kwezinanakazana lemikhuhlane ehlasela izilimo lezifuyo. Izinanakazana ezinengi lemikhuhlane eminengi kuphila ngcono lapho okutshisa khona njalo okumanzi kukanti izilimo lezinyamazana kuqedwa amandla lizinga lokutshisa eliphezulu okwenza zibesengozini. Imizekeliso ngegoqela umhogoyi (fall army worm) emabeleni, izinanakazana ezinengi ezihlasela amatamatisi kanye lemikhuhlane ethwalwa yimikhaza enkomeni kanye lasembuzini. Ezinye izinanakazana kanye lemikhuhlane kungatshabalala ngenxa yokuguquka komumo womkhathi.

Imithi yokulawula imikhuhlane kanye lezinanakazane ezihlasela izilimo lezifuyo iyadula njalo ukuyisebenzisa okwedlulise amalawulo kwenza ukuthi izinanakazana lezi loba imikhuhlane le ingasazweli imithi le. Imithi eminengi yokubulala izinanakazana iyabulala izinanakazana ezilusizo ezidla izinanakazana eziluhlupho okwenza uhlupho lumemetheke. Ukwenziwa kwemithi esetshenziswa

kwezokulima kwenza intuthu ezibamba isikhudumezi emkhathini ukuthi ziphume ziye emkhathini. Kungcono ukuthi abalimi basebenzise ezinye indlela ezinika isixazululo sesikhathi eside ezingangezeleliyo amagasi abamba isikhudumezi emkhathini. Ezinye kodwa zingatshabalala



Ukulima ugabanisa umumbu lendlube kanye lokuhlanyela utshani be-napier emaphethelweni ensimu kuyasiza ekuphunguleni ukuhlaselwa yimihogoyi

Indlela zokulawula umhogoyi ngokuwuxotsha kanye lokuwuhuga

Imizamo (trials) eyenziwe e-Africa yonkana jikelele isithole indlela ezisebenzayo sibili ekulawuleni umhogoyi ezingeyamanga emithini. Nanka amanye amasu abalimi:

- Hlanyela ama-legumes afana lendlube phakathi laphakathi kwezilimo. Lezi ziyaphambanisa umhogoyi okuwenza wehluleke ukufinyelela isilimo somumbu.
- Hlanyela isilimo sotshani esibizwa ngokuthi Napier grass emaphethelweni ensimu. Imihogoyi izakhetha ukuhlasele isilimo se-napier grass kulomumbu.
- Hlola amasimu kanye lezilimo zomumbu udinga amaqanda omhogoyi loba yona imihogoyi yakhona, patshaza konke okubonayo.
- Sebenzisa umlotha, ilayimu loba nje okunye okuyimpuphu emfolweni wehlamvu lesilimo somumbu.
- Huga ubunyonyo kuzilimo zakho zomumbu ngokuzifafaza ngamanzi aletshukela. Ubunyonyo buyahlasela umhogoyi.

Ukuphungula ukuhlaselwa kwezilimo yizinanakazana kanye lemikhuhlane

Ukuphungula ukuhlaselwa yizinanakazane kanye lemikhuhlane emasimini, engadini yezihlahla zezithelo kanye lezingadini:

- Hlanyela izilimo ezihambelana lendawo kanye lomkhathi wenu.
- Hlanyela ngesikhathi somnyaka esifaneleyo.
- Tshintshanisa izilimo emasimini kanye lasezingadini.
- Qiniseka ukuthi umhlabathi ulokudla okwaneleyo njalo kungamane usebenziise indlela zemvelo ezifana le-compost, umquba kanye lokuhlanyela lezilimo zomhlobo wendumba (legumes).
- Nika izilimo amanzi aneleyo kodwa hatshi adlulisileyo njengoba lokhu kukhanga izinanakazana lemikhuhlane.
- Sebenzisa indlela zasendulo ezifana lomlotha kanye lezinto ezixotsha izinanakazana ezenziwe ngezimila ezilephunga elilamandla.
- Khipha ubulale zonke izilimo ezingenwe ngumkhuhlane.

Ukuphungula ukuhlaselwa kwezifuyo yizinanakazana lemikhuhlane

Ukuphungula ukuhlaselwa kwezifuyo yizinanakazana kanye lemikhuhlane abalimi kumele:

- Bakhethe imihlobo yezifuyo eqinileyo. Gcina imihlobo eminengi.
- Qiniseka ukuthi izifuyo zilokudla kohlonzi oluphezulu kanye lamanzi aneleyo ahlanzekileyo.
- Gcina amadlelo emahle njalo uhlanyele izilimo kanye lezihlahla zokungezelela ukudla.
- Bana lendawo eziqinileyo njalo ezihlanzekileyo zokugcinela izifuyo zakho.
- Hlaba amajekiseni okuvikela imikhuhlane njalo ulawule imikhaza.

Imibuzo esuka emadolobheni eZimbabwe

Njengoba umphakathi wasemadolobheni usebenzisa kakhulu amandla (asukela emalahleni enjiwayo, kuphethiroli, idizili legasi) kanye lendlela zokuhambisa (kusetshenziswa iphethuroli ledizili) kutsho ukuthi uyingxenyane emqoka ekwenzeni ukuthi kube lentuthu ezibamba isikhudumezi emkhathini. Indawo zasemadolobheni kuzadingeka ukuthi ziziguqule ngendlela ezithile ukuze zijwayele inguquko yomumo womkhathi.

20. Inguquko yomumo womkhathi izathinta njani amadolobho amancane lamakhulu?

Indawo zasemadolobheni zizathintwa kabanzi yikukhwela kwezinga lokutshisa, isikhukhula esisukela ekuneni kwezulu kakhulu kanye lokusilela kwamanzi. Ukuthinteka kanye lokungcoliswa kokwenziweyo okufana lemigwaqo, amabholo kanye lezakhiwo kuzengenzeka lapho amagasi lawo esanda.

Ukuqansa kwezinga lokutshisa

Ngenxa yokuthi amadolobho amancane lamakhulu alezakhiwo ezinengi, ikhonkirithi enengi kanye lethara ngasikhathi sinye elezimila ezilutshwane kuqathaniswa lasemaphandleni izinga lokuqansa kwezinga lokutshisa lizabe liphezulu. Indawo ezisemadolobheni zilethuba elikhulu lokuhlangana lokutshisa okwedlulisileyo okungafaka impilo engozini ikakhulu ezabantwana, abantu asebekhulile kakhulu kanye labantu abalezimo ezithile ezibucayi.

Uhlonzi lomoya osemadolobheni soluvele lulubi ngenxa yokwanda kwezakhiwo, ukungcoliswa komoya okusukela ezimoteni kanye lemitshineni, ukusweleka kwezihlahla kanye lokungahambahambi kuhle komoya. Izinga lokutshisa eliphezulu lizenza uhlonzi lomoya lubelubi ngamandla okuzenza ukuthi izifo eziphathelane

lokuphefumula ezifana le-asima zande.

Abantu abasebenza bephakathi kwezakhiwo kanye lalabo abasebenza bephandle bazaphambaniseka kakhulu lapho izinga lokutshisa eliphezulu selisenza kubenzima kumbe kungasenzeki ukuthi baqhube imisebenzi yabo.

Izinga lokutshisa eliphezulu lizenza ukuthi kudingeke amandla (energy) okusebenzisa amanengi ngokudingeka okwengezelekileyo kokusetshenziswa kwamafiriji lama-air conditioner.

Lokhu kuzengeza ubunengi bamagasi akhutshwa esiya emkhathini wona abamba isikhudumezi emkhathini ngaphandle nxa kungatholakala ubuciko obutsha.

Isikhukhula samanzi

Ngesikhathi sokuna kwezulu elinengi kakhulu amadolobho amanengi alethuba eliphezulu lokuhlangana lesikhukhula kulemaphandleni khona okungenziwa kube kubi yikungaphathi kuhle izibi okuvala imigelo yamanzi. Ngenxa yokuthi umhlabathi omnengi emadolojeni wakhelwe phezu kwawo, amanzi ezulu kenelisi ukungena phansi kalula.

Ukwakha phezu kwamaxhaphozi kuyengeza uhlupho ngoba amaxhaphozi ayindlela yemvelo yokumunya amanzi okwehlisa isikhukhula ngasikhathi sinye evuselela imithombo engaphansi komhlaba eyiyo eyenza izibholane zibelamanzi. Kulethuba elikhulu lokuthi ukuguquka komumo womkhathi kuzengeza ithuba lokusetshenziswa kwamaxhaphozi ngendlela edlulisa amalawulo ezenza ukuthi angagcinakali njengoba ayabe engumthombo wokuphila ngesikhathi sokoma. Lokhu kuzehlisa ukwenelisa kwawo ukumunya amanzi.

Ingozi kanye lokuphambaniseka kwemisebenzi eyenzelwa uzulu

Izakhamizi zemadolobheni zithembele kakhulu kulezemaphandleni enhlelweni zemisebenzi ezipha amanzi, amagetsi kanye lekuphatheni izibi. Ukuguquka komumo womkhathi kulakho ukuphambanisa limisebenzi okwenza abantu basemadolobheni babesengozini yokuphambaniseka kwalimisebenzi. Lokhu kungabe kusukela:

- Eziqhothweni ezivame ukuphambanisa intambo zamagetsi,
- Isikhukhula esingcolisa imithombo yamanzi kanye lokuvalala ezinye izindawo ukuthi zingafinyeleleki kanye
- Lezulu lamatshe elibhidliza impahla.

Ukuqansa kwezinga lokutshisa kuzengeza ingozi yomlilo kanye lezehlakalo zemikhuhlane.

Ezinye inhlu pho

Ngenxa yobunzima obubangelwa yikuguquka komumo womkhathi, abantu basemadolobheni bangangasathumeli kangako imali emulini zabo ezisemakhaya. Ngokufanayo, ukusweleka kwezulu emaphandleni kungengeza ithuba lokukhwela kwentengo yokudla emadolobheni.

Ukuswelakala kwezulu kanye lengozi yengxabano engabakhona kubangwa amanzi lezinye ezemvelo emakhaya kungengeza ithuba lokuthutha kwabantu abanengi besuka emaphandleni besiya emadolobheni. Lokhu kuzenza ukutholakala kwezindlu zokuhlala kanye lokufinyeleleka kweminye imisebenzi eyenzelwa abasemadolobheni kube lukhunyanana ngamandla khona okungakhokhelela enkingeni zempilakahle kazulu kanye lokwanda kokuganga kanye lengxabano.

21. Izakhamizi zemadolobheni zingenzani ukulwisana lokuguquka komumo womkhathi?

Abantu basemadolobheni kumele basungule amanyathelo okuzijwayeza ukuguquka komumo womkhathi kanye lokuphungula ukwenziwa kwamagasi abamba isikhudumezi emkhathini.

Indlela zokuzijwayeza (adaptation) emadolobheni

Ukuhlanyela izimila ezinengi ezitaladini kanye lalapho okulezakhiwo. Lokhu kungasiza ukwehlisa izinga lokutshisa kwaphandle njalo kwengeze ukungena kwamanzi emhlabathini khona okuphungula isikhukhula. Izakhiwo zingenziwa ukuthi ziqandelele ngokuhlanyela izihlahla, izihlahlakazana ezithandelayo kanye lezinye izimila zokwenza umthunzi emafasiteleni kanye lasephahleni. Umhlaba ongelalutho ungasetshenziswa ekulimeni okokudla kanye lekuzilibaziseni. Ngokuhlanyela izihlahla ezinengi endaweni lezi lazo zizakwengeza ukuqandelela.

Ukuvikelwa kwamaxhaphozi kuqakathekile kakhulu ekwengezeni ukumunywa kwamanzi ngumhlabathi kanye lekwengezeleleni amanzi angaphansi komhlaba.

Ukubalula ingozi. Wonke amabhizimisi kanye lemizi kumele abalule izingozi ezingalethwa yikuguquka komumo womkhathi abuye athathe amanyathelo okwehlisa lezi ngozi.

Amanyathelo okulondolozwa kwamanzi kumele asungulwe kuwo wonke amabhizimisi kanye lemizini njalo kumele kwenziwe imizamo yokuphungula ukungcoliswa kwamanzi okuzenza kubelula ukusebenzisa njalo amanzi ake asetshenziswa ngaphambilini.

Basebenzise indlela zokuphungula intuthu ezikhutshelwa emkhathini ezilenzuzo kwezomkhonomi njalo ezingezelela ukwenelisa ukuzimela lalapho kulenkinga zokwethulwa kwemisebenzi ethile.



Ukusebenza emadolobheni kuzakuba nzima kungela ma air conditioner.

Lezi ziyathintwa kabanzi esigabeni esilandelayo.

Ukuphungula intuthu ezibamba isikhudumezi emkhathini (mitigation) emadolobheni

Ukusebenzisa inhlelo zamandla ezivuselelekayo - okugaqela okokukhudumeza amanzi ngelanga, amandla elanga kanye lokusebenzisa okubolayo kanye lamanzi alahliweyo ukwenza igasi. Lawa manyathelo ayasiza njalo ekuqinisekeni ukuthi amandla okusebenzisa ayatholakala lapho amagetsi engekho elizweni. Amandla elanga asaleleyo alakho ukufakwa ehlelweni lwelizwe olwamagetsi okwehlisa imali yokubhadalela amagetsi ngenxa yohlelo olusanda kusungulwa oluvumela abantu abenze amagetsi amanengi kulalawo abawadingayo ukuthi bawagcinise phakathi kwesiphala samagetsi elizwe.

Ukusebenzisa ubuciko obungadlalisi amandla. Amabhizimisi kanye lemizi kumele batshintshe zonke izibane zamagilobhu baye kulawa alondoloza amandla loba ama-LED. Bangafaka njalo ubuciko obunjengalobo obuzwa nxa kulolutho oluhambayo ukuze bukhanyise izibane, buhambise amasitepisi amagetsi lamabhanti athwala impahla ema-indatsri nxa kudingakala kuphela. Kungasetshenziswa njalo imitshina eguquguquka isiqubu phezu kokufaka ama-compressor kanye lokubilisa amanzi ngendlela ezilobuciko obungcono.

Phungula izibi njalo ziphathwe ngcono. Lokhu kungagoqela ukuphungula ukusetshenziswa kweziphathelo ezingamapulasitiki kanye lokuba leziphathelo ezingasebenziseka njalo loba ezeneliseka ukubola.

Sebenzisa izibizakweyinye i-indastru ukuthi zisetshenziswe ekwenzeni izinto kweyinye i-indatsri (recycling). Ukukhuthaza ukusebenzisa izinto kuphindwa kanye lokuphungula izibi kuyaphungula ukukhutshwa kwamagasi, kwehlise impumela embi kwezemvelo kubuye kwengeze inzuzo kwezamabhizimisi.

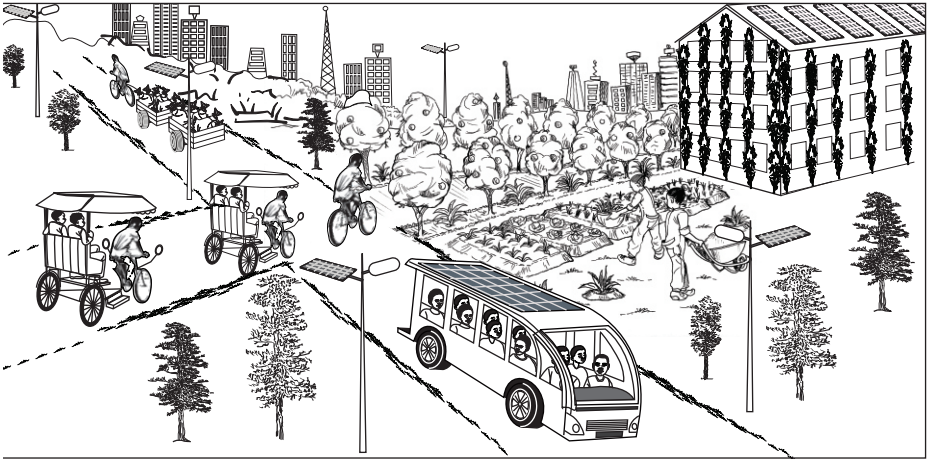
Sebenzisa izindlela zokuhambisa zikazulu loba utshove ibhayisikili usiya emsebenzini loba esikolo lapho okuvuma khona. Yenzani njalo indlela zokuthwala abantu ezisebenzisa amandla avuselelekayo.

Sebenzisa ubuciko obutsha bokwakha izakhiwo ukuze uphungule isidingo sokusebenzisa ama-air conditioner. Sebenzisa ukukhanya kwemvelo njengamazenge lamafasitela angenisa ilanga. Dinga ezinye izinto zokusebenzisa endaweni yesamende sona esiphathisa kakhulu ekwengezeni amagasi abamba isikhudumezi emkhathini.

Ukufaka imali kumkhononi onanza umkhathi (green economy)

Amanyathelo la angaletha amathuba amatsha kumabhizimisi kanye lasekudalweni kwemisebenzi njengengxenywe yomkhononi onanza umkhathi (green economy) wona olamalunga amqoka ayisithupha:

- Amandla avuselelekayo (Renewable energy)
- Izakhiwo ezinanzu umkhathi (Green buildings)
- Indlela zokuthwala abantu lempahla ezingelakutshabalala
- Ukuphathwa kwamanzi
- Ukuphathwa kahle kwezibi
- Ukuphathwa kahle komhlabathi



Idolobho laseZimbabwe kwelakusasa elilezibane zezitaladi ezisebenzisa amandla elanga, elilezaxhiwo ezilama-solar panel phezulu, izakhiwo ezivalwe ngezimila ukwenzela ukuqandelela, izilimo ezimila emhlabathini ongasetshenziswanga, izihlahla ezihlanyelwe ezitaladini, imota zokuthwala abantu lempahla ezidonswa ngamabhayisikili kanye lebhasi esebenzisa amandla elanga.

Mayelana logwادلانا lolu

Ugwادلانا lolu lujonge ukupha abantu baseZimbabwe impendulo ezicacileyo njalo ezilula phezu kweminye imibuzo evamileyo mayelana lokugquka komkhathi. Ukuze sibhale lolu gwادلانا saqoqa imibuzo esukela ebantwini baseZimbabwe abatshiyetshiyeneyo abasemaphandleni lasemadolobheni. Ugwادلانا lolu lwehlukaniswe lwaba yizigaba ezinhlanu:

- I mibuzo jikelele mayelana lokugquka komkhathi
- I yini impumela yokugquka komkhathi eZimbabwe?
- Kuyini okwenziwayo ngokugquka komkhathi?
- I mibuzo esuka kuzizalwane zaseZimbabwe ezisemaphandleni
- I mibuzo esuka kuzizalwane zaseZimbabwe ezisemadolobheni

