UBUTUMWA SHINGIRO BWEREKERANYE N'IMITERERE Y'IBIDUKIKIJE MU RWANDA HAMWE N'IBIKORWA BYATEGANIJWE MU 2009

Intangiriro Rusange

- Itegeko rishyiraho Ikigo cy'u Rwanda gishinzwe kubungabunga no kwita ku bidukikije (REMA) – mu ngingo yaryo No.16/2006 – ritegeka REMA gukora ibarura, isuzuma n'igenzura ry'ibidukikije rusange, hagamijwe gutegura raporo ku miterere y'umutungo kamere mu Rwanda, iyo raporo ikazajya ikorwa buri myaka ibiri.
- Iyi raporo ni cyo gikorwa cya mbere gisesuye gikorewe u Rwanda ku birebana n'imiterere y'Ibidukikije. Ni isuzuma rifata impande zose rikazanaba icyitegererezo kuri raporo zizajya zikorwa mu bihe bizaza. Izafasha na none izindi raporozijyanye n'ibidukikije mu karere u Rwanda ruherereyemo, n'izo ku rwego rw'isi nka raporo kucyerekezo Nyafurika cy'Ibidukikije (Africa Environment Outlook) na raporo kucyerekezo cy'Isi cy'Ibidukikije (*Global Environment Outlook)*.
- Igikorwa cyo gusuzuma Imiterere y'Ibidukikije, uhereye ku guhitamo no ku kumenya ibizagenderwaho kugeza ku iyemezwa rya raporo ya nyuma, cyabaye igikorwa gihuriweho na benshi. Cyashyizwemo imbaraga z'urwunge na REMA, ababifitemo uruhare b'ibanze bo muri Leta n'abatagengwa na Leta, abo mu bigo byigenga n'inzobere z'igihugu mu byiciro ngenderwaho binyuranye.

- Uburyo bwakoreshejwe (Methodology) mu isuzuma risesuye ry'ibidukikije bugerageza kwerekana amahuriro mu mpamvu no mu ngaruka y'ibikorwa bya muntu n'ibikomoka kuri kamere kimwe n'ingaruka zabyo ku bidukikije. Ku rundi ruhande, bugaragaza ingaruka z'ihindagurika ry'ibidukikije ku mibereho myiza y'umuntu.

- Umurongo ugenderwaho muri iki gikorwa cy'isuzuma witwa DPSIR (Drivers, Pressure, State, Impact, Response). Ugaragaza by'umwihariko uruhererekane rw'impamvu uhereye ku mbaraga n'ibikorwa (mbaturabukungu), ingorane (imyuka ihumanya, imyanda) n'imiterere y'ibidukikije (nyabugenge, nyabutabire na nyabuzima) n'Ingaruka ku rwunge rw'ibinyabuzima, ku buzima no ku mibereho by'abantu, ibi bikaganisha ku ifatwa ry'Ibyemezo ku birebana n'igenamikorere (politike, amategeko n'inzego z'ubuyobozi) (PNUE, 2006).

- Icyo iri suzuma rigeraho amaherezo kirenze ubumenyi gusa ku miterere y'ibidukikije. Rizaha abafata ibyemezo n'abandi babifitemo uruhare amabwiriza yerekeranye n'uburyo bwo kwita ku bidukikije neza kurushaho.

- Iyi raporo ku miterere y'Ibidukikije igizwe n'ibice bitatu:
  - Igice cya Mbere cyerekana muri rusange ibijyanye n'ubukungu, abaturage n'uruhare ibidukikije bifite mu gufasha iterambere ari ko na ryo ribibungabunga. Kiriga na none ku bintu bibiri ngenderwaho mu bukungu by'ingirakamaro cyane ku mibereho y'abantu: 1) Imikoreshereze y'ubutaka n'ubuhinzi, 2) Inganda n'amabuye y'agaciro.

- Mu gice cya kabiri, isesengura riribanda ku mutungo kamere ari na wo shingiro ry'imizamukire mu bukungu no mu iterambere ry'abaturage. Kirarebera hamwe ibintu bitanu ngenderwaho: Urwunge rw'ibinyabuzima n'Umutungo kamere, amashyamba n'ahantu hakomye, umutungo w'amazi n'uw'ahantu hahehereye, umutungo ubyara Ingufu, Imihindagurikire y'Ibihe n'iy'Ikirere n'Impanuka zikomoka kuri karemano.
- Igice cya gatatu cy'iyi raporo kiragaragaza ingamba (politike, ishyirwaho ry'amategeko n'inzego z'ubuyobozi) Guverinoma yafashe mu gushyigikira iterambere rirambye. Kirareba na none ibihe bizaza hakoreshejwe umurongo w'imitekerereze ku gihe kizaza.

Imiterere y'u Rwanda muri rusange

- Ubucucike mpuzandengo bw'abaturage mu 2002 wari 321 kuri km2 (INSR na ORC Macro 2006) naho umubare mpuzandengo ku buso bw'ubutaka bushobora guhingwa) wari urenze abantu 500 ku km2.

- Imiterere y'u Rwanda irangwa n'ibibaya, ibitwa n'imisozi bifite ubutumburuke mpuzandengo bwa metero1700. Agasongero gatumburutse kurusha ak'iyindi misozi ni aka Karisimbi gafite metero 4507 z'ubutumburuke. U Rwanda rufite imisozi ikomoka ku birunga mu nkengero z'amajyaruguru no mu ruhererekane rw'imisozi ahenshi mu gitwa cyo hagati. Nyamara, uruhande rw'uburasirazuba bw'igihugu rurarambaraye bihagije ku buryo rufite ubutumburuke mu nsi cyane ya metero1500. Ubutaka buri hasi mu majyepfo ashyira uburasirazuba mu kibaya cya Bugarama ku butumburuke bwa metero 900m bubangikanye n'igisate mu butaka bw'ikibaya cya Rift.

- Iyi miterere iha u Rwanda imiterere y'ikirere gitoshye kandi gifite ubukonje bitewe ahanini n'ubutumburuke. Ugereranije, ubushyuhe mu mwaka ni hafi 18,5^{o}C, naho imvura igwa muri rusange ni hafi milimetero 1.250 mu mwaka.

- Igihugu gitunzwe ahanini n'ubuhinzi, kikaba gifite amahitamo make yatuma kigabanya imbaraga nyinshi zisabwa umutungo w'ubutaka. Ubuhinzi butanga 47 ku ijana by'umusaruro w'igihugu ukomatanyije kandi buhagarariye 71 ku ijana by'amafaranga akomoka ku bicuruzwa hanze by'igihugu. Ni isoko y'ibanze yo kwinjizaamafaranga ya 87% y'abaturage (MINAGRI 2006). 52% by'ubuso bw'ubutaka ni bwo buhingwa gusa, hafi hegitari 1.385.000 (ROR 2004). Ubucucike bunini bw'abaturage hagati y'urusobe rw'ibinyabuzima butorohewe butuma umutungo kamere w'igihugu wangirika (ROR 2004).

- Ibibazo bikuru bikuru by'ibidukikije ni ibijyanye n'ingaruka ziterwa n' ubwiyongere bw'abaturage ugereranyije n'umutungo kamere nk'ubutaka, amazi, ibimera n'inyamaswa n'indi mitungo itisubirisha (MFEP 2000). Ibi bigaragazwa cyane n'iyangirika ry'ubutaka, isuri, igabanuka ry'uburumbuke bw'ubutaka, itemwa ry'amashyamba, iyangirika ry'ahantu hahehereye, gutakaza urusobe rw'ibinyabuzima no guhumana kw'ikirere n'ukw'ibidukikije.

Umutwe wa mbere: Ibidukikije n'Iterambere mu Bukungu

- Hafi 57 ku ijana by'Abanyarwanda, harimo cyane cyane abagore, babaho mu bukene bukabije, bakaba batungwa n'idolari ridashitse ku munsi.
- Uburyo abakene babayeho n'icyizere bafite cyo kubona ibiribwa bishingiye akenshi ku buryo butaziguye ku rusobe rw'ibinyabuzima, no ku rwunge rw'ibintu na za serivisi bikomoka kuri urwo rusobe rw'ibinyabuzima.
- Gushyira mu bikorwa imigambi y'igihugu n'imigambi mpuzamahanga y'iterambere rirambye n' ibikorwa byo kugabanya ubukene bisaba ko u Rwanda rushyira ibidukikije n'amahame yumwimerere yo gucunga neza umutungo mu rwego rw'igenenamigambi ry'igihugu ryerekeranye n'iterambere mu bukungu.
- Ubukungu na bwo bujyana n'ibidukikije mu buryo bwinshi bugaragara. Ibikorwa ngengabukungu byose harimo Kubyaza umusaruro, kuwukoresha no gutaba imyanda bibera mu bidukikije.
- Mu Rwanda, Umusaruro Rusange w'Igihugu (PIB/GDP) nyawo duhereye ku biciro byo mu 2001 wiyongereho 6 ku ijana mu 2007 ugereranije na 5,5 ku ijana mu 2006. Uko kwiyongera kwaturukaga ku kugaruza umusaruro wo mu nzego za 3 n'iza 2 zinjije inyongera za 11,4 na 9,2 ku ijana buri kimwe hakurikijwe inyongeragaciro ku kiguzi mu 2007 ugereranije n'umwaka ubanziriza.

- Inyongeragaciro ku kiguzi mu 2007 duhereye ku biciro byo mu 2001 mu rwego rwa mbere (Primary sector) yagabanutseho 0,5 ku ijana. Urwego rwa gatatu (tertiary sector) rwagumanye umwanya wa mbere mu miterere ya PIB rufite 48 ku ijana ya PIB tugereranyije n' ibiciro byo mu 2001, rukurikiwe n'urwego rwa mbere (Primary sector) rufite 31 ku ijana hanyuma hakaza urwego rwa kabiri (secondary sector) rufite 15 ku ijana bya PIB mu 2007.

- Iyi miterere y'ubu ya PIB aho urwego rwa gatatu (tertiary sector) ari rwo rufite uruhare ruhanitse mu bukungu ni ikimenyetso cyiza cy'uko ishyirwa ku muhate ry'umutungo kamere rishobora kugabanuka ku buryo bugaragara kugira ngo ibidukikije bibungabungwe. Ariko iki cyitegererezo nticyitaye kubwiyongere bw'abaturage Nyamara uko kwiyongera nyine, niba kudakumiriwe gushobora guteza ukwiyongera kw'imyanda n'ibintu byanduza bishora kwangiza ibidukikije.
- Umusaruro Rusange w'Igihugu (PIB) ku muntu ku biciro biriho ubu wiyongereyeho 6,6 ku ijana: inyongera yavuye ku bihumbi 181,3 igera ku bihumbi 199,9 mu mafaranga y'u Rwanda. Ushyize mu Madolari y'Abanyamerika, habayeho inyongera ya 10, 3 ku ijana: kuva ku madolari 331 y'amanyamerika kugeza kuri madolari 365 mu 2006 n' 2007.
- Mu 2007, igabanuka rusange ry'agaciro k'ifaranga ku isi ryageze ku 9, 1 % ugereranije na 8, 9 % mu 2006 (NBR 2008). Hakoreshejwe ibimenyetso mu mibare ku bicuruzwa byinjizwa bivuye hanze, umubyimba n'ibimenyetso mu mibare by'agaciro k'ibicuruzwa byiyongereyeho 43,84 na 47,04 ku ijana, muri 2006 no muri 2007 kuri buri kimwe.
- Mu bicuruzwa byinjiye, ibitanga ingufu hamwe n'amavuta ya za moteri byarazamutse kurusha ibindi, ku buryo byageze kuri 99, 46 % mu gaciro. Ibicanwa byari ku isonga bifite ubwiyongere bwa 106, 32 ku ijana mu gaciro ugereranije n'ubwiyongere bwa 5, 33% mu mubyimba.
- Isuzuma ry'igabanuka ry'agaciro k'ifaranga ryerekanye ko u Rwanda rudashobora kugera ku Ntego z'Iterambere z'Ikinyagihumbi (ODM) niba igabanuka ry'agaciro k'ifaranga mu nzego z'ibanze zerekeranye n'amacumbi, amazi n'ingufu rikomeje kwiyongera.
- U Rwanda, kimwe n'ibindi Bihugu hafi ya byose biri mu nzira y'amajyambere, rwahuye n'ibibazo by'ideni mu myaka makumyabiri ishize, iryo deni rikaba rikomoka ku kwiyongera kw'inguzanyo

zituruka hanze ((rugamije kubona amafaranga yo gutanga ku biciro bihanitse ahanini, cyane cyane mazutu); iryo deni kandi ryakomotse ku imanuka ry'agaciro k'ifaranga, na za gahunda z'iterambere, ari byo bimwe muri ibyo.

- Kugira ngo kwitabaza amahanga bigabanuke, harimo gushyira imbaraga mu bwiyongere bw'umubare w'ibicuruzwa bituruka mu gihugu, ariko ibyo bicuruzwa biracyashingiye ku mutungo kamere. Bimwe mu bicuruzwa bigizwe n'ibikorwa by'ubugeni (*agaseke*) cyane cyane ku birebana n'abagore, n'ibicuruzwa bishyashya nk'imitobe ikomoka ku mbuto, inanasi n'uburabyo.
- Izindi ngamba zigizwe no kongera ubushobozi mu birebana no kubona amashanyarazi kugira ngo horoherezwe ishoramari ryo mu rwego rw'inganda igihe umutungo w'imari uzatuma bishoboka.
- EDPRS yo mu mwaka w'i 2007 iraha umwanya w'ibanze kwihutisha izamuka ry'ubukungu hagamijwe guhana imirimo no kubona ibicuruzwa bijya mu mahanga. Kuko hari bibiri bya gatatu by'abaturage bafite munsi y'imyaka makumyabiri n'itanu, haribandwa by'umwihariko ku kubonera urubyiruko imirimo. Hateganyijwe ubwiyongere bw'ibicuruzwa bijya hanze bwa 15 ku ijana ku mwaka ugereranije n'ijanisha ry'i 10 %.

- Ikibazo kiri mu gukoresha umutungo kamere mu gushaka guteza imbere ubukungu mu gihe nanone hakenewe kurinda ibidukikije mu kwirinda ingaruka mbi zijyanye n'iyandura ry'ikirere n'iry'ubutaka, isuri, itemwa ry'amashyamba n'iyangirika muri rusange.

- Ibidukikije n'umutungo kamere ni byo musingi w'ibikorwa byo mu nzego zose bityo iyo gahunda ''EDPRS'' ikaba ibibonamo ikintu cy'ibanze kigize iterambere ry'igihugu (ROR 2000).

Umwanzuro

- Ubukungu bw'u Rwanda n'ibitunze abaturage bikomoka ku mutungo kamere. Nyamara, uwo mutungo kamere, nk'ubutaka, bigenda birushaho gusabwa imbaraga nyinshi kubera ubwiyongere bw'abaturage n'imikoreshereze idahwitse, itarambye. Ibi biganisha ku kwangirika kw'ibidukikije kandi bishobora kuburizamo izamuka ry'ubukungu n'imbaraga zo kurwanya ubukene niba ntagikozwe.
- Harimo gushyira imbaraga mu izamuka ry'ubukungu burambye zigizwe na politike ya Guverinoma yo kongera umusaruro mu buhinzi no mu bworozi no kuzamura imiterere y'umusaruro hakoreshejwe itunganywa ry'ubutaka, inganda zinoza ibikomoka ku buhinzi, kuzana ibikoresho bishyashya byo mu buhinzi by'agaciro gahanitse muri gahunda y'iterambere izwi ku izina rya ''green revolution'' no korora mu buryo bwa kijyambere hagamijwe kunoza umusaruro no kugabanya umwuka mubi wahungabanya ibidukikije.
- Ku birebana no kwita no gucunga neza imyanda ihumanya, ishyirwaho ry'isuzuma ry'ingaruka ku bidukikije hamwe na za raporo zikorwa ku bidukikije hakurikijwe itegeko nshinga rirebana n'ibidukikije, ishyirwaho rya gahunda y'umusaruro unoze mu nganda ni ibikoresho biganisha ku izamuka ry'ubukungu rihamye.
- Kubera y'uko ubukungu bushingiye cyane ku mutungo kamere, ni ngombwa cyane ko ibikorwa bijyanye n'ubufatanye bw'ibidukikije n'iterambere bishimangirwa kugira ngo hanozwe ibikorwa bya politike bifite uruhare mu kugabanya iyangirika ry'umutungo kamere ukiriho kandi hatezwe imbere ishoramari ry'inyongera rikenewe mu ikoreshwa rya sitoki isigaye y'umutungo kamere hagamijwe guteza imbere imibereho myiza y'abaturage no kurwanya ubukene.

Umutwe wa 2: Abaturage, Ubuzima n'Imiturire

- Hakurikijwe ijanisha ry'ubwiyongere bwa 2,9 ku ijana buri mwaka, abaturage b'u Rwanda ubu babarirwa muri miliyoni 9,2 (2006) harimo abatuye mu mijyi bagera kuri 17 ku ijana. Biteganyijwe ko abaturage biyongera kugeza hafi kuri miliyoni 16 mu 2020 keretse nihashyirwa ingufu mu iringanizwa ry'imbyaro, mu burezi no mu ngamba z'ubukangurambaga (ROR 2000). U Rwanda ni igihugu gituwe n'abaturage benshi ku buso kurusha ibindi muri Afurika, kikaba gifite hafi abaturage 397 ku kilometero kare. Guverinoma irifuza ko ibi byazagabanukaho 2,2 ku ijana ahagana mu mwaka w'i 2012.

- Ubwiyongere bw'imicucike y'abaturage mu ngaruka yabwo bwasabye imbaraga nyinshi cyane ibidukikije by'umwimerere bityo butuma abashobora gukora bimukira hirya no hino mu byaro, ndetse hakaba n'abavuye mu cyaro baza mu mujyi.

- Kubera y'uko ibitunze hafi 90% by'abaturage bishingiye ku butaka byanze bikunze, ubwiyongere bw'abaturage ni imwe mu nkomoko y'izamuka mu gukenera umutungo kamere.

- Indengo rusange y'imiryango ni abantu 4,6 naho icyaro n'umujyi bitandukanye mu kigero cya 4,5:4,8. Hakurikijwe Icyerekezo 2020, iterambere ry'imiturire mu mujyi rizatunganywa, bityo iterambere rizagendera ku bwisuganye bw'ibikorwa remezo n'ubwa za serivisi ziboneka mu mijyi (ROR 2000).

- Ubushakashatsi ku miturire hakurikijwe ahantu bibanze gutura bwerekana ko ubucucike bw'abaturage buri hejuru kurushaho mu mijyi cyangwa mu masanteri (centre) y'ubucuruzi n'ay'ibikorwa remezo by'abaturage.

- Mu w'i 2003, igihe hashyizwe ahagaragara inyandiko ya Viziyo 2020, abaturage bo mu mujyi bakekwaga kuba ari 10 ku ijana ; ibarurisha mibare riherutse ryakozwe n'Ishuri Rikuru ry'Igihugu ry'Ibarurishamibare rirasanga byari hafi 17 ku ijana mu 2007 (NISR 2007).

- Ntibigaragara niba ubwiyongere mu mijyi bushingiye ku ngamba z'iterambere mu bukungu cyangwa ku baturage bava mu cyaro bagana mu mijyi. Byombi bifite ingaruka yihariye ku bidukikije.
- Izamuka ry'imiturire mu mijyi bitewe no gushakisha iterambere mu bukungu ritanga inyungu z'inyongera ziyongera ku bihasanzwe kandi rigabanya imbaraga nyinshi cyane zisabwa ibidukikije.

- Kwimuka kw'abaturage bava mu cyaro bajya mu mijyi bishobora gutanga uburyo wasanga ibyiza bike cyane bisangirwa n'abaturage benshi.
- Abaturiye umujyi ku bwinshi batuma ubusanzwe habaho kwiyongera kw'imikoreshereze y'ibintu, agatsiko kanini k'imyanda n'imyuka ihumanya.
- Impamvu nkuru zo kwimuka bava mu cyaro bajya mu mujyi ni ugushaka uburyo bwo kubona ku buryo byoroshye za serivisi, ibikorwa remezo, imyidagaduro n'akazi.

- Kugira ngo hakumirwe iyimuka ry'abava mu cyaro bajya mu mujyi, Guverinoma yitabaje ishyirwa mu bikorwa ry'ingamba zigamije kwegereza abaturage za serivisi, ibikorwaremezo n'imyidagaduro.
- Hari amasanteri agizwe n'imijyi agera kuri 18 mu Rwanda.

- Mu 1996, Guverinoma yashyizeho politike y'igihugu y'imiturire. Iyo politike yaje kumenyekana ku izina ry'Imidugudu.
- Impamvu yo gushyiraho Imidugudu ni ukugirango imiturire ishyirwe mu matsinda, bityo hakemurwa ikibazo cyo kubura ubutaka kimwe n'icyo gucunga neza ibidukikije.
- Imitunganyirize y'ibidukikije ni ikintu cy'ibanze gifasha ubuzima, uburumbuke n'imibereho myiza y'abantu, cyane cyane abaturiye imijyi. Iboneka mu Cyerekezo 2020 nk'ikintu cy'ibanze kigize ishingiro ry'ubuzima n'iry'iterambere ry'abaturage.
- Gahunda na none ibona kurinda ibidukikijeale no gucunga neza kurushaho imiturire nk'igikorwa cy'ibanze kigamije gushyigikira iterambere ry'icyaro n'iry'umujyi.

Ubuzima bwiza bw'ibidukikije

- Ubuzima bw'ibidukikije bugamije guteza imbere no kugira ibidukikije bisukuye, byizewe kandi biboneye, mu miturire , hagamijwe guteza imbere ubuzima bwiza bw'abaturage, n'ubukungu mu nzego zose z'abaturage.
- Bugizwe n'umubare runaka w'ibikorwa byuzuzanya, harimo kubaka no kwita ku bikorwaremezo bijyanye n'ubizima, itangwa rya za serivisi, uburezi bushingiye kuri Leta, ibikorwa rusange n'iby'umuntu ku giti cye, amabwiriza n'amategeko.
- Intego y'Icyitegererezo 2020 ni ukugira ubuzima bwiza mu mujyi no mu cyaro – nta bintu byanduza, no gukorera isuku ibishanga byose hagamijwe kugabanya cyane cyane ibintu bibamo bitera malariya. Kuri buri mujyi cyangwa buri hantu h'iterambere kugira agashami gashinzwe gutunganya no gushyingura imyanda ikomeye, no mu ngo, guteza imbere ubukangurambaga no gushyira mu bikorwa, ingamba z'ibanze z'izuku n'iz'imitunganyirize y'ahantu n'iy'ibintu.
- Ubushakashatsi mu 2006 bwerekanye ko 19 ku ijana by'ingo zo mu mujyi zakoreshaga amazi y'amariba naho ko 12 ku ijana zavomaga amazi mu mavomero ya Leta adatwikiriye.

Gucunga neza imyanda

- Gucunga neza amazi mabi n'imyanda ikomeye mu Rwanda bifite isura zitandukanye: kuva ku misarane ya Leta kugeza ahantu hateganyirijjwe za ruhurura.
- Kuboneka kw'imyanda ikomeye, iy'amazi n'iy'imyuka ihumanya byiyongera ku muvuduko ujyanye n'uw'iterambere ry'inganda.
- Mu byaro, igenamigambi ry'iterambere ry'Uturere ririmo gushimangira ko buri rugo (100 ku ijana) rugomba kuba rufite ikimpoteri gikozwe neza mu mwaka w'i 2012;

Ibangamirwa ry'ibidukikije i Kigali

- Umujyi wa Kigali nta genamigambi ngenderwaho y'iterambere ifite bityo hakaba hari akajagari mu iterambere ry'imiterere y'umujyi. Ahantu hakorerwa ubucuruzi, ahantu h'imiturire ho mu rwego rwo hasi, uruciriritse cyangwa urwo hejuru, hose hahindutse insisiro zitari mu igenamigambi.
- Kuri izo mpamvu, ibibazo by'ibidukikije n'iby'ubuzima nk'imyanda ikomeye, gutwara imisarani,

amazi mabi n'imyanda yoroshye byo mu nganda byahindutse ikibazo.

- Abayobozi b'umujyi wa Kigali, mu bufatanye by'inzego zikorera ku giti cyazo, bakoze uko bashoboye kugira ngo batoragure imyanda ikomeye (solid waste) bahereye aho ituruka bashaka gukiza Kigali imyanda ikomeye.

- Ariko, haracyari ibangamirwa ry'ahantu imyanda yo mumusarani n'iyindi myanda ikomeye ijyanwa amaherezo. Aho ijyanwa hameze nabi kuri ubu, hakaba hanafite imbogamizi zikomeye ku buzima bw'abantu n'ubw'ibidukikije.

- Kuri ubu, Umujyi ufite ikimpoteri cyuzuye i Nyanza mu Karere ka Kicukiro, hakaba harimo kwikorwa ubushakashatsi bwo guhitamo ahantu ho gutaba imyanda hajyanye n'ibisabwa n'inzego za tekiniki.

- Umujyi wa Kigali ntigira inyubako nkuru yo gutunganya amazi, cyangwa uburyo bwa za ruhurura. Ntihigeze habaho politike yerekeranye n'imitunganyirize y'ahantu n'iy'ibintu nyayo mu bihe byashize – abantu ku giti cyabo ni bo biyemeza gushyiraho uburyo bakoresha hakurikijwe amikoro.
- Ibigega boherezamo imyanda n'amazi mabi yo akamanukira mu byobo biyanyunyuza ni bwo buryo bwa tekinoloji abakire bo mu mujyi bakoresha kurushaho, mu gihe abatabishoboye biyambaza bya byobo birebire gakondo bikoreshwa mu kubaka imisarane n'ubwo bigira ingaruka ku mutungo w'amazi yo mu butaka cyane cyane ahantu h'umujyi.

- Amazi mabi y'ibigo bihambaye nk'amashuri, amahoteri, za gereza n'ibitaro ajugunywa iminsi yose muri za ruhurura mu byobo, hanze mu bisambu byo mu mujyi nta kuyatunganya no kuyavangura, ndetse no mu gishanga cya Nyabugogo.
- Imikorere ikunze kuboneka ni ugushishikariza abubatsi gushyiraho uburyo bw'imitunganyirize y'ahantu n'iy'ibintu hagati y'amacumbi bubaka. Urugero rw'iyo mikorere rushobora kuboneka ahantu habiri mu mujyi wa Kigali: Viziyo 2020 i Gaculiro mu Karere ka Gasabo ifite uruganda rutuganya imyanda na Nyarutarama (Estate), muri ako Karere na none, ifite ibizenga byo gucubya imyanda.
- Nyamara, inyinshi muri iyi mikorere mishyashya y'ibigo ni ijyanye n'ikoreshwa rya za mashini, bityo ikaba ishobora guzahinduka inkomoko y'ibibazo mu gihe kizaza niba nta gisubizo kirambye kibonetse.

- Kuri ubu, umujyi urabishyiramo ingufu ufatanije n'abaterankunga b'iterambere bashoboye gukora igenamikorere ngenderwaho, harimo ibintu byose birebana n'igenamigambi rijyanye n'iterambere ry'ahantu ariko rigomba gukomeza kunonosorwa.
- Nanone, umushinga w'igenamigambi ngenderwaho werekeranye n'imitunganyirize y'ahantu wagejejwe ku mpuguke muri za tekinoloji zo gucunga neza itunganywa ry'ahantu n'ibintu. Uwo mushinga uzi neza ko imiterere nyaburanga ya Kigali itazatuma hashyirwaho uburyo bumwe bwihariye bukusanya amashami ya za ruhurua z'umujyi.

- Ku rwego rw'igihugu, igenamigambi ngenderwaho ryo gukoresha ubutaka no kububyaza umusaruro ririmo gukorwa riyobowe na MINIRENA. Ariko n'izindi minisiteri na zo zatangiye gukora amagenamigambi ngenderwaho azireba muri urwo rwego mbere y'uko igenamigambi ngenderwaho ry'imikoreshereze y'ubutaka no kububyaza umusaruro rirangira. Igenamigambi

ngenderwaho ryo kuhira kimwe n'igenamigambi ngenderwaho ry'imikoreshereze y'ubutaka n'igenamigambi ry'ubuhinzi ni zimwe mu ngero.

- Hari ubushyamirane mu nzego z'ubuyobozi ku birebana n'inshingano zijyanye n'ubuzima bw'ibidukikije n'imitunganyirize y'ahantu n'iy'ibintu. Ubuzima bw' ibidukikije ni inshingano ya Minisiteri y'ubuzima (MINISANTE) n'ubwo uburyo bwo kuyishyira mu bikorwa bushyirwaho hakurikijwe amabwiriza ya REMA.
- Amazi mabi no gucunga neza imyanda ikomeye bitunganywa na za Guverinoma zaguye, kandi uruhare rwa Minisiteri y'ibidukikije (MINIRENA) mu kubaka ibigo by'ubuzima hanze y'Umujyi wa Kigali ruragaragara.

Imyanzuro n'amabwiriza

- U Rwanda rufite abaturage bakiri bato ariko biyongera vuba. Abaturage bari miliyoni 9,2 mu 2006 hakaba hakekwa ko bazaba ari miliyoni 16 mu 2020 keretse niba kuringaniza urubyaro, uburezi n'ingamba z'ubukangurambaga bishyizwemo ingufu.
- Kuba ubucucike bw'abaturage ari abantu 397 kuri kilometero kare, u Rwanda ni cyo gihugu gituwe cyane kuri kilometero kare kurusha ibindi ku mugabane wa Afurika. Ubwiyongere bw'ubucucike bw'abaturage butahwemye bwasabye imbaraga nyinshi cyane ibidukikije by'umwimerere maze butima abashobora gukora akazi bimuka bava mu cyaro bagana mu kindi cyangwa bava mu cyaro bagana mu mijyi.
- Ingorane u Rwanda rufite muri rusange ni ukumenya uburyo bwo kubonera igisubizo ibikenewe n'abaturage bakomeza kwiyongera, begamiye ku mutungo kamere ku birebana n'ibishakwa binyuranye – ingufu, amazi, amacumbi, ubwikorezi, umurimo.
- Gukomatanya amahame adakuka yo gucunga neza ibidukikije n'ay'umutungo kamere ni kimwe mu ngamba z'ibanze za Politike yerekeranye n'Abaturage yasuzumwe mu 2008.
- Kubera y'uko gusabwa imbaraga nyinshi cyane n'ubwiyongere bw'abaturage bigize kimwe mu bitera kwangirika kw'ibidukikije n'ubukene (REMA *et. al.* 2007, ROR 2004a), ishyirwa mu bikorwa rya politike irebana n'abaturage cyane cyane iy'ibintu byerekeranye n'ikigero cy'uburumbuke gihanitse, ibitsina n'imyororokere, iyimuka n'imiturire, rigize ibintu bikomeye bituma habaho gucunga umutungo kamere neza kandi ku buryo burambye.
- Kuri izo mpamvu, EDPRS ishyira ku murongo wa mbere igenamigambi no gutunganya kurushaho imiturire mu cyaro no mu mijyi, bijyanye n'imikoreshereze irambye y'ubutaka igamijwe, n'uburyo bwo kurinda ibidukikije (ROR 2007). Ibi bizatuma hakemurwa ibibazo by'imikoreshereze y'ubutaka n'iby'ubuzima bw'ibidukikije.

- Abaturage baracyari bato harimo ahanini 67% by'abaturage bose hamwe bafite munsi y'imyaka 25, abenshi muri bo bakaba nta kazi bafite (MINECOFIN 2003). Iyi miterere y'ibibazo yatumye mu baturage habaho ibusana rikabije mu kunganirana (dependancy ratio). Bityo, ububasha bw'ingamba zo mu bihe bizaza buri mu maboko y'urubyiruko rugize umubare munini w'abashobora gukora bo mu gihugu.

Umutwe wa 3: Imikoreshereze y'Ubutaka n'Ubuhinzi

- U Rwanda ni agahugu gato gafite ubuso bwa 26.336 km2. Ubutaka bushobora guhingwa bwose hamwe ni hafi hegitari miliyoni 1,4 zigize 52 ku ijana by'ubuso bw'igihugu bwose hamwe.
- Ariko ubuso burimo guhingwa none bwarenze hegitari miliyoni 1,6 muri iyi myaka ishize. Akandi gace gato kagizwe na hegitari miliyoni 0,47 kagenewe inzuri zihoraho, ku buryo aharenze 70 ku ijana by'ubuso rusange bw'igihugu hakoreshwa mu buhinzi.

- U Rwanda rufite hafi hegitari 165.000 z'ibishanga harimo 93.754 ha (57 ku ijana) zahinzwe.

- Ariko, 5.000 ha gusa zaratunganyijwe kandi zishobora guhingwa umwaka wose mu gihe ahasigaye hahingwa uko umuntu yishakiye nta nyigo mu bya tekiniki n'imwe ibanje gukorwa.
- Urwego rw'ubuhinzi rwagennye nk'ibyihutirwa cyane igenamigambi rya Guverinoma mu iterambere. Amerekezo y'igihugu y'ubu arashaka ko uru rwego rwava ku gushakisha amaramuko rukajya ku gushaka umusaruro mu bintu bijyanye n'ubucuruzi.
- Ubuhinzi bugezweho buboneka nk'imwe mu nkingi esheshatu za Vision 2020 kimwe no gucunga neza ku buryo burambye imikoreshereze y'ubutaka n'ibikorwa remezo by'ibanze ;
- Ubuhinzi nanone bwemewe ku mugaragaro muri EDPRS nka kimwe mu nzego enye zihutirwa zigiye kuzashimangira ikwirakwizwa ry'ubukungu no kugira uruhare ku buryo buhanitse mu igabanuka ry'ubukene (ROR 2007). Izindi nzego ni ubuzima, uburezi no gutunganya imihanda.
- Mu 2020, hagamijwe ko ubuhinzi bwazatanga 33 ku ijana bya PIB mu gihe ibikorerwa mu nganda, harimo n'ibikomoka ku buhinzi, byagombye kwiyongera kuva kuri 14 ku ijana kugera kuri 26 ku ijana bya PIB (ROR 2000) ugereranije n'indengo y'ubu.
- Viziyo 2020 n'ingamba z'igihe gicirirtse (EDPRS) zibanze ku micungire y'ubutaka no gucunga neza imikoreshereze yabwo kubera ari byo bintu bishingirwaho mu bikorwa byo guhindura imikoreshereze y'ubutaka bikazashyigikira iterambere rirambye.

- Ubu harashyirwa imbaraga mu gutunganya igenamigambi ngenderwaho y'igihugu yo gukoresha ubutaka, iryo genamigambi nyuma y'aho rikazavamo za gahunda z'uturere zigamije kuyobora ibishushanyombonera by'ibikorwa harimo ubuhinzi, ishyirwaho ry'imijyi, imiturire, ibikorwaremezo bya Leta no kurinda urusobe rw'ibinyabuzima.

- Hejuru yo guhindura imikoreshereze y'ubutaka n'ubuso buhinzweho, habayeho imihindurire ijyanye no kwerekana ahazahingwa imyaka runaka hakurikijwe buri karere gakorerwamo. Imihindurire y'imiterere y'ibihingwa ifite icyo imariye ibidukikije mu turere dutuwe cyane. Nk'urugero, uturere urutoke n'ikawa byasimbuwemo n'ibinyabijumba nk'imyumbati tugaragaraho kuba twakwangizw n'isuri kubera gutakaza ibyatsi byar bikomeje ubwo butaka.

- Umusaruro w'imyaka itanga ibiribwa n'icuruzwa wiyongereye cyane hagati ya 2000 na 2005. Ubwiyongere by'uwo musaruro usobanurwa ku ruhande rumwe no kwagura ubuso buhingwa cyangwa gukoresha inyongeramusaruro. Ibi byakozwe mu rwego rw'ingamba zo mu rwego rwo guha abaturage icyizere cyo kubona ibiribwa, kugera ku nyungu no kugabanya ubukene.

- Uburyo bunonosoye buzakoreshwa mu gucunga neza ibidukikije bugomba kuzareba niba uburyo bakormo ubuhinzi bunoze.

- Habayeho izamuka ry'umusaruro w'imyaka y'ibanze ijyanwa mu mahanga hagati ya 2001 na 2005 kandi iryo zamuka rirakomeza.

- Umusaruro w'ikawa wariyongereye uva kuri16 % ari byo kuva kuri 16,0 kugera kuri18, 6 MT hagati ya 2000 na 2005 mu gihe umwaka w'i 2004 wabaye umwaka usumbya iyindi umusaruro kuko wari ufite 28,7 MT. Mu 2005, n'ubwo umusaruro w'ikawa waguyeho 35%, ubwiza bwayo bwariyongereye.

- Ikawa yujuje amategeko agenderwaho mu gupima ubwiza yarazamutse kuva kuri 19,2 kugeza kuri 45 % hagati ya 2000 na 2005, mu gihe ikawa isanzwe yamanutse kuva kuri 74,4 ku ijana mu 2000 kugera kuri 49 ku ijana mu 2005. Uruhare rw'ikawa yogejwe burundu rwariyongereye kuva kuri 0,1 ku ijana kugera kuri 6 ku ijana muri icyo gihe nyine.

- Umusaruro w'ibihingwa byo mu busitani (uburabyo, imbuto n'imoga) wiyongereyeho 2.737 ku ijana harimo toni 59 zajyanwe mu mahanga buri cyumweru ugereranije, cyane cyane mu masoko y'akarere.

- Amatungo yiyongereho 60 ku ijana mu bihe bya PRSP1, (2001-2005) asingira inzego zariho mbere ya1990 mu 2003/2004

- Muri icyi gihe inka ziyongereyeho 43 ku ijana, ihene 67 ku ijana, intama 195 ku ijana, ingurbe 93 ku ijana, inkoko 44 ku ijana naho inkwavu 67 ku ijana

- Ubwiyongere bw'umubare w'inka bwatumye umusaruro w'amata wiyongera cyane, haza n'ubwiyongere bwakurikiyeho bwo kunywa amata bwa kuva kuri litiro 6,8 buri muntu ku mwaka mu 1999 ugereranije kugeza kuri litiro 20 mu mwaka mu 2007 (MINAGRI 2008).
- N'ubwo umusaruro w'ibikomoka ku matungo wiyongereye, ibintu bisabwa birenze nanone ibitangwa, cyane cyane ibyerekeranye n'amata n'amagi.

Ubuhinzi n'Iterambere ry'Igihugu mu Bukungu

- Urwego rw'ubuhinzi ni ingirakamaro mu bukungu bw'u Rwanda. Urwego rw'ubuhinzi rwariyongereye rugira impuzandengo ya 9,5 ku ijana mu bihe bya 1996 - 2000; ariko, iryo zamuka ryagabanutse mu kigero cya 4,8 ku ijana z'ubwiyongere buri mwaka mu 2001-2006 aho bwabaye ku buryo bugoranye igice cy'ubwiyongere bwabonetse mu gihe kibanziriza cy'imyaka 5 (ROR 2007).

- Umusaruro w'ibihingwa mu 2008 wabaye munini cyane muri rusange, 14,8 ku ijana. Habayeho na none ubwiyongere ku musaruro w'ibiribwa no ku bihingwa bijyanwa mu mahanga bwa 16,4 na 13,5 ku ijana kuri buri cyiciro.

- Mu 2001, uruhare rwo mu urwego rw'ubuhinzi muri PIB rwari hafi 46 ku ijana mu buryo nyakuri, rukaba rwari rugize 80 ku ijana ry'ibicuruzwa bisohoka.
- Uruhare rwo mu urwego rw'ubuhinzi mu mizamukire rusange ya PIB mu mwaka w'i 2007 rwari 6.3 ku ijana.
- Malgré la baisse de sa contribution au PIB, l'ubuhinzi reste encore importante (ROR 2007). Elle fournit de l'emploi pour 86,3 ku ijana de la abaturage ouvrière du Igihugu (NISR *et. al.* 2008),

- Kuri ubu, urwego rw'ubuhinzi rufite hafi uruhare rwa 30 ku ijana mu mizamukire y'u Rwanda, bityo ruza kuba urwego rw'ingirakamaro mu iterambere ry'igihugu. Ni ngombwa mu gushyira mu bikorwa intego zivugwa muri EDPRS no mu Cyitegererezo 2020.

Ibibazo by'ibidukikije by'ingenzi bijyanye n'urwego rw'ubuhinzi

- Ibibazo by'ibanze binaniza iboneka ry'umusaruro mu buhinzi bigizwe n'ubucucike buhanitse bw'abaturage ku mutungo w'ubutaka udahagije. Ibi byaganishije ku isaranganywa ry'ubutaka n'igabanuka ry'ubugari bw'ahanfu habyazwa umusaruro, ku gukomeza guhinga ibihingwa byinshi ku butaka butarazwa kandi bufite imbogamizi y'isuri, ku ihingwa ry'ubutaka risubirwamo kandi hatongerwamo ibitunga ubutaka, ku mihingire y'uburyo burambuye no kuri za serivisi z'ubushakashatsi zidahwitse no ku ibura rikabije rw'ubusugire igihe cy'ingorane zikomoka ku mihindagurikire y'ikirere nk'imeshyi cyangwa amahindu y'imvura ari byo bitera igabanuka ry'uburumbuje bw'ubutaka n'igabanuka ry'itangwa ry'umusaruro amaherezo.

- Gahunda y'Umuryango Umwe Inka Imwe *(Gira Inka*) yabaye ingairakamaro mu guteza imbere amoko y'inka za kijyambere hagati y'abanyarwanda bitari gusa mu kugira imirire myiza n'inyungu zijyanye n'umusaruro w'amata n'uw'ibicuruzwa, ariko na none mu kubona ifumbire ikomoka ku binyabuzima igakoreshwa mu kunoza umusaruro ukomka ku buhinzi.

- Amasambu ni mato cyane muri rusange, kuba hari ingo zirenzeplus 60 ku ijana zihinga mu nsi ya 0,7 ha, 50 ku ijana zihinga mu nsi ya 0,5 ha, n'izirenze 25 ku ijana zihinga mu nsi ya 0,2 ha (ROR 2008).

- Iki kibazo kirushaho gukomezwa n'ukuntu amenshi mu masambu afite amapariseli anyuranye kandi anyanyagiye, amenshi muri yo akaba manzunyu. Ubuto bw'amasambu buturuka ku ngufu nyinshi cyane zisabwa ubutaka kubera ubwiyingere bukabije bw'abaturage ku buso butabifitiye ubushobozi. Hejuru y'ibyo, imico n'imigenzereze y'izungura igizwe no kugaba ubutaka hagati y'abana umuntu yabyaye na byo byongereye ikibazo.

- Ubuhinzi bukorwa mu manga z'ibitwa n'iz'imisozi, n'uko bugenda bwiyongera ku itemwa ry'amashyamba, bwatumye habaho iyangirika ry'ubutaka n'isuri. Hafi 40 ku ijana by'igihugu cy'u Rwanda byafashwe na FAO nk'ibishobora guhura n'isuri ihambaye mu gihe ubuhinzi bugera kuri 37% bukeneye ingamba zijyanye no kuzitira ubutaka mbere yo guhinga. 23,4% gusa by'ubutaka bw'igihugu nta mbogamizi y'isuri bufite.

- 31,2 ku ijana gusa by'ubuso bw'ubutaka buhingwamo bufite za tekinike zijyanye no kuburizamo isuri. Hafi 36,5% by'igihugu birinzwe n'amaterasi.

- Muri rusange, igihugu kizwiho kuba cyatakaza toni miliyoni 1,4 y'ubutaka ku mwaka. Ibi bihwanye imanuka ry'ubushobozi bw'igihugu bwo kugaburira abantu 40.000 ku mwaka.

- Nk'urugero, ingo zigeze kuri 80 ku ijana mu turere duhanamye nka Ruhengeri zisigaye zihura n'igabanuka ry'umusaruro bitewe n'isuri (Musahara 2006).
- Ifumbire ikomoka ku binyabuzima ni yo ubu ikoreshwa na 69 ku ijana guse by'amasambu ahingwamo kuri 59 ku ijana by'ubuso buhingwaho ugereranije na 95 ku ijana na 70 ku ijana

mbere y'intambara.Icyenda ku ijana by'abahinzi bakoreshaga imiti yica udukoko kuri 5 ku ijana by'ubutaka bwahinzwe igihe cy'ihinga cya 2000A. Imibare yerekeranye n'ifumbire n'ishwagara yerekana ko 5 ku ijana by'amasambu ahingwamo byakoreshaga uburyo bw'ifumbire kuri 3 ku ijana by'ubuso
bwahinzwe. Iyi mibare ari gato mu nsi y'iya 1991 (7 ku ijana by'amasambu ajyanye n'ubuhinzi na 5 ku ijana by'ubuso).

Ibikorwa byagezweho mu kurinda ubutaka

Hakurikijwe ubushakashatsi bwo mu nzego buhuriweho na benshi byo muri Werurwe 2009(Etude *Sectorielle Conjointe de Mars 2009)* mu Rwego rw'Ubuhinzi, urwego rw'ubuhinzi (ubusanzwe n'ubw'ibintu bicuruzwa) rwafatiwe ingamba z'uburinzi nuko haboneka ibigenda neza mu nzego zikurikira:

- Ubuso bw'ubutaka burinzwe isuri: 45 ku ijana (2008) kugeza kuri 50 ku ijana (2009)
- Zone de marais aménagée pour l'utilisation agricole: 12.000 ha (2008) kugeza kuri14, 000 ha (2009)
- Ubutaka bushobora guhingwa bwuhiwe bwiyongera kuva kuri 1 ku ijana (hafi 15.000 ha) kugera kuri 1,6 ku ijana (hafi 24.000 ha)
- Ubuso bwuhiwe mu manga z'ibitwa bwiyongera kuva kuri 130 ha mu 2006 kugera kuri 1.100 ha mu 2012 hakoreshejwe tekiniki zo kuhira mu misozi miremire
- Imibare igereranya ingo z'abahinzi zikoresha uburyo bwo guhinga bwa kijyambere: gukoresha ifumbire mva ruganda byiyongera kuva kuri 15 ku ijana (2008) kugera kuri 18 ku ijana (2009); gukoresha ifumbire ikomola ku binyabuzima byiyongera kuva ku 10 ku ijana (2008) kugeza kuri 13 ku ijana (2009)
- Ijanisha ry'ubworozi mu buryo bw'itubura ryiyongera kuva kuri 30 ku ijana (2008) kugera kuri 38 ku ijana (2009).

Amabwiriza

- Gukumira isuri n'itakazwa ry'ibitunga ubutaka
- Kongera ubutaka bushobora guhingwa hakoreshejwe kuhira
- Gushimangira ishyirwa mu bikorwa rya za politike
- Kunononsora uburyo abaturage babungabunga ubutaka n'imikorere yo mu buhinzi
- Kubyaza ibishanga umusaruro

Umutwe wa 4: Inganda n'Amabuye y'Agaciro

- Guteza imbere inganda no kongerera abakozi ubushobozi ni bimwe mu bigize ingamba za Guverinoma y'u Rwanda zo kugera kuri Vision 2020

- Nk'uko bimeze mu bigihugu bikiri mu nzira y'amajyambere, inyinshi mu nganda zashyizwwe mu turere tw'umujyi. Hafi 63 ku ijana by'inganda byubatze mu mujyi wa Kigali cyangwa mu nkengero zawo.
- Ibigo bikuru bikuru byibanda ku gukora cyane cyane ibikomoka ku biti na /cyangwa gutunganya ibiti, kwenga inzoga, ibinyobwa bidasindisha, itabi, ciment, imyenda, icyayi n'ikahwa. Ibindi

byahisemo gukora ibijyanye ibintu n'ubutabire, ubwubatsi, amacapiro, gukora impapuro, gukora ibyuma na *gaz méthane*.

- Bityo, ubukungu bushingiye cyane ku rwego rwa mbere, rugizwe n'inganda zijyanye cyane no gutunganya ibintu byo mu rwego rwa mbere.
- Inganda ziyongereyeho 10 ku ijana gusa mu 2007 ugereranije na 11 ku ijana mu 2006.
- Uruhare rwazo muri PIB rusa n'urwagumye kuri 14 ku ijana aho rwari ruri kuva mu 2001.
- Ubukerarugendo buragenda burushaho guhindura isura kuko ari urubuga rwinjiriramo ubushobozi bushyashya bujyanye n'inganda kandi bwiyongera mu gihugu.

Amabuye y'agaciro

- Ubucukuzi bw'amabuye y'agaciro ni igikorwa kigizwe n'umutungo utisubiranya ufite agaciro gahanitse. Amabuye y'agaciro akoreshwa mu masoko y'igihugu no mu mahanga hagamijwe iterambere mu bukungu no mu bintu bikorerwa mu nganda.
- Ariko, n'ubwo bukoresha ubuso buto bw'ubutaka, bushobora kugira ingaruka zihambaye ku bidukikije kandi akenshi zidatezuka.
- Ibikorwa by'ubucukuzi bw'amabuye y'agaciro na za kariyeri byiyongereyeho hafi 55 ku ijana mu mwaka w'i 2004, bishyigikiwe ahanini n'umusaruro wiyongeraga wa gasegereti n'uwa tini.
- Urwego rw'amabuye y'agaciro na za kariyeri rukekwaho kuba rukoresha ku buryo butaziguye hafi abantu 50.000 mu Rwanda.
- Ubungubu, ibikomoka kuri za kariyeri bitanga 11 ku ijana by'inyungu ziboneka imbere mu gihugu ugereranije na 3-4 ku ijana uhereye mu mwaka w'i 1990. Ubwiyongere mu rwego rw'inganda bwageze hafi kuri 7 ku ijana mu mwaka w'i 2004,
- Ntihashize igihe, mu myaka y'i 2006-2007, urwego rw'amabuye y'agaciro rwashyizwe mu maboko y'abikorera ku giti cyabo ku buryo burambuye, ibyo bituma haba imizamukire muri icyo gikorwa cy'ubucukuzi bw'amabuye y'agaciro.
- Amafaranga yinjiye akomoka ku mabuye y'agaciro (mines) yari miliyoni 71 z'Amadolari y'Abanyamerika na miliyoni 93 mu 2007 n'i 2008 buri kimwe. Yarengeje intego zakekwaga kugerwaho mbere.

Ingorane zo mu rwego rw'inganda

- Kubura ingufu zihagije
- Kudakumira imyanda ihumanya bihagije

Ingamba zigamije gushyigikira iterambere ryo mu rwego rw'inganda

- Kugira ngo u Rwanda rwungukire muri politike yo guha imitungo abakorera no kugira ngo rushyigikire ishoramari kurushaho, politike idatezuka iriho yo guteza imbere inganda hamwe n'izindi nzego ngenderwaho z'iterambere bigomba gukomatanywa mu rwego rwo gucunga neza ibidukikije ku buryo burambye.

-Gushyira mu bikorwa no kuboneza amategeko arebana n'ibidukikije: ingingo ya 67 n'iya 68 y'itegeko ryerekeranye n'ibidukikije zitegeka ko ibikorwa byose bishobora kugira ingaruka zihambaye ku bidukikije bikorerwa isuzuma ry'ingaruka ku bidukikije (EIA).

- Umusaruro uboneye kurushaho: urugero rw'ibikorwa bya CP (inganda)

- Kunoza urwego rw'ubucukuzi bw'amabuye y'agaciro : guteza imbere ubucukuzi bw'amabuye y'agaciro n'ubushobozi bw'igihugu bw'imitunganyirize; gushyiraho ikigo cya za serivisi zerekeranye no gutunganya amabuye y'agaciro mu karere no kunoza imikorere y'igihugu y'ibikoresho byo mu

bwubatsi.

Umutwe wa 5: Urusobe rw'Ibinyabuzima n'Umutungo ugizwe n'Ibinyabuzima

- Urusobe rw'ibinyabuzima ni uruvange rw'amoko y'ubuzima n'imikoranire yayo n'iy'ibindi bidukikije byatumye isi iba ahantu honyine ho gutura ku bantu (CDB 2000). Urusobe rw'ibinyabuzima tubona none rukomoka ku mamiliyaridi y'imyaka y'ihindagurika ryakozwe n'imitere y'ibikorwa by'umwimerere, hanyuma umuntu abigira mo uruhare rwagiye rurushaho gukomera.

- N'ubwo u Rwanda ari agahugu gatoya, rufite urusobe rw'ibintu bihumeka n'ibidahumeka bikoze ireme n'umwimerere by'ahantu mu rwego rw'ibidukikije (*écosystèmes*), ibimera n'inyamaswa. Kuba ruri hagati mu rwunge rw'ibibaya bya Rift Albertine mu ishami ry'amajyaruguru rya Rift Valley yo muri Afurika ni ikintu gifite icyo kimaze.

- Aka karere ni kamwe mu bihugu byo muri Afurika bifite ibinyabuzima binyuranye kurusha ibindi bihugu. Gacumbikiye hafi 40 ku ijana by'amoko y'inyamaswa zonsa z'umugabane (amoko 402), urusobe rwaguye rw'inyoni (amoko 1.061), inyamaswa zikururuka n'iziba mu mazi zikaza no hanze (amoko 293), n'ibimera bitumburuka (amoko 5,793).

- ''Rift Albertine'' ifashwe nk'aho ari yo ifite umutungo w'amoko y'ibinyabuzima kurusha ahandi muri Afurika. Ibonwa nk'aho ari indiri y'urusobe rw'ibinyabuzima ifite inyamaswa zonsa zihakomoka kurusha ahandi hose muri Afurika : inyoni, ibinyugunyugu, amafi n'inyamaswa zo mu mazi ziza no ku butaka.

  - Imiturire yo mu Rwanda iboneka rwagati muri ''Rift Albertine'' na yo iranyuranye, uhereye ku rusobe rw'ibihumeka n'ibidahumeka bikoze ireme n'umwimerere by'ahantu byo mu misozi ya Afurika mu turere tw'amajyaruguru n'utw'uburenerazuba ukagera mu mashyamba yo mu mibande, ahantu h'ibiti bitatanye n'ahantu h'ubwatsi butoshye n'umukenke mu turere tw'amajyepfo n'utw'uburasirazuba.

  -Hababo n'indi miturire ikikije amashyuza akomoka ku birunga no ku mu manuko w'ibirutsi by'ibirunga bya kera, cyane cyane mu gice cy'amajyaruguru ashyira uburasirazuba bw'igihugu. U Rwanda rufite na none ibiyaga byinshi n'ahantu hahehereye henshi bikize mu kugira amoko anyuranye y'ibinyabuzima. N'ubwo ayo moko yose y'urusobe rw'ibihumeka n'ibidahumeka bigize ireme n'umwimerere by'ahantu mu rwego rw'ibidukikije atarakorerwa neza ubushakashatsi, atunze urusobe rw'inyamaswa, ibimera n'udukoko ku bwinshi.

Ibimera

- U Rwanda rucumbikiye ibimera by'amoko menshi anyuranye kubera urusobe rw'imiterere y'igihugu n'urw'ikirere ruhanitse kuva mu burengerazuba kugera mu burasirazuba. Ibimera bito

bizamura amazi mu miheha yabyo (*plantes vasculaires*) bibarirwa hafi mu moko 3000 aturuka mu turere dutandukanye bitewe n'imiterere nyabuzima y'ahantu.

- Amoko hafi 280 y'ibimera bigira uburabyo bituruka mu Rwanda abonwa nk'akomoka muri Albertine Rift. Muri ayo moko cyimeza, hafi 20 yihariwe n'u Rwanda, amoko 50 aboneka gusa mu Rwanda no muri Kongo y'Uburasirazuba ,naho amoko 20 yabonetse gusa mu Rwanda no mu Burundi.
- Ingero z'ayo moko ni *Impatiens bequaertii* (Balsaminacea), *Impatiens mildbraedii* (Balsaminacea), *Monathotaxis orophila* (Annonaceaa) ou *Liparis harketi*i (Orchidaceae) (Fischer na Killmann 2008).

- U Rwanda rufite ibimera bigira uburabyo 56 byo mu gihugu, harimo 47 biboneka gusa muri Pariki y'Igihugu ya Nyungwe (no mu ishyamba rya Cyamudongo). Ingero z'ibyo bimera ni amoko aherutse kuvumburwa nka *Impatiens nyungwensis* Eb.Fisch

- Umubare w'aya moko amenyekanye vuba werekana ko umubare w'amoko y'ibimera uboneka mu Rwanda utaramenyekana wose uko wakabaye.

- Kuba hafite amoko y'uburabyo arenga 104, ahantu hahehereye n'ah'urusobe rw'ibihumeka n'ibidahumeka bikoze ireme n'umwimerere by'ahantu h'amazi na ho hakize ku rusobe rw'ibinyabuzima. Ibiyaga bimwe na bimwe nk'Ikiyaga cya Kivu, Bulera na Ruhondo bifite ibimera mu mazi cyangwa mu nkengero zayo (macrophytes) bikeya.

- Urusobe rw'ibihingwa rufite amoko y'ibihingwa bitanga ibiribwa nk'Amasaka (*Sorghum), Phaseolus vulgaris, Eulisine corocan, Colocasia antigonum, Zea mays, Oryza sativa, Triticum sp., Hordeum vulgare, Pisum sativum, Soja hispada, Arachis hypogea, Ipomea durcis*, ibirayi, *Manihot esculenta* n'insina (*Musa*)

- Hari n'ibihingwa bigenewe ubucuruzi nk'ikawa, icyayi n'ibireti. Uburyo bw'imikorere bugamije kongera ibikomoka ku bihingwa na bwo bwazanye amoko menshi yo mu ishyamba, akunze kuboneka akaba ari *Eragrostis sp., Bidens pilosa, Digitaria sp., Conyza sumatrensis, na Cyperus sp*.

- Amoko y'ibiti yabonetse mu Rwanda agizwe na *Ficus thoningii, Euphorbia tirucalli, Erythrina abyssinica, Verminia amygdalena, Dracaena afromontana*, mu bindi.

- Gutera ibiti byashyizwemo imbaraga bwa mbere hagati ya 1920 na 1948. Ni muri icyo gihe bazanye Inturusu. Andi moko yaje nyuma cyane, harimo P*inus sp, Callistris sp, Grevillea robusta, Cedrella sp,* n'amasipure (*Cupressus)*.

Inyamaswa

- U Rwanda rucumbikiye ubwoko bw'inyamaswa zonsa butandukanye151, harimo cumi na bumwe bubangamiwe muri iki gihe kandi nta na bumwe buhakomoka. Muri bwo harimo amoko y'inkima (hagati ya 14 na 16), harimo igice cy'ingangi zo mu misozi zituye ku isi zikiriho (*Gorilla gorilla berengei*)

- Ayandi moko y'inkima agizwe n'inkima ifite mu maso hameze nk'ah'igihunyira (*Cercopithecus hamlyni*), inkima yo mu misozi (*Cercopithecus hoesti*) muri Nyungwe, Inguge (*Pan troglodytes*) muri Nyungwe no muri Gishwati, n'icyondi (*Cercopithecus mitis kandti*) cyabonetse muri Pariki y'Igihugu y'Ibirunga.

- Hari amoko 15 y'amafumberi, n'urusobe rwinshi rw'amoko nk'ay'imbogo, imparage, amasatura, inguge y'umunwa muremure, inzovu, imvubu, ingona, utunyamasyo n'amoko y'imbonekarimwe nk'inyaga.

U Rwanda ni kimwe mu bihugu bya mbere bicumbikiye inyoni harimo amoko yazo 670 atandukanye yamaze kwandikwa. Amoko 4 y'inyoni zo mu Rwanda asa n'akendera: inyoni ifite umunwa umeze nk'urukweto bita *shoebill* (*Balaeniceps rex*) cyangwa *bec-en-sabot* mu ndimi z'amahanga yabonetse mu Kagera; inyoni ifite umunwa umeze nk'urushinge runini rurerure bita *Grauer's rush warbler*(*Bradyptrus graueri*) cyangwa *la paruline pointe de Grauer* mu ndimi z'amahanga yo muri Pariki y'Igihugu y'Ibirunga, muri Nyungwe no mu bishanga bya Rugezi; Apalis Kungwe (*Apalis argentea*) muri Nyungwe; n'ubwoko bw'igihunyira cyo mu bihugu bya Afurika cyangwa muri Kongo (*Phodilus prigoginei*) cyabonetse mu nkengero z'ikiyaga cya Kivu (Chemonics Interigihugu Inc. 2003)

- Amoko y'amatungo yororwa mu Rwanda avanze n'akomoka imbere mu gihugu n'athakomoka. Hari nk'inka (*Ankole, Sahiwal, Frisonne, Brune* zikomoka mu misozi *za Alpes* na Z*ébu* itanga Amata yo muri Australiya), amoko y'ihene (A*lpines* na *Anglonubiennes*), amoko y'intama (*Karakul, Mérinos* na *Dorper*), ingurube (*Large White na Landrace, Piétrain*), inkoko (*Livourne, Rhodes Island Red, Derco*, *Sykes* na *Anak*), amafi (*Tilapia na Clarias*)
  - Amoko y'amafi ari mu rusobe rw'ibidukikije bigizwe n'amazi arimo *Haplohcromis, Synodontis, Barbus, Labeo, Tilapiines*, n'amoko ya *Clarias*. Amoko ya *Raimas moorei* n'aya *Limnothrissa miodon* oyazanywe mu kiyaga cya Kivu mu mpera za 1950.

Uko kurinda urusobe rw'ibinyabuzima byifashe

- Uru rusobe rw'ibinyabuzima ruhanitse rurindiwe cyane cyane mu turere dukumiwe (za pariki z'igihugu 3, amashyamba cyimeza, ahantu hahehereye). Utu turere tugize hafi 10 ku ijana by'igihugu mu gihe ahasigaye hatuwe cyane.

Ibangamirwa ry'urusobe rw'ibinyabuzima

- Bitewe n'ubucucike bw'abaturage burusha ahandi muri Afurika hakiyongeraho kubogamira ku buhinzi, ingorane z'ibanze ku rusobe rw'ibinyabuzima no ku murungo w'umwmimerere mu Rwanda zijyanye cyane cyane n'imbaraga nyishi cyane zisabwa n'ubwiyongere bw'abaturage n'ikibazo cyibura ry'ubutaka. Izindi ngorane urusobe rw'ibinyabuzima ruhura na zo zikomo ku bikorwa bya muntu nko gutakaza ahantu hatuwe bitewe n'imindagurikire y'imiturire, ubucukuzi bw'amabuye y'agaciro, ubuhinzi no kuzana amoko y'ibintu by'ahandi.
- Nk'urugero, ubuso rusange bwa za pariki z'igihugu, bwagabanutseho kuva mu myaka y'i1960 bitewe no gushaka ubutaka bwo guhinga n'aho gutura.

- Ubwiyongere bw'ubuhinzi n'ubworozi bugira ingaruka ku miturire kamere y' amoko.
- Ingorane umutungo w'umwimerere (umutungo uhangana n'ibizazane by'akarere) ufite ziterwa na none n'ubworozi bugizwe n'amoko ya kijyambere hagamijwe kongera umusaruro.

- Indi ngorane ku byerekeranye n'umutungo w'umwimerere, ariko itarigwaho neza, ni ijyanye n'itemwa ry'imigano muri Nyungwe no muri Pariki y'igihugu y'Ibirunga. Iki kibazo kirimo gukomera bitewe no gukomeza kwamaamaza imikoreshereze y'umugano ku isoko ry'ibikorwa bw'imyuga byahawe agaciro kanini.
- Gutunga inyamaswa ku buryo bunyuranije n'amategeko bivugwa by'umwihariko ku musambi «Royal Crane » ucungiwe mu busitani bw'abantu ku giti cyabo, utunyamasyo n'izindi nyoni hamwe n'inyamaswa zikururuka ku butaka. Ibi bigize imbogamizi ku moko urebye ko, akenshi, izi nyamaswa zidashobora kugira uburumbuke hanze y'imiturire yazo y'umwimerere.

Ubushobozi butangwa n'urusobe rw'ibinyabuzima

- **Gushyigikira ubukungu n'ibitunga abantu:** Ibiribwa, imiti n'ibindi bintu byinshi Abanyarwanda babikesha urusobe rw'ibinyabuzima n'umutungo w'umwimerere.

- **Akamaro k'ubukerarugendo:** Umusaruro ukomoka ku bukerarugenso wageze kuri miliyoni 33 z'amadolari y'Abanyamerika mu 2006, harabanje kuboneka umusaruro udahambaye uri munsi y'amadolari miliyoni 5 mu 2002
- **Ubushakashatsi ku birebana n'imiti:** Ingero z'umutungo w'umwimerere w'ingirakamaro zigizwe na *Prunus africana* yabonetse muri Nyungwe. Iki kimera gikoreshwa nk'umuti w'ibanze wa kanseri ya porositate,
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Umwanzuro n'amabwiriza

- U Rwanda rufite urusobe rw'ibinyabuzima ku bwinshi; ni ngombwa rero ko hashyirwaho amateko ihamye yo kurwitaho, harimo n'amategeko y'imikoreshereze y'umutungo w'umwimerere, bitari ukwihuza n'ibisabwa n'amahanga gusa, ahubwo kubera y'uko urusobe rw'ibinyabuzima ari umusingi w'ibitunga Abanyarwanda kandi rutanga amahirwe y'iterambere mu bukungu.
- Birakwiye nanone gutangira gushimangira ubushobozi ku buryo burambye bitari gusa mu birebana no kurinda, ahubwo nanone mu birebana n'ibikoresho bishyashya nko gusuzuma ibidukikije no kubikorera ikeshaburanga.
- Ni ngombwa gushyiraho amategeko n'inzego z'ubuyobozi bifite ishingiro mu gucunga neza urusobe rw'ibinyabuzima. Hatariho politike n'amategeko bigenga urusobe rw'ibinyabuzimam ibimera n'inyamaswa, birakomeye kurinda no gutunganya imikoreshereze yurusobe rw'ibinyabuzima ruhanitse rw'u Rwanda.
- Aya mategegeko azagomba kubamo inyamaswa ziri hanze y'aza pariki z'igihugu, amategeko agenga ubushakashatsi ku mutungo w'ibinyabuzima, gushakisha ibinyabuzima, n'ibindi bintu nko gucunga ubumenyi gakondo.

Umutwe 6: Amashyamba n'Ahantu Hakumiwe

- Amashyamba n'uturere twamezemo ibiti tw'u Rwanda bishobora gushyirwa mu nzego enye:
  - Amashyamba ya cyimeza yo ku Isunzu rya Kongo Nili harimo Pariki y'Igihugu ya Nyungwe, Gishwati, na Mukura;
  - Amashyamba ya cyimeza ya Pariki y'Igihugu y'Ibirunga;
  - Amashyamba cyimeza y'ahantu h'ibiti bitatanye no mu ishyamba ritanga umwezi bya Pariki y'Igihugu y'Akagera n'ibisigara by'amashyamba atanga umwezi n'ay'ahantu h'ibiti bitatanye yo mu Bugesera, i Gisaka no mu Mutara;
  - Amashyamba y'amaterano agizwe ahanini n'amoko aturuka hanze (*Eucalyptus sp, Pinus sp, Grevillea robusta*) n'ibiti bikwirakwijwe ku butaka buhingwa (gutera amashyamba) no mu nkengero z'ibyobo birinda isuri.
- Amashyamba y'igihugu yakekwagaho kuba 240.746 ha mu 2007. Ibyo bikaba bihwanye hafi na 10 ku ijana by'ubuso bw'ubutaka bw'imusozi bw'igihugu (23.835 km2). Ariko umutungo w'amashyamba mu Rwanda ugizwe nanone n'uduce tw'ubutaka duteyemo ibiti n'umutungo w'amashyamba y'amaterano.
- Ibarurishamibare ryIshami rishinzwe amashyamba ryerekana ko amashyamba yari ahwanye na 659.000 ha mu 1960 (ROR 2004). Ibyo byerekana itakara rya afi 64 ku ijana by'amashyamba hagati ya 1960 na 2007,

- Amashyamba cyimeza y'ahantu hari amazi ni yo mashyamba menshi mu Rwanda (33 ku ijana), hagakurikiraho amashyamba y'amaterano y'Inturusu n'amashyamba ya cyimeza yamaze kwangirikaho 26 na15, 7 buri kimwe.

Ahantu hakumiwe

- Hakurikijwe Ubwumvikane ku Rwunge rw'Ibinyabuzima (Convention sur la Diversité Biologique), ahantu hakumiwe hasobanurwa nk'agace k'ubutaka, ibidukikije byerekeranye n'amazi cyangwa ingezi hafite imipaka ngenderwaho ishingiye ku miterere yaho, hashyiriweho ku buryo bw'umwihariko kurinda no kubungabunga urwunge rw'ibinyabuzima n'umutungo waho kamere n'uwerekeranye n'umuco; bityo aho hantu uko hateye hagomba kwerekanwa mu buryo bw'amategeko, gutunganywa no gucungwa neza hakoreshejwe uburyo bukwiriye, ubushingiye ku mategeko n'ubundi.

- U Rwanda rufite amoko ane y'ahantu harinzwe harimo za pariki z'igihugu (Akagera, Nyungwe na Pariki y'Igihugu y'Ibirunga); amashyamba akumiwe (Gishwati, Ikirwa cya Iwawa n'amashyamba arinzwe ya Mukura); Amashyamba afite agaciro ndangamuco (ishyamba rya Buhanga); n'ibishanga bifite agaciro ku isi (agatsiko k'ibishanga bya Rugezi-Bulera-Ruhondo). Kuri ayo mashyamba afite ubuzima gatozi bushingiye ku mategeko agennga uturere turinzwe, hiyongeraho andi mashyamba afite agaciro gashingiye ku muco (ishyamba rya Busaga mu Karere ka Muhanga) n'ahandi hantu h'amashyamba cyimeza asa n'aho arinzwe n'itegeko.

Ubushobozi butangwa n'urwego rw'amashyamba

- Urusobe rw'amashyamba agize ireme n'umwimerere by'ahantu mu rwego rw'ibidukikije rutanga ibintu na za serivisi birimo ibikurikira: inkwi zo gucana n'ibiti byo kubaka, kurinda ahantu haturuka amazi, kunoza amazi, ubukerarugendo, ibikomoka ku mashyamba byoroshye nk'ibimera bivamo imiti, ubuki n'ibikoresho byo mu rwego rw'imyuga.

- Ibiti bikomeje kuba inkomoko y'ibanze y'ingufu zikenerwa mu ngo ku Banyarwanda barenze 90 ku ijana.
- Amashyamba ashyigikiye ubuhinzi mu gutanga za serivisi zijyanye n'ukuntu ibimera n'inyamaswa bifatikanya mu rwego rw'ibidukikije mu buryo buziguye.
- Iyangirika ry'uburumbuke bw'ubutaka ni ku ruhande rumwe ingaruka yo kubura inkwi zo gucana mu byaro, ibyo bigatuma abahinzi bakoresha ibisigazwa by'imyaka nk'ibicanwa aho kubikoresha nk'ifumbire ikomoka ku binyabuzima. Ubushakashatsi bwemeje bukomeje ko icyo gikorwa gitwara 1,7 ha y'ifumbire ikomoka ku binyabuzima kuri hegitari kandi ku mwaka. Gutakaza uburumbuke bikomoka ku bikorwa nk'ibyo mu rwego rw'igihugu bihwanye na toni 40.000 z'ifumbire na toni 33.000 z'ishwagara.

- Ibiti bikoreshwa mu bwubatsi no mu bikoresho byo mu rugo, ibyo akaba ari bimwe mu bindi. Ibiti bikunze gukoreshwa birimo Inturusu (45 ku ijana), *Grevillea* na Sipure

- Ibimera 59 bikomeye bikoreshwa mu buvuzi bw'abantu gakondo naho ilisiti y'ibimera bikomera 39 ni iy' ibikoreshwa mu buvuzi gakondo bw'amatungo kimwe no ku ndwara amatungo n'abantu bahuriyeho.

- Ubworozi bw'inzuki ni ikindi kintu kijyanye n'ibikomoka ku mashyamba byoroshye bifite ubushobozi cyane kubera cyane cyane imiterere y'ikirere cy'u Rwanda n'ubwiza bw'ahantu ku buzima

- Urwego rw'ubukerarugendo rushingiye ku gusura ahantu hakumiwe, ruhagaze neza cyane kuva mu 2002

- Hari ubushobozi mu rwego rw'amashyamba bwo kubona imari mu rwego rwo Kugera ku Iterambere Rinoze (*Mécanisme du Développement Propre : CDM*) hakurikijwe inama yabereye i Kyoto ku byerekeranye no kohereza imyuka ihumanya mu kirere. Ariko, ni ngombwa guteza imbere ubushobozi bw'abenegihugu no kugira ingamba zigaragara zo kubyaza umusaruro ubwo bushobozi.

Ibangamirwa ku kubyaza umusaruro amahirwe atangwa n'amashyamba

- N'ubwo urwego rw'amashyamba rutanga amahirwe menshi mu birebana n'imizamukire y'ubukungu bw'igihugu, rufite zimwe mu ngorane zikwiriye gukemurwa kugira ngo u Rwanda rushobore kwifashisha ayo mahirwe. Ibangamirwa ry'ibanze ry'amashyamba ni cyane cyane ibibazo bijyanye n'imitegekere, urwego rw'amategeko rudahwitse n'ingufu nyinshi cyane zisabwa n'ubwiyongere bw'abaturage bigatuma gusatira no gutema amashyamba kubera imiturire, ubuhinzi n'inzuri.

- Ibarura ry'amashyamba y'igihugu mu 2007 ryabonye uburyo bw'ibanagamirwa bukurikira : gutema ibiti ku buryo butemewe n'amategeko (78,3 ku ijana), gutwika amakara (4,9 ku ijana),

inzuri z'amatungo (2,5 ku ijana), ibikorwa by'ubuhinzi (1,9 ku ijana), gutwika ibisambu (1,9 ku ijana), gushishura ibiti (0,6 ku ijana), ubucukuzi bw'amambuye y'agaciro (0,5 ku ijana) n'ubworozi bw'inzuki (0,4 ku ijana).

- Harakekwa ko mu ntambara, hafi hegitari 15.000 z'ahateye ibiti zavanyweho burundu, naho 35.000 ha zikangirika (MINAGRI, 1998)

- Ikenerwa ry'amakara akomoka ku biti mu mijyi rituma haba gusaba ingufu nyinshi cyane amashyamba. Gutwika amakara mu kugemurira umujyi wa Kigali byateje ivanwaho ry'ahantu h'ibiti bitatanye n'ah'amashyamba atanga umwezi mu Bugesera. Za hegitari zirenga 50.000 z'ahantu h'ibiti bitatanye zabonetse mu 1983, ziza kugabanukaho zigera munsi y' 10.000 mu 1988 (MINAGRI 1988).
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- Irindi bangamirwa ry'amashyamba ryamenyekanye mu ishyamba rya Nyungwe: hagati ya 1996 na 2003, **inkongi z'umuriro mu mashyamba** zangije ahantu hahwanye na 12.800 ha, cyangwa hafi 13 ku ijana by'ubuso rusange bw'iryo shyamba (ORTPN 2005). Inkongi z'umuriro zivugwa nanone kenshi muri Pariki y'Igihugu y'Akagera mu mpeshyi.
- Ibikorwa byo gucukura ambuye y'agaciro byavuzwe muri Pariki h'Igihugu ya Nyungwe no muri mu ishyamba ririnzwe rya Gishwati ; bituma amashyamba yangirika.
- Gushimuta inyamaswa muri Nyungwe byageze ku irangizwa rya zimwe mu nyamaswa zonsa – imbogo n'inzovu.

- Iyinjizwa ry'amoko aturuka hanze (inturusu na pinusi) yahinzwe mu turere turi hagati nu gihugu cyangwa hafi y'amashyamba cyimeza ribangamiye ayo mashyamba ya cyimeza
- Muri Nyungwe muri Pariki y'Igihugu y'Ibirunga, gusarura bitemewe n'amategeko imigano mu gukora ibintu bijyanye n'imyuga n'imitako no mu kubaka byatumye ayo mashyamba abangamirwa.

Ingamba zo kubyaza umusaruro ubushobozi urwego rw'amashyamba rutanga

- **Gushimangira ububasha bw'inzego :** Isuzuma ryo mu rwego rwo gutera amashyamba rirekana inenge mu ku birebana n'ubushobozi bw'inzego z'ubuyobozi. Hakwiriye gukomezwa inzego z'ubuyobozi bukuru - Minisiteri n'ikigo cy'igihugu gishinzwe Amashyamba (ANFA) n'iz'ubuyobozi bwaguye – Uturere na za segiteri. Muri urwo rwego, Ishuri rikuru ry'u Rwanda ryatangiye *maîtrise* mu gutera ibiti n'amashyamba.
- **Guteza imbere iterwa ry'ibiti n'amashyamba:** Za tekiniki zo gutera amashyamba ziri mu bisubizo bishobora gusana vuba isura y'igihugu kuri unu gisa n'ikigiye kuba ubutayu. Mu rwego rw'ibura ry'ubutaka, harashyirwa imbaraga mu guteza imbere amoko akomeye cyane ajyana neza n'imyaka kurusha ayandi
- **Guhindura amashyamba y'amaterano ashaje:** Isura y'igihugu cy'u Rwanda ku birebana n'amashamba cyiganjwemo inturusu, izo nturusu zikaba mu gihe kirekire zaragize uruhare mu igabanuka ry'inkwi zo gucana n'iryi ibiti bya za serivisi. Ahenshi mu hatewe ubwo bwoko bw'ibiti hashyizweho mbere y'ubwigenge, none ubu hakaba hameze nabi kubera iyangirika ry'ubutaka no gucungwa nabi. Ni ngombwa kuvugurura ayo mashyamba bayasimbuza amoko yatoranyijwe ajyanye n'uturere tuberanye na yo n'imiterere y'ubuka buberanye na yo. Amoko amwe n'amwe

twakwitaho ni: *Acacia mearnsii*, *Acacia melanoxylon* et n'amoko amwe n'amwe y'Inturusu nka *Eucalyptus saligna*, *E. maideni*, *E. microcorys* na *E. grandis*.

- **Kurinda no kubungabunga amashyamba mato ya cyimeza:** Kugira ngo umutugo usigaye utazimira, minisiteri ifite amashyamba mu shingano zayo ifatanije n'abakorana na yo mu birebana n'ibidukikije (REMA, ORTPN, Uturere n'abaterankunga) yagombye gukora ibarura rigamije kumenya aho ayo mashyamba yose aherereye no gushyiraho gahunda yerekeranye n'imicungire myiza kugira ngo hamenyekane ibikorwa byihutirwa byo kuyarinda.
- Guverinoma yu Rwanda yihaye intego yo kongera amashyamba y'igihugu abarirwa ku 10 ku ijana akazagera kuri 30 ku ijana by'igihugu mu 2020. Kugira ngo ibi bigerweho, ni ngombwa guhuza imbaraga mu kongera umubare w' amashyamba arinzwe ahari no kongera umubare w'ahantu hatewe ibiti

- Ibikorwa bijyanye no kuvugurura amashyamba yangiritse biriho kandi ibyagezweho birashimishije. Muri urwo rwego, ku turere 30, 15 twamaze gutegura za Gahunda zatwo zo Gucunga neza Amashyamba mu rwego rw'Uturere

Umutwe 7: Umutungo w'Amazi n'Ahantu Hahehereye

- Amazi afite akamaro gahambaye bitari gusa ku buzima bw'abantu, ahubwo na none ku nyamaswa, ubuhinzi, iterambere mu byerekeranye n'inganda, amashanyarazi akomoka ku ngufu z'amazi, ubwikorezi, iterambere ry'imibereho myiza y'abaturage n'iry'ubukungu n'ivanwaho ry'ubukene.

- U Rwanda rugabyemo ibibaya bibiri bitanga amazi by'ibanze : Nili mu burasirazuba igize 67 ku ijana kandi itanga 90 ku ijana by'amazi y'igihugu na Kongo mu burengerazuba igize 33 ku ijana ikanatunganya amazi yose y'igihugu.

- Urwunge rw'imigezi n'ibiyaga by'igihugu ugizwe n'umubare mwinshi w'ibiyaga n'imigezi n'ahantu hahehereye habangikanye na byo. Ibarura rya vuba aha ry'ibishanga mu Rwanda ryakozwe mu 2008 ryabonye ibishanga 860, bitwikiriye ubuso rusange bwa 278 536 ha, ari byo10, 6 ku ijana by'ubuso bw'igihugu, ibiyaga 101 bitwikiriye 149487 ha, n'imigezi 861 ifite ibirometero 6462 by'uburebure (REMA 2008).

- Ibyagezweho mu bushakashatsi ku mazi yo mu butaka n'ahantu habika amazi mu Rwanda ntibihagije. Ariko, amakuru aboneka asanga ikigero cy'amazi yisukiranya hakurikijwe ibyo ubushakashatsi bwashoboye kubona ari m^3 66 ku isegonda ; hari nanone hafi amasoko 22.000 yemewe afite ikigero cy'amazi yisukiranya m^3 9,0 ku isegonda (NBI 2005, Kabalisa 2006). Ishusho ya 3 irerekana ikigero cy'amazi yo mu butaka mu gihugu.

- Umutungo kamere w'amazi wisubirisha, hakurikijwe AQUASAT 2005, mu mwaka w'i 2000 wageraga kuri 6,3 km3/umwaka, ugereranije na 5 km3/umwaka mu 1993, ubwiyongere nyabwo bw'umutungo. Umutungo w'amazi wisubirisha kuri buri muntu na wo wiyongereye kuva kuri 638,2 m3 kuri buri muntu ku mwaka mu 1993 kugera kuri 815 m3 ku muntu ku mwaka mu

2000).

- Nyamara, igabanuka ry'umubare rusange w'ibipimo bya buri mwaka kuva kuri 0,768 km3/umwaka mu 1993 kugera kuri 0,15 km3/umwaka mu 2000 n'ubwo habaye ubwiyongere bw'umubare rusange by'umutungo wisubirisha ryerekana igabanuka ry'ubushobozi bwo gukoresha umutungo w'amazi uhari.

  Urwego rw'ubuhinzi rwakoresheje amazi menshi kurushaho muri iyo myaka 2, ari byo 94 ku ijana mu 1993 ugereranije na 68 ku ijana mu 2000. Iryo gabanuka ntaho rihuriye n'ikinyuranyo cy'amazi yakoreshejwe nyakuri (ari byo kuvuga kilonetero kibe 0, 722 mu 1993 na kilometero kibe 0,102 mu 2000)

- Izindi nzego ebyiri zerekana ubwiyongere bw'imikoreshereze y'amazi mu ijanisha muri iyo myaka ibiri, ariko imikoreshereze nyakuri mu rwego rw'ingo iriyongera mu gihe iyo mu urwego by'inganda ihura n'igabanuka ricirirtse rya 5 ku ijana (0,031 km3) mu 1993 n'irya 24 ku ijana (0,036 km3) mu rwego rw'ingo, 2 ku ijana (0,015 km3) mu 1993 na 8 ku ijana (0,012 km3) mu urwego by'inganda
- Uburyo bw'itaramakuru bwa FAO ku mazi no ku gusukira/kuhira muri Mata 2005, bwasanze umutungo wisubiranya rusange wa buri mwaka wari 5,2 km3 ku mwaka; naho itegurwa ry'Umushinga w'Igihugu wo Gucunga neza Umutungo w'Amazi (PGNRE) ryasanze imikoreshereze y'amazi mu nganda ari 0,013 km3 ku mwaka (PGNRE 2005).

- Imibare ya ELECTROGAZ yerekana ko akenerwa mu mujyi wa Kigali ari 55.080 m3 ku munsi, mu gihe umusaruro bwite uboneka ari 30.525 m3 ku munsi.
- Iyigwa ku byagaragaye mu birebana no Kumenya no Gucunga neza Amazi ryakozwe mu rwego rwo gutegura Umushinga w'igihugu wo Gucunga neza Umutugo w'Amazi (PGNRE) rirekana ko amazi inganda zizakenera azaba ari hagati ya 300.000 na 900.000 m³ ku mwaka mu 2020 mu mijyi kandi ko ahantu hogerezwa ikawa hazakoresha 130.000 m³/umwaka mu 2010 mu byaro.
- Imikoreshereze y'amazi iteganijwe n'inzego zinyuranye.

Uko ahantu hahehereye hameze mu Rwanda

- Ibishanga ni byo binyuranye mu buryo bw'imiterere no n'ubw'ubutabire kurusha ibindi bintu byose byerekeranye n'ibihumeka n'ibidahumeka bikoze ireme n'umwimerere by'ahantu mu rwego rw'ibidukikije biboneka mu mazi mu Rwanda. Muri ubwo buryo ni ahantu hahehereye hakurikijwe ibihe.
- Ibarura rya vuba aha ry'ahantu hahehereye ryakozwe mu 2008 ryerekanye ko u Rwanda rufite ibishanga 860 n'ibiyaga 101 bitwikiriye ubuso bwa 278.536 ha muri rusange (10,6 ku ijana by'ubuso bw'igihugu), n'i 149.487 ha, kuri buri kimwe.
- Iri barura nanone ryabonye imigezi 861, ifite igiteranyo cy'ibirometero 6.462 z'uburebure. 41 ku ijana by'ibishanga byabaruwe bitwikiriwe n'ibimera by'umwimerere, 53 ku ijana birimo ibihingwa, (ibi bikaba bigize hafi 148 344 ha) kandi hafi 6 ku ijana n'imirima yarajwe.

Agaciro k'ahantu hahehereye n'akamaro kaho mu iterambere ry'ubukungu

- Ahantu hahehereye hazwiho kuba urusobe rw'ibintu bihumeka n'ibidahumeka bikoze ireme n'umwimerere by'ahantu mu rwego rw'ibidukikije bitanga umusaruro kurusha ibindi ku isi. Bimwe mu byo dukesha ahantu hahehereye, ari byo abantu bungukiramo ni ukwisubiranya

kw'ibitunga ubutaka, gukumira ibyondo n'iyandura, kugabanya imyuzure no gusubiza amazi mu butaka.

- Hejuru y'izo nyungu z'uburyo buziguye, ahantu hahehereye ni ho hakomoka inyamaswa, amafi, ibiti n'ibiti by'ishyamba bifite umubyimba woroheje (*non-timber products*) byinshi abaturage bakoresha cyane. Icy'ikubitiro nanone, ubutaka bw'ahantu hahehereye bushobora kugira agaciro kanini mu byerekeranye n'ubuhinzi bukoreshejwe neza.
- Ibyo dukesha ahantu hahehereye by'ibanze mu Rwanda ni umusaruro wo mu buhinzi, ibikenerwa byerekeranye n'amazi, indiri y'urusobe rw'ibinyabuzima, ububiko bwa nyiramugengeri, gucubya imihindagurikire y'ibihe n'iy'ikirere, imyidagaduro, ubukerarugendo n'agaciro mu birebana n'umuco.
- Ugereranije, hegitari 92.000 ku 165.000 muri rusange zikoreshwa mu buhinzi. Ni ahanini kubera y'uko 90 ku ijana by'abaturage b'igihugu bacyitabira ibikorwa by'ubuhinzi.
- Ububiko no gusukura amazi

Ibangamirwa ry'amazi n'iry'umutungo w'ahantu hahehererye

- Ingufu zihambaye, mu myaka ya vuba aha, zasabwe umutungo w'amazi n'uw'ahantu hahehereye kubera imikoreshereze inyuranye yadutse kandi yiyongeraga bitewe n'izamuka ry'ubwiyongere bw'abaturage. Zimwe muri izi mbogamizi zigizwe n'ikwirakwizwa ry'ubuhinzi, imyanda, kwinjizwa kw'amoko, ikoreshwa rikabije n'inzego z'ubuyobozi zidatunganye mu gucunga neza ahantu hahehereye.
- Zimwe muri izi mbogamizi, mu birebana n'amazi, zagize ingaruka ku bwinshi n'ubwiza by'amazi aboneka. Imihindagurikire y'ikirere na yo ni impamvu y'iyangirika ry'ibishanga. Kubera igabanuka ry'imvura, imiterere y'amazi y'ahantu hahehereye irabangamiwe.
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Ingamba zo kunoza umutungo w'amazi n'uw'ibishanga

- **Guhindura imikoreshereze yo mu rwego rw'amazi:** Gucunga neza umutungo w'amazi mu myaka yashize byibanze ku gutanga amazi hatitawe cyane ku micungire myiza y'umutungo w'amazi no ku bibazo nko kugenzura umutungo w'amazi, gusuzuma ahantu amazi aturuka n'ibindi. Hashingiwe ku mihindurire yo mu rwego rw'amazi, gushyira itangwa ry'amazi n'imikorere yerekeranye n'imitunganyirize y'ahantu n'iy'ibintu birebana na yo muri Minisiteri y'Ibikorwa Remezo (MININFRA) mu gihe Minisiteri ishinzwe ibidukikije MINIRENA yari ifite mu nshingano zayo gucunga neza umutungo n'ibijyanye n'ishyirwaho n'iyubahirizwa ry'amabwiriza, gucunga neza umutungo w'amazi kurushaho birashoboka.
- Hashingiwe kuri EDPRS, imikoreshereze y'umutungo w'amazi mu mizamukire yagombye kwiyongera, kubera y'uko ubutaka bwinshi kurushaho buzasukirwa; hazabyazwa umusaruro muni kurushaho ingufu z'amashanyarazi akomoka ku mazi kandi hagamijwe ibikorwa byo mu nganda byinshi kurushaho.
- Hazabyazwa umusaruro ibyiciro by'imikoreshereze y'amazi y'umwimerere ku mpamvu zo kwirema, harimo amahoteli n'izindi nyubako zigenewe imyidagaduro. Ibi byifuzo byose birasaba ikwirakwizwa ry'amazi rizakenera imicungire myiza.

- **Kunoza imicungire myiza y'ahantu hahehereye:** U Rwanda nta politike yerekeranye n'ahantu hahehereye rufite ku buryo kuri ubu aho hantu hacungwa mu rwego rw'Itegeko Shingiro ryerekeranye n'Ibidukikije no mu rwego rw'Itegeko rirebana n'Ubutaka. Kurinda ahantu

hahehereye ni ngombwa cyane cyane mu kubungabunga no guteza imbere umumaro usanzwe w'ahantu hahehereye. Gukoresha uburyo bumwe kuri buri mubande uzana amazi bisa n'umugambi mwiza kurusha iyindi wo gucunga neza no gusana ahantu hahehereye mu Rwanda.

- Imyanya igamijwe gusigwa ku nkengero z'imigezi ari yo metero10 ku myaka na metero 20 ku nyubako z'amacumbintabwo yubahirizwa igihe cyose.

- **Kunoza imicungire myiza y'amazi:** Ku birebana no gucunga neza amazi, ni ngombwa gushyiraho umusingi w'ibikenewe gukorwa wujuje ibya ngombwa byose bizatuma habaho kugenzura no kubungabunga ibikorwa byose uko byakabaye hamwe no gushyira ku gihe amakuru yerekeranye n'ubwiza n'ubwinshi by'amazi y'igihugu.

- **Kurwanya iyandura ry'amazi:** Kugirango haboneke igisubizo cy'ikibazo cy'iyandura ry'amazi, ni ngombwa gushyiraho amategeko n'amabwiriza ajyanye no kugenzura imyanda by'ingandas. Ingufu zirakenewe kugira ngo hashyirwe mu bikorwa uburyo bwo kubona umusaruro mwiza kurushaho mu nganda zose kandi ibi byarushaho kuba byiza biramutse biherekejwe n'ihame rya 'uwangiza arishyura' ryatuma inganda zose zangiza zikorera umusaraba w'ibikorwa byazo kandizikagira uruhare rwubaka kurushaho ku birebana n'igabanuka ry'iyanduzwa ry'umutungo w'amazi n'uw'ibidukikije muri rusange.

Umutwe wa 8 Umutungo w'Ibitanga Ingufu

- U Rwanda rufite uburyo bwinshi cyane bwo kugera ku iterambere mu birebana n'ingufu– uhereye ku hashobora kuvanwa amashanyarazi akomoka ku ngufu z'amazi, umwuka witwa ''gaz methane'', ingufu zitangwa n'imirasire y'izuba na nyiramugengeri iboneka mu bishanga. Umutungo utarabyazwa umusaruro ku birebana n'amashanyarazi ushobora kuba ungana na megawati 1.200
- Inyinshi muri izi nkomoko z'ingufu ntizabyajwe umusaruro ku buryo buhagije. Muri ubwo buryo, inkwi ziracyari iza mbere mu guha ingufu abaturage 94 ku ijana, ibikomoka kuri peteroli bivanwa mu mahanga bitwara amafaranga arenze 40 ku ijana mu kuyavunja.
- Ingufu ni ikintu kigize umasingi w'ubukungu. Birumvikana rero ko ingufu zitangwa ubungubu, zidahagije kandi zihenze, ari zo mbogamizi iterambere rirambye rifite.

- Intego y'Icyerekezo 2020 mu birebana n'ingufu ni ukugeza amashanyarazi nibura ku baturage 35 ku ijana (ugereranije na 6 ku ijana none)

- Vision 2020 y'u Rwanda irashimangira ikenerwa ry'imizamukire mu bukungu, ishoramari ryo mu rwego rw'abigenga n'itunganywa ry'ubukungu rishyigikiwe n'itangwa ry'ingufu ryizewe kandi ridahenze nk'ikintu cy'ibanze mu bikorwa byo gushaka kugera ku iterambere. Kugira ngo iyo mitunganyirize igerweho, igihugu kizagomba kongera umusaruro werekeranye n'ingufu no kunyuranya ibitanga ingufu na byo binyuranye.

Ibura ry'ibicanwa mu Rwanda

- Igice kinini cy'ingufu zikoreshwa mu Rwanda none kiracyagizwe n'inkwi (80,4 ku ijana). Ni muri ubwo buryo hari itemwa ry'amashyamba riteye inkeke mu gihugu rifite ingaruka ku bidukikije.

- Ubushobozi bwo kubona amashanyarazi y'imbere mu gihugu ni buke cyane, megawati 72.445 hakoreshejwe uburyo bwose bushoboka.

- 2 ku ijana gusa by'abaturage ni byo bishobora kubona amashanyarazi, ku buryo hari umusaruro w'igihugu w'amashanyarazi ubura ibirenze mirongo 50% by'amashanyarazi bikavanwa muri RDC.

Ibintu bitanga ingufu mu Rwanda

- Urwego rw'ingufu mu Rwanda rugizwe n'ingingo eshatu: amashanyarazi, ibikomoka kuri peteroli n'ibitanga ingufu bishyashya n'ibyisubiranya
- Mu bitanga ingufu byisubiranya dufite ibikomoka ku binyabuzima (*biomass*), imirasire y'izuba, nyiramugengeri, umuyaga, ingufu ziva mu butaka (*géothermie*) n'amashanyarazi aturuka ku mazi
- Ibipimo byerekeranye n'ingufu by'igihugu biriho ubu bya 86, 11 na 3 ku ijana by'ingufu zose zikoreshwa bikoreshwa mu rwego rw'ibikomoka ku binyabuzima, ibikomoka kuri peteroli n'amashanyarazi, buri kimwe (ishusho)
- Ibikomoka ku binyabuzima bimaze kuba bikeya mu gihe igihugu kirimo gihura no gutakaza ibikomoka ku binyabuzima bigera kuri miliyoni metero kibe 4 ku mwaka.
- N'ubwo imikoreshereze y'inkwi zo gucana yagombye kwiyongera mu gihe gicirikiritse, ingamba z'igihe kirekire za EDPRS zigamije kugabanya imikoreshereze y'inkwi zo gucana kuva kuri 94 kugera kuri 50 ku ijana mu mpera za 2020.
- Imbonerahamwe ya 2 irerekana ubwiyongere buteganyijwe bw' imikoreshereze ya 20 ku ijana hagati ya 2005 na 2010.
- Ingamba zigamije gukemura iki kibazo zirimo gahunda yo kongera ubuso bw'ahatewe amashyamba kuva kuri 20 kugera kuri 23,5 ku ijana mu 2012. Ibi bizatuma haba igabanuka ry'imikoreshereze y'inkwi kuva kuri 8,9 kugera kuri miliyoni 6,2 m3.
- Ingamba zo gutera inkunga Umuryango w'Afurika y'Iburasirazuba zigomba gutangira iyamamaza rihanitse ryo gukoresha Amashyiga yo Gutekaho Akorwa ku buryo bwihutirwa, ari yo Fourneaux de Cuisine Improvisés (ICS), mu buryo bwo kuzigama burambye hagamijwe gukomeza uburinganire hagati y'ibintu bitangwa n'ibisabwa.
- Inkwi zo gucana ICS zirahendutse kurusha amakara ICS ku madolari 3 y'amanyamerika ugereranije n'amadolari 6 y'amanyamerika kuri buri kimwe.

- U Rwanda ruvana hanze hafi 15,5 MW z'amashanyarazi hakoreshejwe kwambukiranya imipaka ya RDC n'iya SINELAC na hafi 3MW ziva mu Bugande.
- N'ubwo hari ingufu z'amashanyarazi zituruka hanze, umutungo w' amashanyarazi uburaho 50%. Mu 2004 hinjijwe amashanyarazi angana hafi na 380 MWh z'amashanyarazi atangwa.
- Ibura ry'amashanyarazi ryateye kuyimana buri gihe. Kuyimana bibaho igihe amasosiyete atanga amashanyarazi agaritse kuyatanga kuri bamwe mu bafatabuguzi

- Ibura ry'amashanyarazi na bwatumye hiyongerqho 250 ku ijana ku giciro cy'amashanyarazi– kuva kuri ku mafaranga yu Rwanda 48 kugera ku 120 kuri inite imwe y'amashanyarazi

  - Kugira ngo amashanyarazi akenewe aboneke,'Electrogaz yaguze amamashini atanga amashanyarazi hakoreshejwe moteri ya *diesel*. Mu gihembwe cya kabiri cy'umwaka wa 2006, amafaranga yishyuwe kubera ikoreshwa ry'amavuta ya ''diesel'' yageze hafi ku madolari 65.000 ku munsi.
  - Hafi 42 ku ijana by'amashanyarazi aboneka mu Rwanda bitangwa n'amamashini ''diesel''.
  - Hashingiwe ku kugereranya, agaciro ka *méthane* mu kiyaga gahwanye na toni miliyoni 40 za peteroli, bivuga ko hafi 700 MW zishobora gutangwa na za sentarali ubudahwema nibura igihe cy'imyaka 55 bitekerejwe ko impuzandengo y'ubucukuzi bwa miliyaridi imwe ya **m3** ya wa mwuka witwa ''gaz méthane'' ku mwaka

- U Rwanda ruracyafite nyiramugengeri ibarirwa kuri toni ''***tonne***'' miliyoni 155, bityo rukaba rufite ubushobozi bwo gusimbura inkwi, amakara na mazutu.

- Ariko, hagomba gusuzumwa ingaruka ku bidukikije z'ubucukuzi hagamijwe ubucuruzi mbere y'uko nyiramugengeri ishobora gukoreshwa nk'ingufu nsimbura nyazo.

- U Rwanda rufite umutungo w'ingufu ziba mu butaka zimeze nk'amasoko y'amazi ashyushye ku ngengero z'Ikiyaga cya Kivu, uwo mutungo ukaba ufite ubushobozi bwo gutanga amashanyarazi angana hafi na MW 170-320. Inyigo mu bya tekinike zibanziriza ubushakashatsi zirimo gukorwa.
- Ubushobozi by'umuyaga nk'isoko ry'ingufu burimo gusuzumwa. Ishusho y'igihugu ''atlas'' y'umuyaga igiye kuzakorwa ku nkunga ya Guverinoma y'Ububiligi.

- Kuba imishinga yerekeranye n'amashanyarazi yambukiranya imipaka ari ngombwa biragaragara mu Rwanda kubera y'uko igihugu kidafite ubushobozi bwo kubona amashanyarazi ashobora gushyigikira iterambere ryifuzwa mu mibereho myiza y'abaturage no mu bukungu.

- Igenamigambi ry'imikorere riherutse ku birebana n'ingufu rifite intego yo kongera ubushobozi bw'ingufu hagabanywa ibitakara mu buryo bwa tekiniki kuva kuri 23 kugera kuri 15 ku ijana, n'ibitakara mu rwego rw'ubucuruzi kuva kuri 12 kugera kuri 5 ku ijana mu gihe cy'imikorere ya EDPRS
- Inyubako n'ibyuma bijyanye no kurinda ingufu z'amashanyarazi bizaba bifite mu ntego zabyo kongera itangwa ry'amashanyarazi kuva kuri megawati 0 kugera ku ngufu z'igipimo cya megawati ''megawatt'' 30 mu 2012.

Ingorane urwego rw'ingufu rugomba gukemura

- **Ingufu zihagije zo mu rwego rw'ubwikorezi:** Hafi 75 ku ijana bya peteroli ivanwa mu mahanga bikoreshwa mu rwego rw'ubwikorezi; muri ubwo buryo, ibiciro by'ubwikorezi birahanitse rwose. Ingorabahizi y'ingufu mu urwego rw'ubwikorezi ni ugutanga icyizere ku mikoreshereze myiza kandi ikwiye y'ibikomoka kuri peteroli. Imikoreshereze myiza ya peteroli iterwa n'ubwoko bw'imodoka, uburyo ubwikorezi bukorwamo n'imikoreshereze y'ubwikorezi buboneye kurusha ubundi mu birebana n'ingufu.

- Guhuza ibikorwa by'inzego biracyabangamiwe no kuba hari ububishobozi buke hamwe n'icyuho mu rwego rw'ubumenyi. Nk'urugero, nta bumenyi bwinshi; mu birebana n'ingufu zisimbura izindi kandi zisubirisha kandi ikoranabuhanga riri hasi cyane mu gihugu. Bityo igihugu ntigishobora kugera ku nzira z'iterambere risukuye kubera kubura ubumenyi mu birebana n'uburyo bwo kubyaza umusaruro amahirwe.

Umuti mu kunoza imiterere y'ingufu

- **Kunoza uburyo amashanyarazi abonekamo:** Abashoboraga kubona amashanyarazi mu 2006/7 bari abaturage 4,7 ku ijana bose hamwe, bakaba bagombaga kwiyongera bakagera kuri 30 ku ijana mu 2020. Hateganyijwe nanone ko ikoreshwa ry'amashanyarazi ku muturage rizava kuri 30 kWh rikagera kuri100kWh mu 2020

- **Gushyira mu bikorwa politike irebana n'ingufu:** Intego ya politike y'igihugu mu brebana n'ingufu (ROR 2004) ni ugukemura ingorane zerekeranye n'ingufu no kugeza Abaturarwanda ku iterambere ry'igihugu rirambye.

- Gukoresha Isuzuma Shingiro ry'Ibidukikije (EES), Ubushakashatsi ku Ngaruka ku Bidukikije (EIE) kimwe no gushyira mu bikorwa urwego rw''amategeko n'urw'ibindi bikoresho bijyanye n'amabwiriza ari na ko byose bitanga amahirwe yo gutanga umusanzu ugaragara uhereye ku mikoresshereze y'ingufu ukagera ku igabanuka ry'ubukene no ku mizamukire ifite ireme y'ubukungu bw'igihugu.

- Urwego rw'ingufu rufite uruhare rukomeye mu koroshya imizamukire mu zindi nzego nk'ubuhinzi, za TIC / ICT, uburezi n'ubuzima, no mu gutanga za serivisizo mu urwego rw'igihugu.
- Bityo Guverinoma igamije guha icyizere itangwa ry'ingufu yongera umusaruro iherreye ku masoko menshi (amashanyarazi akomoka ku mazi, gaz méthane, ingufu zitangwa n'izuba, ingufu zikomoka ku binyabuzima n'izikomoka kuri peteroli).
-
- Ni ngombwa gushyiraho urwego rw'ubuyobozi rushoboye gukangura, guhuza no koroshya ibikorwa by'abikorera n'abakorera Leta mu birebana n'ingufu zisubirisha / imikoreshereze ya za tekinoloji mu byaro.
- Ni ngombwa ko abaturage bakangurirwa akamaro no kubaho kwa za tekinoloji, imikorere n'umutungo uhari n'uwisubirisha kandi ko babyumva.
- Gukemura ikibazo cy'ubusumbane mu mikoreshereze y'ibiti nk'ibicanwa hakoreshejwe a) guterra ibiti byinshi kurushaho, b) kugabanya isabwa ry'inkwi zo gucana mu rwego rw'ingo n'urw'ibigo no kwita ku bikoresho byo mu rwego rwo gutanga umusaruro no gushyikirrana hakoreshejwe abakozi babitojwemo bihagije.

Umutwe wa 9: Imihindagurikire y'ikirere n'Impanuka zikomoka kuri karemano

- Imiterere y'ikirere ni impuzandengo y`ibintu biboneka mu bipimo by'ikirere by'akarere k'ahantu bwite mu gihe ubusanzwe kitarenze imyaka 30.

- Kubera ubutumburuke bwarwo buri hejuru, u Rwanda rufite imiterere y'ibihe n'iy'ikirere igizwe n'ubushyuhe bucirirtsse. Ubushyuhe mpuzandengo mu mwaka buri hagati y'igipimo cya degré Celcius 16 na 20, hakaba nta mihindagurikire ihambaye

- Imiyaga na yo ni mu kigero cy'a hafi milimetero ''millemètre'' 1 kugeza kuri 3 mu isegonda
- Kuba ubukungu bushingiye cyane ku buhinzi bw'igihe cy'imvura, imiterere y'ibihe n'iy'ikirere ifite akamaro kihariye.
- Imiterere y'imvura igizwe n'ibihe, ighe cy'imvura kuva muri Nzeli kugeza mur gushyingo n'igihe kirekire kurushaho hagati ya Werurwe na Gicurasi. Hari ibihe bibiri hagati y'ibihe by'izuba, ighe kiguffi hagati y'Ukuboza n'Ugushyinngi n'igihe kirekire kuva mu kwezi kwa gatandatu kugeza mu kwezi kwa Kanama.
- Ibipimo by'imvura biri hafi hagati ya milimetero''millemètre'' 900 mu burasirazuba no mu majyepfo ashyira Uburasirazuba na milimetero''millemètre'' 1500 mu turere tw'imisozi miremire n'utw'ibirunga two mu majyaruguru ashyira Uburengerazuba.

Imihindagurikire y'ikirere mu Rwanda

- Ibigo bipima ikirere bikora kuri ubu nta bushobozi bifite buhagije bwo gutanga isura ngenderwaho yizewe y'imihindagurikire y'ikirere ;

- Ariko ibyagaragaye, kimwe n'isuzuma ry'ibintu biboneka byerekana ko mu myaka 30 ishize, bimwe mu bice by'u Rwanda byahuye n'imihindagurikire idasanzwe mu byerekeranye n'imiterere y'ibihe, harimo n'imihindukire y'ibihe n'ubukana by'imvura no kwikanyiza kw'ibihe byombi bigera aho bigahanika isura, urebye ko haba imvura y'amahindu mu majyaruguru n'izuba rikabije mu turere tw'iburasirazuba n'utw'amajyepfo ;

- Isuzuma ry'uburyo imvura igenda igwa ryerekana ko igihe cy'imvura kigenda kigana ku kuba kigufiya cyane kurushahom ari nako gifite ubukana bwinshi kurushaho. Ubu buryobw'imvura bwatumye hababo igabanuka rijyanye n'umusaruro w'imyaka n'ibintu nk'izuba rikaze mu turere tw'ubushyuhe n'imyuzure cyangwa inkangu mu turere twahuye n'imvura y'amahindu. Imvura y'amahindu yabonetsse cyane cyane mu Ntara y'Amajyarurguru no mu Ntara y 'Iburengerazuba ;
- Akarere k'Uburasirazuba bw'igihugu kahuye n'igabanuka ry'imvura mu myaka mirongo ingahe ishize. Ibyagaragaye byerekana ko hagati ya 1961 na 2005 igihe kiri hagati ya 1991 na 2000 cyahyuye n'izuba uhereye mu w'1961 ;

- Ibyagaragaye byerekana ubwiyongere bw'ubushyuhe bucirirtse mu Rwanda mu myaka 20 ishize, nk'uko tubiobona mu ishusho ya 2. Ibintu byabonetse mu 2006 byerekanye ko ubushyuhe bwari burenze impuzandengo y'imyaka 32 ku birebana n'ibihe by'izuba (Mutarama, Gashyantare, Nyakanga, Kanama, Nzeli n'Ugushyingo);

Kwibasirwa n'impanuka zituruka kuri karemano

- Kuba ruherereye mu kibaya cya Rift ya Afurika hafi y'Ikirunga cya Nyiragongo no hafi y'ibiwzazane biterwa n'Akarere kari hagati y'Ihuriro ry'imirambararo ifite ubushyuhe (ZCIT) ku mugabane, u Rwanda rubangamiwe n'impanuka karemano zikomoka ku mihindagurikire y'ikirere cyangwa y'ibintu byo mu nda y'isi.
- Zimwe muri izo mpanuka ni : izuba rikabije, imvura y'amahindu, imyuzure, inkangu, imitingito, kuruka kw'ibirunga n'ibyorezo.
- Mu myaka 10 ishize, izi mpanuka zabaye mu by'ukuri mu gihugu cyose. Izi mpanuka zirushaho kugira ubukana bitewe n'imihingire mibi, itemwa ry'amashyamba no kwangiza ibidukikije ari byo bimwe muri ibyo.
- Ibihe by'izuba nibyo akenshi bitera amapfa, ibura ry'ibiribwa, igabanuka ry'aamoko y'inyamaswa n'ay'ibimera, iyimuka ry'abaturage bashaakisha ibyo kurya n'inzuri.
- Imyuzure n'inkangu ni byo bya mbere bigize impanuka mu turere tw'ubutumburuke buhanitse, cyane cyane mu gihe cy''mvura. Muri ubwo buryo, kubera i ; imitere y'umurambararo w'u Rwanda, kwibasirwa n'imyuzure itunguranye mu turere twinshi tw'igihugu biba bishoboka buri gihe.
- Imyuzure n'inkangu biterwa n'ibikorwa by'abaantu (imihingire mibi, gutema amashyamba no kwangiza ibidukikije) byarushijeho gukaza ingaruka z'imyuzure ku baturage,
- Imyuzure n'inkangu bijyana akenshi no kwaduka kw'indwara zikomoka ku mazi kandi ziterwa n'amazi nka malariya, impiswi, macinya n'ubwandu bw'udukoko two mu myanda bita ''virus'' cyane cyane kubera kz'amavomero n'amazi yo butaka.
- Muri Nzeli 2008, imvura nyinshi n'inkubi z'imiyaga byagize ingaruka ku mu Mirenge 8 kuri 12 y'Akarere ka Rubavu: Gisenyi, Rubavu, Rugerero, Nyamyumba, Nyundo, Cyanzarwe, Nyakiriba na Kanama.

Imitingito y'isi

- U Rwanda ruherereye mu karere kaberamo imitingito y'isi ifite inkomoko yayo mu kiyaga cya Kivu. Agace k'amajyaruguru ashyira uburengerazuba bw'igihugu kagizwe n'uruhererekane rw'ibirunga gakunze kuberamo imitingito.
– Ibi bituma u Rwanda rukunze kuberamo imitingito y'isi, by'umwihariko Akarere k'uburengerazuba.
– Mu minsi ya vuba aha koko, imitingito 2 iifite ubukana bwa 6,1 na 5,0 mu mibare ya Richter kimwe n'intandaro zayo yabaye ku itariki ya 3 n'iya 14 Gashyantare 2008, umwe ku wundi. Inkomoko y'iyo mitingito y'isi yari ihererye hafi y'umujyi wa Bukavu mu nkengero z'ikiyaga cya Kivu, muri Repubulika iharanira Demokarasi ya Kongo.

Kuruka kw'ibirunga

- Uruhererekane rw'ibirunga mu majyaruguru ashyira uburengerazuba, harimo na Nyiragongo iri muri Repubulika iharanira Demokarasi ya Kongo, gihora k'itezwe guteza ibibazo kubera y'uko gikunze kuruka. Uko kuruka kw'ibirunga kubangamiye abatuye mu turere twa Goma na Gisenyi, aha mbere ari ho muri Repubulika Iharanira Demokarasi ya Kongo ahandi ari mu Rwanda.
– Iruka rya vuba ryabaye muri Kanama 2005 ryateje iyangirika ry'ibikorwa remezo mu mujyi wa Goma muri Repubulika iharanira Demokarasi ya Kongo ku mupaka w'umujyi wa Gisenyi mu Karere ka Rubavu.

Umuti

Guhangana n'ihindagurika ry'ikirere: U Rwanda rwasanze hari ibintu 6 byihutirwa mu guhangana n'Imihindagurikire y'ikirere:

• Gucunga neza Umutungo kandi ; uburyo Bukomatanyije (IWRM);
• Gushyiraho uburyo bwo gutanga amakuru kugira ngo inzego zishinzwe amazi n'izishinzwe ubumenyi bw'ikirere n'ubuhinzi zigire icyo zimenya hakiri kare no gushyiraho inamba zo gutabara bidatinze;
• Guteza imbere ibikorwa byo mu rwego rw'ubuhinzi n'ubworozi bisuganyije;
• Guteza imber ibikorwa bitari iby'ubuhinzi bibyara inyungu;
• Kuzana amoko ahangana n'ibihe bikabije;
• Gutunganya amasoko y'ingufu asimbura inkwi zo gucana.

Uburyo bugamije kugabanya kubangamirwa n'impanuka

- Ibigize icungwa neza ry'impanuka by'ingenzi ari byo gutegura, gusuzuma, gucubya no kuburiza mo impanuka birimo kwiganwa ubushishozi kuri ubu.
- : muri ubwo buryo, Ishami rishinze Guhuza ibikorwa byo Gucunga Impanuka neza (DMC) ryashyizweho n'Inama y'Abaminisitiri yo kuwa 27 Ukwakira 2004 kandi hashyizweho amakipe y'ingoboka mu rwego rw'Akarere no mu rwego rwa segiteri mu 2007.

– Ishami rishinzwe Guhuza ibikorwa byo Gucunga neza Impanuka riyobirwa na Polisi y'Igihugu ifite mu nshingano zayo ibi bikurikira:

- Kumenya no gusuzuma impanuka ziboneka kenshi mu turere cyangwa mu masegiteri,
- Gukora gahunda zo gucunga no gucubya impanuka,
- Kumenya no kugereranya agaciro k'impanuka mu mafaranga ku birebana n'imibereho myiza y''abaturage n'ubukungu,
- Guha raporo Abashinzwe Ihuzabikorwa ryo Gucunga neza Impanuka (Minisitiri w'Intebe)

- Ishami rishinzwe guhuza ibikorwa byo Gucunga neza Impanuka ryakoze iyigwa ryerekeranye no gusuzuma ibangamirwa ryo mu rwego rw'impanuka mu turere tw' Igihugu dukunze guhungabana, cyane cyane uduce tw'amajyaruguru, utw'uburengerazuba n'utw'amajyepfo tw'Igihugu. Ikipe y'impuguke mu byerekeranye n'ibirunga ya *Observatoire Volcanologique de Goma* ifatanije na Kaminuza y'u Rwanda. Ikurikiranira hafi imigendekere y'ibirunga

Imyanzuro n`amabwiriza

- Imiterere y'ikirere ifite uruhare rukomeye m buhinzi, ari bwo nkingi y'ubukungu bw'ibanze bw'Abanyarwanda n'uburyo bwo kubaho bw'abaturage.
- Nyamara kubera ibikorwa by muntu, imihindagurikire y'ikirere iriimo kugenda yigaragaza. Ibintu byerekeranye n'imiterere ikirere nk'imvura nyinshi cyangwa imvura ikabije kuba nkeya birimo kubaho kenshi kandi bikagira ingaruka ku mibereho myiza y'abantu.
- Ibi bituma habaho impanuka nk'imvura z'amahindu, izuba, imyuzure, inkangu, imitingito, kuruka kw'ibirunga n'ibyorezo.
- Kumenya ibihe hakiri kare, gutabaza vuban, imiti n'ibindi bikoresho ni ngombwa mu gucunga neza, mu kugabanya ibangamirwa no mu gucubya impanuka.
- Gukanguraa abaturage ni ingirrakamaro kugirango bamenye buryo ki bagabanya ibangamirwa n'iyangirika ry'ibintu riterwa n'impanuka witandukanye, bitba ibyo hagafatwa izindi ngamba zo guteganya no gucubya impanuka.

- Serivisi Nyarwanda y'Ubumenyi bw'Ikirere nta bushobozi buhagije iffite bwo gutaangga ibimenyetso bihagije, amakuru n'ibitekerezo kubera abakozi babishoboye badahagije, qhqntu hqtqndukanye ho gupima ikirere hadahagije n'ibikoresho bigenewe gukurikiranira hafi ibimenyetso bidahagije.
- Kugira ngo hanonosorwe uburyo bwo guteganya no kumenya vuba na bwangu ibintu biteye inkeke byerekeranye n'ikirere n'amazi, ihinduka n'imihindagurikire y'ikirere, ni ngombwa kumenya no kumva neza uburyo ibihe n'ikirere byo ku isi n'imikoranire yabyo bigenzurwa.
- Ubwo buryo burimo ubushakashatsi mu birebana no kumenya mbere imiterere y'ikirere mu nzego zose z'ibihe, kugereranya no gushyira ubushobozi ku gihe, cyane cyane ubushobozi bujyanye no kunoza uburyo bwo kumenyekanisha mbere ihinduka cyangwa imihindagurikire y'ikirere ku rwego rw'igihugu, ubushobozi bukenewe mu gucunga neza impanuka no mu kugabanya kwibasirwa n'impanuka.

Umutwe wa 10: Kureba igihe kizaza cy'Ibidukikije by'u Rwanda kakoreshejwe Inzira zose zishoboka

- Ubu buryo ni ubwo gusubiza ikibazo gikurikira: ni gute dushobora kugera ku iterambere mu mibereho myiza y'abaturage no mu bukungu ku buryo buboneye kurushaho ku birebana n'ibidukikije kandi burushijeho guhenduka?
- Kugeza uyu munsi, ingengo y'imari igenerwa inzego zifite ibidukikije mu nshingano zazo ni ntoya cyane ugereranije n'uburemere bw'ingorane zihura na zo mu kugena ibikorwa bijyanye no kugera ku bidukikije bifite ireme. Abarebwa n'ibidukikije basa n'abataremeje bihagije ikigega cy'imari ko ishoramari rishyashya mu bidukikije rikwiriye mu birebana n'ubukungu n'ibidukikije. Nyamara, guhera mu 2003 kugeza mu 2007, ingengo y'imari yagenewe ibidukikije yiyongereye kuva kuri 0,06% kugera kuri 1,15 % (MINITERE 2006).

Amabwiriza

- Gushyira ibidukikije mu nzego z'igenamikorere cyangwa za politike, z'igenamigambi n'iz'agahunda nk'uko biteganywa muri Politike yo gucunga neza ibidukikije.

U Rwanda: Ubukungu ngenderwaho bushingiye ku gihe kizaza kandi bugenwa haherewe ku murongo w'ibitekerezo biganisha ku gihe kizaza

Imiterere y'ingenzi y'ibimaze kugerwaho mu mibereho myiza y'abaturage no mu bukungu mu Rwanda ikubiye mu Igazeti ya Leta y'u Rwanda (2007). Ishingiye kandi ikerekana ibyangombwa mu gushyiraho politike y'iterambere y'igihe gito. Icyitegererezo gishingiye ku bihe bizaza ku birebana n'ingamba z'iterambere ry'imibereho myiza y'abaturage n'iry'ubukungu gishobora kugenwa hashingiwe ku miterere y'ibitekerezo n'ibimenyetso bigaragara.

U Rwanda ruri he?

• Imizamukire mu bukungu yageze aho igenda buho buhoro, mu gihe ubwiyongere bw'abaturage bukomeza kwihuta, ibidukikije bigasabwa ingufu nyisnhi cyane.
• Ubukene bwaragabanutse, ariko hakenewe ko bugabanuka vuba kurushaho kugira ngo hagerwe ku Ntago z'Ikinyagihumbi (MDG/ OMD) n'iz'Icyitegererezo 2020

• Ibimenyetso by'ibanze byerekana ko ubuzima bwarushijeho kuba bwiza cyane, ariko ko hakomeje kuba ibintu by'imbusane mu birebana n'ubuzima.
• Kubona amashuri yisumbuye biracyari inyuma ugereranije n'amamashuri abanza, ariko kwiga ku miterere n'imimerere y'ubwiza bw'amashuri abanza na byo birihutirwa cyane
• Ivugururwa ry'imiyoborere ryateye imbere cyane, ariko haracyari byinshi bigomba gukorwa
• Habonetse imikorere myiza kurushaho mu nzego zimwe na zimwe z'ingenzi:
• Kwiyongera kw'imizamukire mu bukungu kubera ibikorwa remezo, guteza imbere imizamukire mu iyubakwa ry'ubushobozi n'iy'Urwego rwa za serivisi; iterambere ry'Urwego rw'Abikorera ku giti cyabo n'ubuhinzi bugezweho.
• Kugabanya umuvuduko w'ubwiyongere bw'abaturage hakoreshejwe igabanuka ry'impfu z'abana, iringanizarubyaro na za gahunda z'uburezi bugera kuri benshi, ubuvuzi buboneye n'ishyirwa mu mashuri
• Kurwanya ubukene bukabije hakoreshejwe uburyo by'icyizere cyo kubona ibiribwa na za gahunda zihariye zo guhanga imirimo no kwita ku baturage.
• Gushyira imbaraga mu bikorwa byo kugabanya ubukene hakoreshejwe ishyirwa mu bikorwa rya za politike nziza kurushaho n'ihuzabikorwa rishingiye ku nzego no mu nzego, ishyirwaho ry'inzego z'ibikorwa rinonosoye, za serivisi zigenewe abakene zagenenwe neza kurushaho, gushishikaza Urugaga rw'abikorera na ba rwiyemezamirimo, no gukoresha neza kurushaho uburyo bujyanye no gusuzuma ibikorwa no kubikurikirana.

Ni hehe u Rwanda rwifuza kuba ruri?

Intego zijyanye n`aho u Rwanda rushaka kuba ruri ziboneka mu ntego z`igihe gito, iz`igihe giciriritse n`iz`igihe kirekire zikubiye mu Ntego z`Ikinyagihumbi z'Iterambere (MGD/OMD), zigizwe n'intego zagenewe umwaka w' 2015, mu ntego z'icyerekezo 2020 cy'u Rwanda zashyiriweho 2020 kimwe no muri EDPRS ifite intego zisa na zo zigamijwe kugerwaho mu mwaka w' 2012.

Ni hehe u Rwanda rwashobora kuba ruri?

Hashingiwe ku bintu ngenderwaho byasobanuwe muri uyu Mutwe n`inzira 4 zigaragara kandi zihariye ziganisha ku bibuga birangwamo Ingufu z`Amasoko, ku Ivugururwa ry`Uburyo bw`Imikorere, ku Rubuga rw`Imitamenwa no ku Nzibacyuho Zihambaye, igihugu gishobora kugera ku byifuzo byacyo bjy'iterambere mu bukungu no mu mibereho myiza y`abaturage. Hakoreshejwe zi mwe mu ntego z`Ikinyagihumbi (MDG) n`iz`Icyerekezo 2020, igishushanyombonera kiboneka hano hasi cyerekana uburyo iterambere rya buri kimwe mu nzego z`ibitekerezo byerekeranye n'igihe kizaza zishobora kugerwaho mu 2025.