



**Kwifashisha ibisubizo bishingiye ku buryo
karemano mu kugabanya imyuzure ahaherereye
ibyogogo bine mu Rwanda**

1. INTANGIRIRO

Mu myaka icumi ishize u Rwanda rwakunzwe kwibasirwa n'imyuzure isenya by'umwihariko mu gice cy'umujiyi hamwe no gukura kw'imijyi mu buryo bwihiuse.

Ubwiyongera bw'ubukana bw'impvura buri kugenda bigenda biterwa n'ubwiyongere bw'ubushyuhe aho impuzandengo y'ubushyuhe mu Rwanda yazamutse ku kigero cy'ubushyuye cyiri hagati ya 1.4°C na 2.56°C uhoreye muri 1971 ukageza muri 2016 mu duce tumwe na tumwe tw' U Rwanda (Uburengerezuba bw'amajyepfo n'uduce tw' Iburasirazuba) kandi biteganyijwe ko guhindagurika kw'impvura kuza-komeza kwiyongera hafi kuri 5% kugera kuri 10% mu bihe biri imbere. (GoR, 2018, Rapor ya gatatu ku itumanaho yatangive mu nama y'umuryango w'abibumbye ku bijyanye n'imihindagurikire y'ibihe).

Imihindagurikire y'igipimo cy'ubushyuhe n'impvura n'ikwirakwira ryayo nibyo ntandaro nyamukuru y'ibiza bikomoka ku ihindagurika ry'ibihe bigira ingaruka mbi ku banyarwanda ndetse n'ubukungu muri rusange.

Muri 2020 gusa, abantu 232 bahitanywe n'umwuzure ndetse n'inkangu, amazu 7,769 yarasenyutse, Hegitari 4, 437 z'ibihingwa zarangiritse ndetse ibiraro 103 birasenyuka (Rapor ngaruka mwaka y'ingaruka z'ibiza, GoR, 2020).

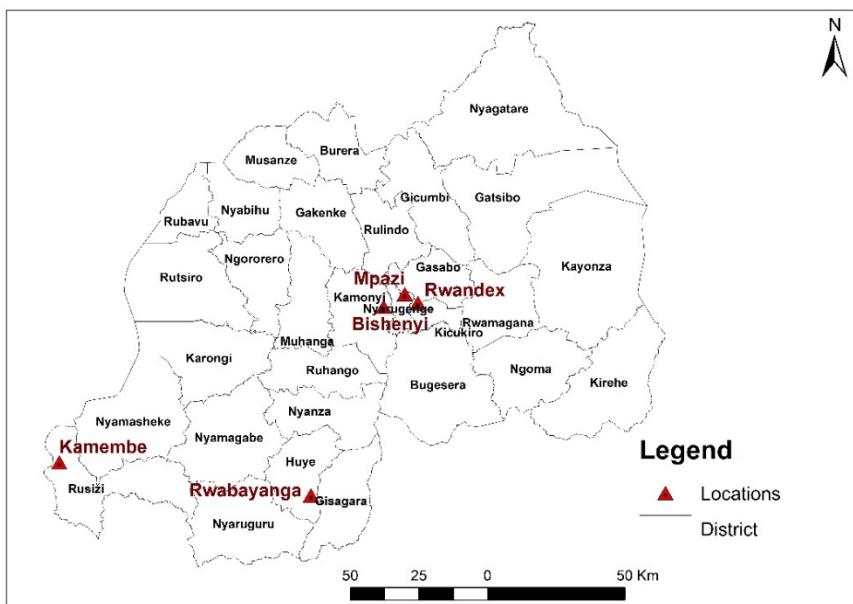
Mu rwego rwo kubaka ubushobozi bwo guhangana n'imihindagurikire y'ikirere, ikigo Mpuzamahanga giharanira Iterambere ritangiza ibidukikije cyitwa Global Green Growth Institute mu rurimi rw'Icyongereza - muri gahunda/Porogaramu yacyo mu Rwanda ku bufatanye n'ikigo cy'Ighugu gishinzwe kubungabunga Ibdrukikije (REMA) mu mu bubasha bwacyo nk'urwego rw'ubuyobozi ku rwego rw'Ighugu rwashyiriweho (NDA) ikigega mpuzamahanga cyo kubungabunga ikirere (GCF) mu Rwanda cyateguriye icyi cyigo mpuzamahanga cyo kubungabunga Ikirere (GCF) icyifuzo cy'umushinga wo kubaka ubushobozi bwo kuba maso mu guhangana n'ibiza hagamijwe kubaka ubushobozi bwo guhangana n'imyuzure mu Rwanda bihuje n'igenamigambi, Ingamba n'Intego rusange bya Guverinoma, no kongera biruseho ubushobozi bw'U Rwanda mu gushakira igisubizo imihindagurikire y'ikirere mu duce dufite ibyago byinshi byo kwibasirwa n'inkangu hashyirwa mu bikorwa gahunda yo guhangana n'imicungire y'imyuzure n'inkangu mu bice by'ahari imijyi. hagamijwe kubaka ubushobozi bwo guhangana n'imyuzure mu Rwanda hakurikijwe politiki ya guverinoma, ingamba n'ibikorwa byihutirwa, no kongerera ubushobozi igihugu mu guhangana n'imihindagurikire y'ikirere mu duce dukunze kwibasirwa hashyirwa mu bikorwa gahunda yo kurwanya imyuzure n'imicungire y'inkangu mu bice by'imijyi.

Mu bigamijwe kuva muri uwo mushinga hari mo:

- Imbaraga zongerewe mu bushobozi no guhuza ibikorwa
- Inyigo zisaba ubuhanga mu bya tekinike zigaragara kandi zigahabwa agaciro, n'imbaraga mu buryo bwo gutera inkunga umushinga n'ingamba zo kubungabunga ikirirere.
- Imbaraga mu gucunga neza ubumenyi bujyanye no guhangana n'ibiza, gusangizanya amakuru no kuyahanahana.
- Ishyirwaho ry'uburyo bw'imitangire ya raporo, ikurikiranwa n'isesengurwa ry'aho ishyirwa mu bikorwa ry'igenamigambi mu kubaka ubushobozi n'ubudahangarwa rigeze.

Mu miterere remezo y'uyu mushinga, Ibyogogo bitanu byahari umujyi mu mujyi mukuru w'Ighugu, Kigali, n'imijyi yunganira umujyi wa Kigali (Huye na Rusizi) kimwe n'agace ko mu nkengero z'umujyi mu Karere ka Kamonyi, byaratoranijwe kugira ngo bikorerwe inyigo zimbitse z'ibago byo kwibasirwa n'imyuzure n'ingamba zo kubigabanya mu rwego rwo guha amakuru lkigega mpuzamahanga cyo kubungabunga Ikirere (GCF) ku cyifunzo cy'inkunga. (Green Climate Fund.)

Ikarita ikurikira irerekana irerekana ahaherereye ibyogogo byatoranijwe mu Rwanda:

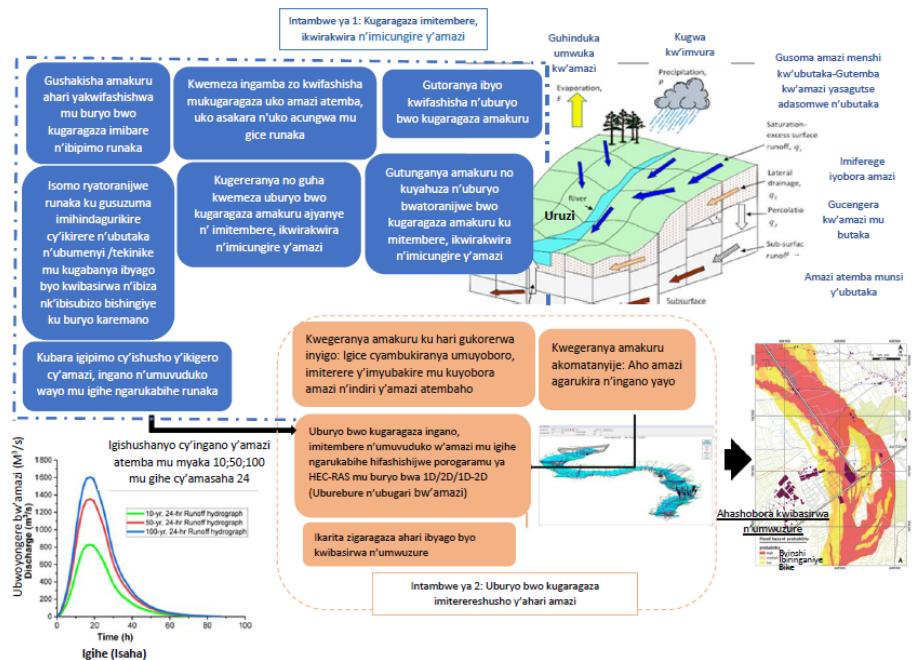


Ishusho ya 1: Ikarita igaragaza ahaherereye ibyogogo byatoranijwe.

2. UBURYO BWAKORESHEJWE

Ubusesenguzi by'ibyago byo kwibasirwa n'imyuzure mu byogogo bitanu ari byo Rwandex-Magerwa na Mpazi (Umujiyi wa Kigali), Bishenyi (Akarere ka Kamonyi), Rwabayanga (Akarere ka Huye) na Kamembe-Gihundwe (Akarere ka Rusizi) bwibanzé ku kugaragaza kure hashoboka umwuzure ushobora kugera no gusuzuma ubujyakuzimu bw'amazi ku mvura igwa mu gihe ngarukabihe cyihariye cyiri hagati y'imyaka 5 kugera ku myaka 100.

Porogramu za mudasobwa za HEC-HMS na HEC RAS zakoreshjejwe mukugaragaza uko amazi atemba, uko asakara n'uko acungwa mu gice runaka (Hydrological and Hydraulic Modeling) n'ishusho ikurikira ikaba isobanura uburyo bwakoreshejwe.



Ishusho ya 2: Uburyo bwakoreshejwe mu gusuzuma ibyago byo kwibasirwa n'inkangu.

Ibisubizo bikwiriye bishingiye ku buryo karemano byariganijwe haba mu buryo bwo kugaragaza imitembere, ikwirakwira n'imicungire y'amazi (Ibisubizo bishingiye ku buryo karemano mu gice cya ruguru amazi aturukamo) no muburyo bwo kugaragaza imiterereshuso y'ahari amazi (Igice cyo hepfo amazi yisukiramo) hagamijwe kubara ingaruka zabyo mu kugabanya ibyago byo kwibasirwa n'imyuzure.

Igisobanuro gikunze gukoreshwa muri rusange cy'ibisubizo bishingiye ku buryo karemano (NBS) ni igitangwa n'umuryango mpuzamahanga wunze ubumwe mu kubungabunga ibidukikije (IUCN) usobanura ibi bisubizo bishingiye ku buryo karemano (NBS) "nk'ibikorwa byo kurinda, gucunga ku buryo burambye, no gufasha urusobe rw'ibinyabuzima ari urugifite umwimerere karemana n'urwahinduye umwimerere gukomeza no kongera kugira umwimerere karemano ku buryo ibibazo byibasira umuryango mugari bikemuka ku rugero rufatika kandi ruhamye, ari nako bitanga imibereho myiza ku inyokomuntu no kugirira umumaro urusobe rw'ibinyabuzima. Iyo bishyizwe mu bikorwa neza, Ibisubizo bishingiye ku buryo karemano bigira akamaro mu buryo bwinshi twavugamo nk'ubudahangarwa no kudatakaza ibintu byinshi; inyungu mu byo ubukungu n'iterambere ry'igihe kirekire; na serivise z'ingenzi ku muryango mugari w'abantu n'ibidukikije: Imbaraga z'Ibisubizo bishingiye ku buryo karemano, Rapor yo muri 2020 ya Hagunda ya Leta zunze ubumwe mu kubungabuga ibidukikije (The power of NBS, UNEP 2020).

Hariho ibyiciro byinshi by'ibisubizo kwifashishwa bishingiye kuburyo karemano bishobora kwifashishwa mu bice by'umujiyi kandi bimwe mu byakoreshejwe muri iyi nyigo hari mo amabuye ashashe ku buryo intera iri hagati yayo ituma amazi yinjira mu butaka, ibiti biberanye n'umujiyi, ibisenge biteyeho ibyatsi no gufata amazi y'imvura ku rwego rw'umuryango mu gihe ibisubizo bishingiye ku buryo karemano byifashishwa mu gice cyo hepfo amazi yisukiramo hari mo ibidendezi byo gufaya amazi n'udushanga duteye ibyatsi.

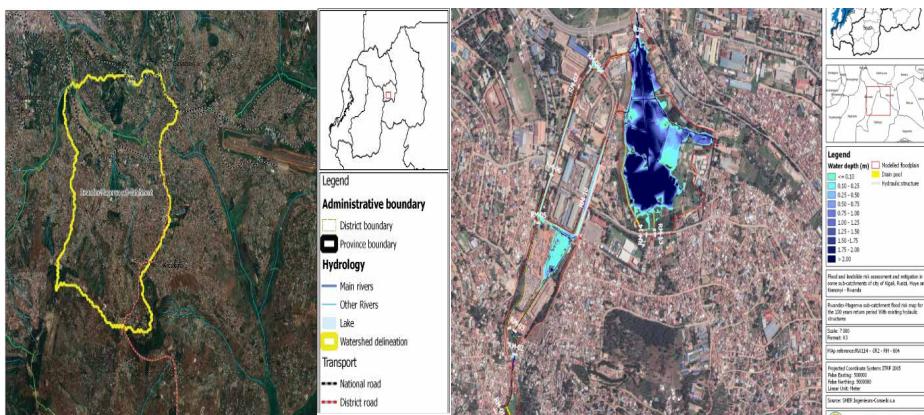
3. IBYAVUYE MU NYIGO

3.1 Icyogogo cya Rwandex-Magerwa

Icyogogo cya Rwandex-Magerwa giherereye mu gice cy'amajyepfo yo hagati mu mujyi wa Kigali kandi cyikaba ari igice cy'icyogogo cyigari cya nyabarongo cyikanagira ubuso bugera kuri 10 Km².

Imikoreshereze y'ubutaka muri icyi cyogogo yiganjemo cyane cyane imiturire igizwe n'ahatuwe hakurikije igenamigambi ry'imiturire n'ahandi hatuwe mu buryo budakurikije igendamigambi ry'imiturire (Ishusho ya 3).

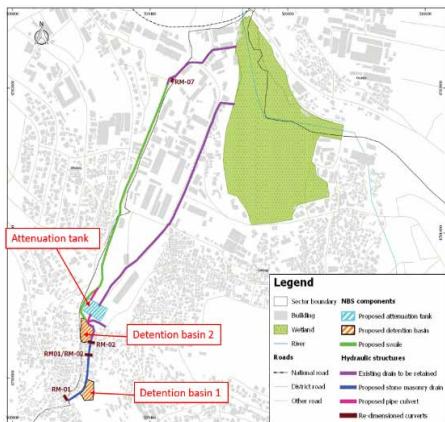
Ibyavuye mu buryo bw'ikoranabuhanga bwifashishijwe mu kugaragaza imyuzure ishobora kubaho mu gihe ngarukabihe cy'imyaka 100 byerekanye ko hegitari 3.37 zisherereye ahakunze kwibasirwa n'imyuzure hatabariwemo ibice byo by'igishanga (Ishusho ya 4).



Ishusho ya 3: Icyogogo cya Rwandex-Magerwa

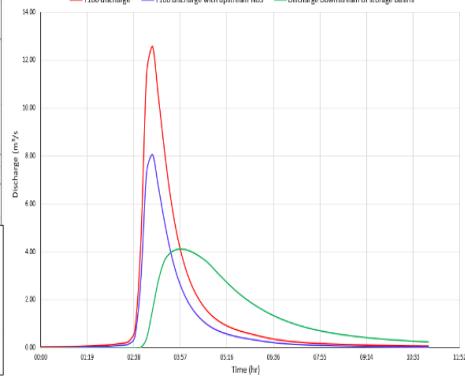
Ishusho ya 4: Ikarita y'icyiza cy'umwuzure mu gihe ngarukabihe cy'imyaka 100

Hifashishijwe ibisubizo bishingiye ku buryo karemano haba ku rwego rw'urugo n'ibisubizo bishingiye ku buryo karemano ku rwego rw'ahaherereye mu gice cy'epfo aho amazi yisukira nk'uko ishusho ya 5 iri hasi ibigaragaza, igice gikunze kwibasirwa n'imyuzure mu gihe ngaruka bihe cy'imyaka 100 cyaragabanutse ku buryo bufatika nk'uko bigaragara mu ishusho ya 6 n'iya 7 iri hasi.



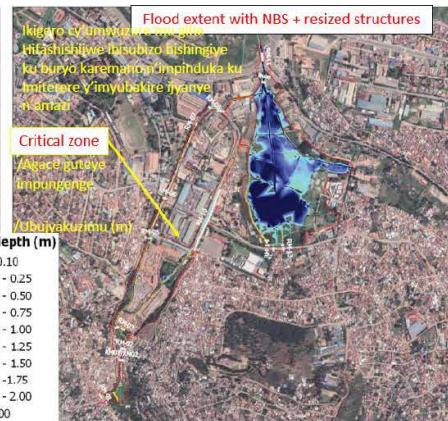
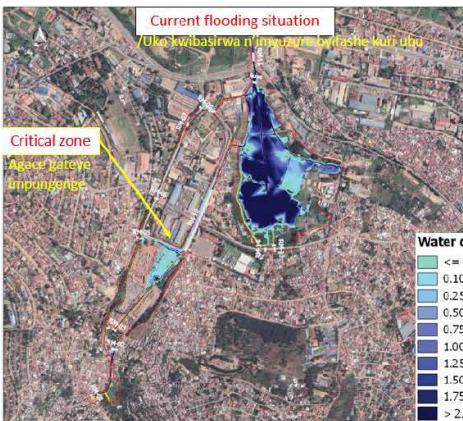
Magerwa Sub basin 10 - Effect of storage on runoff hydrograph

T100 discharge T100 discharge with upstream NBS Discharge downstream of storage basins



Ishusho ya 5: Ikarita igaragaza aho ibisubizo bishingiye ku buryo karemano byateganirijwe mu gice cyo hepfo amazi yisukiramo

Ishusho ya 6: Ingaruka z'ibisubizo bishingiye ku buryo karemano ku gipimo cy'amazi yatembye mu gihe ngarukabihe cy'imyaka 100 (T100).



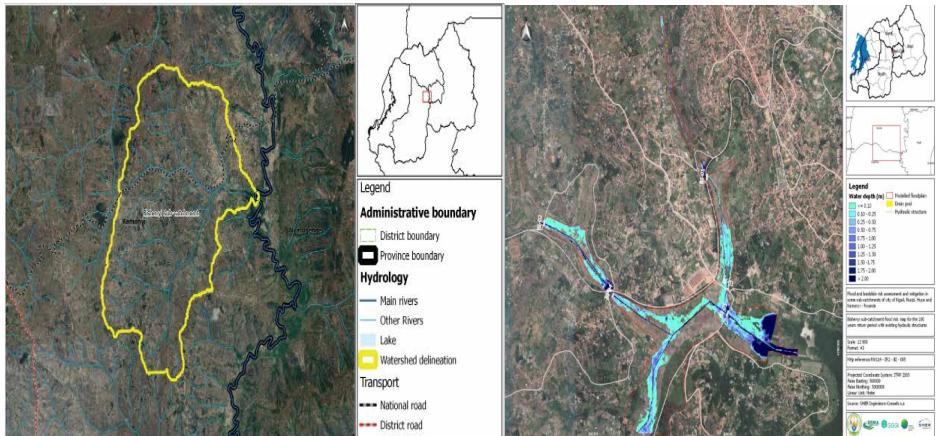
Ishusho ya 7: Kugereranya intera umwuzure ugeraho kuri ubu mbere yuko hifashishwa ibisubizo bishingiye ku buryo karemano n'ubu mbere yuko ibi bisubizo na nyuma yuko ibi bisubizo n'impinduka ku imiterere yibybakirwa gucunga amazi byifashishwa(mu gihe ngarukabihe cy'imyaka 100) muri Bishenyi.

Nk'uko bigaragara mu ishusho ya 7 iri haruguru, igishanga gikomeza kuba agace kibasirwa n'imyuzure kuko uyu mwuzure wakagombye kuba mu mikorere karema-no y'igishanga.

Icyibanzweho cyane muri iyi nyigo kwari ukubungabunga uduce twibasirwa n'imyuzure mu gice cya ruguru gisherereyemo imiturire.

3.2. Icyogogo cya Bishenyi

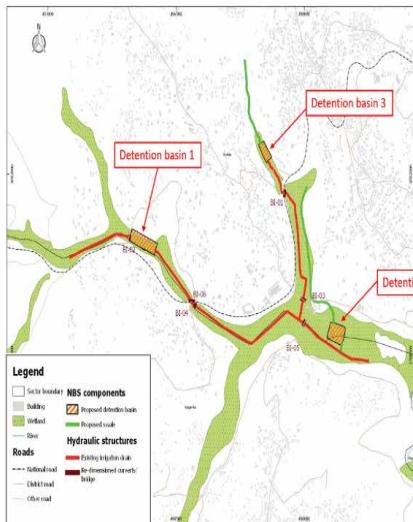
Icyogogo cya Bishenyi giherereye mu Karere ka kamonyi, Intara y'amajyepfo, ku buso bwa 43 Km². Imikoreshereze y'ubutaka muri icyi cyogogo yiganje mo ubuhinzi no gukura kw'umujyi ku muvuduko mu buryo bwihuse (Ishusho ya 8). Ibyavuye mu buryo bw'ikoranabuhanga bwo kugaragaza imyuzure ishobora kubaho mu gihe ngaruka bihe cy'imyaka 100 byagaragaje ko Hegitari 38.63 zifite ibyago byo kwibasirwa n'imyuzure (ishusho ya 9)



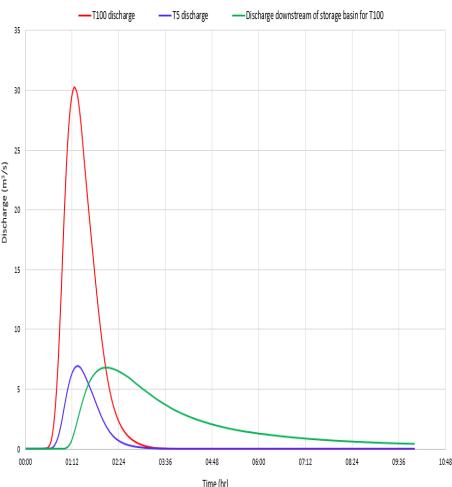
Ishusho ya 8: Ahakusanyirizwa amazi Bishenyi (ibumoso).

Ishusho ya 9: Ikarita y'ibiza mu gihe cy'imyaka 100 (Iburyo).

Hifashishijwe ibisubizo bishingiye ku buryo karemano haba ku rwego rw'urugo n'ibisubizo bishingiye ku buryo karemano ku rwego rw'ahaherereye mu gice cy'epfo aho amazi yisukira nk'uko ishusho ya 10 iri hasi ibigaragaza, igice gikunze kwibasirwa n'imyuzure mu gihe ngaruka bihe cy'imyaka 100 cyaragabanutse ku buryo bufatika nk'uko bigaragara mu ishusho ya 11 n'iya 12 iri hasi.

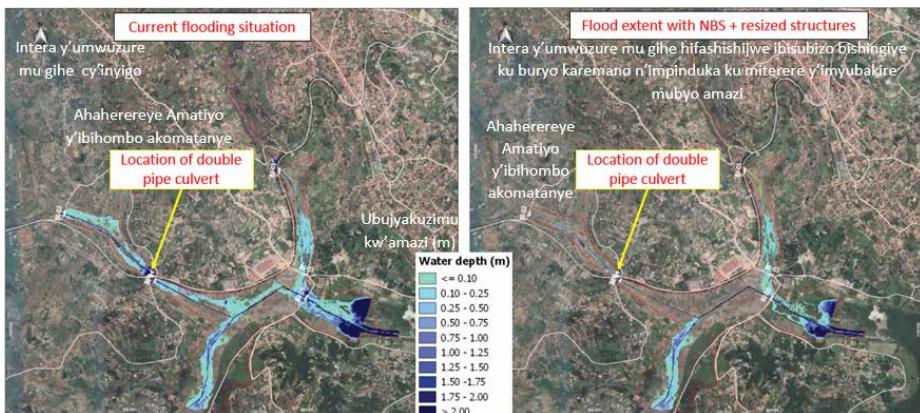


Bishenyi sub basins 2 & 3 - Effect of required storage on T100 runoff hydrograph



Ishusho ya 10: Ikarita igaragaza ahaherereye ibisubizo bishingiye ku buryo karemano biteganijwe mu gice cy'epfo aho amazi yisukira.

Ishusho ya 11. Ingaruka z'ibisubizo bishingiye ku buryo karemano ku ngano y'amazi atemba mu gihe ngaruka bihe cy'imyaka 100.



Ishusho ya 12: Ikigereranyo cy'intera y'umwuzure mu gihe cy'injigo na nyuma yo kwifashisha ibisubizo bishingiye ku buryo karemano n'impinduka ku miterere y'imybakire mubyo amazi.

Ku cyogogo cya Bishenyi, umumaro nyamukuru wingenzi wo gushyira mu bikorwa Ibisubizo bishingiye kuburyo karemano n'impinduka ku miterere y'imyubakire mu bijyanye n'imicungire y'amazi ni ingaruka z'igabanuka ry'amazi ku bujyakuzimu bw'umwuzure.

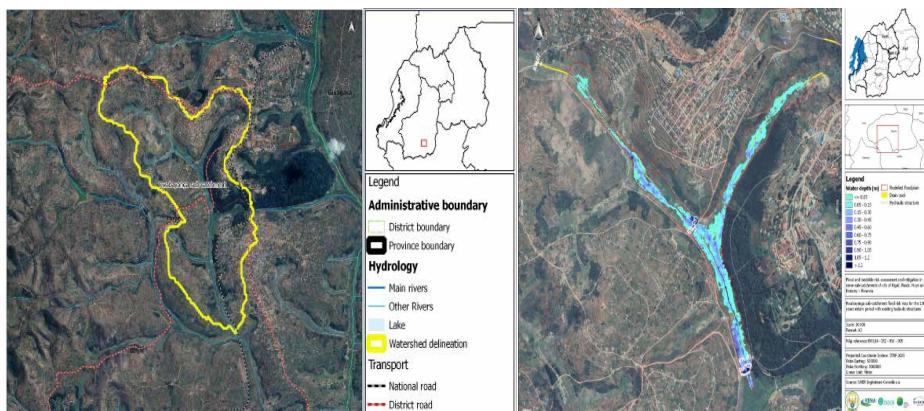
Ishusho ya 12 iri haruguru, igaragaza ko nta mwuzure uri ahari inyubako zижyanye no gucunga amazi ku mihanda minini.

Ariko, igice cyibasiwe n'umwuzure kigabanutseho 22% mu gihe ngarukabihe cy'imyaka 100. Mu gihe iyi 22% iri muri raporo ishobora kutagaragara nk'ifite agaciro kanini, hashimangiwe ko ari igabanuka ridashidikanwaho mu byo guca burundu imyuzure, n'igice kinini cya 78% hasigaye ni ubujyakuzimu buto bw'amazi, ariko rero uburyo bw'ikoranabuhanga bwakoreshejwe mu kugaragaza imyuzure buhagaragaza nk'ahari kwibasirwa n'imyuzure bushingiye ku buryo bw'isuzumwa ry'amakuru akomatanyije. Kugira ngo igabanuka ndashidikanwaho rigerweho hagamijwe guca burundu imyuzure byasabye guha ishusho nshya imiyoboro y'amazi isanzweho.

3.3. Icyogogo cya Rwabayanga

Icyogogo cya Rwabayanga giherereye mu Akarere ka Huye mu Intara y'amajyepfo ku buso bwa 80 Km². Igice cy'iburasirazuba n'icyamajyaruguru y'icyogogo kigizwe n'umujiyi, kikaba ari igice cy'umujiyi wa Huye, mu gihe igice cy'iburengerazuba n'icyo amajyepfo cyiganje mo uduce tw'icyaro n'ubuhinzi (Ishusho ya 13).

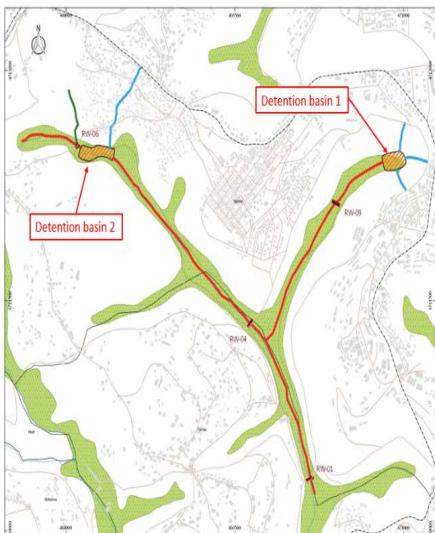
Ibyavuye mu nyigo y'imyaka 100 byerekanye ko hegitare 26.36 ziri mu byago byo kwibasirwa n'umwuzure (Ishusho ya 14).



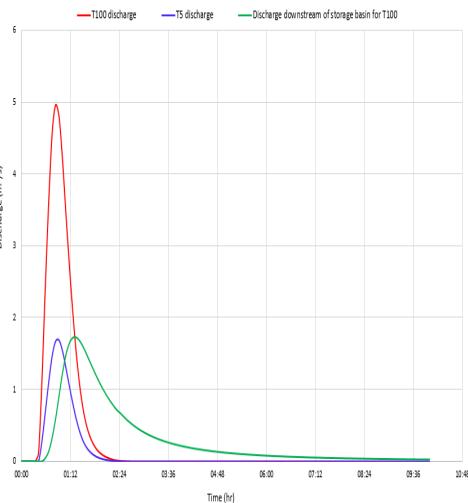
Ishusho ya 13. Ahaherereye icyogogo cya Rwabayanga

Ishusho ya 14: Ikarita igaragaza ahari ibyago byo kwibasirwa n'umwuzure mu gihe ngarukabihe cy'imyaka 100.

Hifashishijwe ibisubizo bishingiye ku buryo karemano haba ku rwego rw'urugo n'ibisubizo bishingiye ku buryo karemano ku rwego rw'ahaherereye mu gice cy'epfo aho amazi yisukira nk'uko ishusho ya 15 iri hasi ibigaragaza, igice gikunze kwibasirwa n'imyuzure mu gihe ngaruka bihe cy'imyaka 100 cyaragabanutse ku buryo bufatika nk'uko bigaragara mu ishusho ya 16 n'iya 17 iri hasi.



Rwabayanga sub basins 1 & 3 - Effect of storage on T100 runoff hydrograph



Ishusho ya 15: Ikarita igaragaza ahaherereye ibisubizo bishingiye ku buryo karemano biteganijwe mu gice cy'epfo aho amazi yisukira.

Ishusho ya 16: Ingaruka z'ibisubizo bishingiye ku buryo karemano ku ngano y'amazi atemba mu gihe ngaruka bihe cy'imyaka 100.

Intera y'umwuzure mugihe kuri ubu /mu gihe inyigo yakorwaga



Intera y'umwuzure mugihe hifashishijwe ibisubizo bishingiye ku buryo karemano n'impinduka ku miterere y'imybakire mubijanyne n'amazi

Flood extent with NBS + resized structures

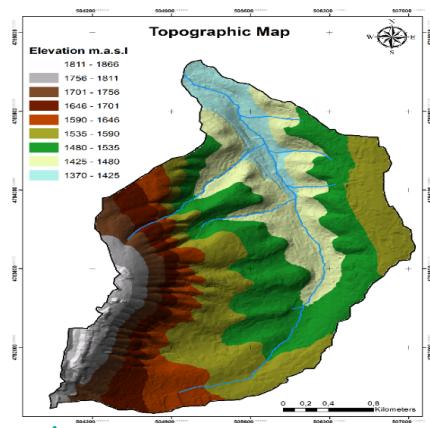


Ishusho ya 17: Ikigereranyo hagati y'intera umwuzure ugereho kuri ubu/ mu gihe cy'inyigo na nyuma yo kwifashisha ibisubizo bishingiye ku buryo karemano hamwe n'impinduka ku miterere y'imybakire mubyo amazi (Mu gihe ngarukabihe cy'imyaka 100) mu icyogogo cya Rwabayanga

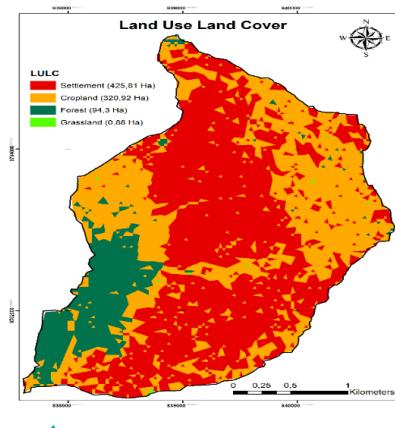
Nk'uko bigaragara mu ishusho ya 17, Icyogogo cya Rwabayanga gikurikije urugero rusa n'urwicyogogo cya Bishenyi aho kugabanuka byimazeyo kw'umwuzure bizashingira ku ivugururwa ry'imiterere y'imiyoboro y'amazi yifashishwa mu kuhira imyaka. Igabanuka rishoboka ry'ubuso bwibasirwa n'umwuzure riri ku rwego rwo hasi (1%) mu gihe igabanuka ry'ibujuakuzimu kw'umwuzure ari 17%. Ibyavuye mu nyigo bigaragaza umwihariko munini wo gusubiramo uburyo busanzwe bwifashishwa mu kuyobora amazi yo kuhira muri Rwabayanga. Imiterere y'Imiyoboro y'amazi ikeneye gusubirwamo ku buryo iyobora amazi agatemba agana mu gice cyo hepfo ahateganijwe ibanya byo gufata amazi atabanje gusendera hirya no hino.

3.4 Icyogogo cya Mpazi

Icyogogo cya Mpazi gifite ubuso bugera kuri Kilometero kare 8.45 (Km²), cyikaba glicherereye mu Umujyi wa Kigali, mu Akarere ka Nyarugenge. Umuyoboro w'ibanze wa Mpazi ni ishami ry'uruzi rwa Nyabarongo. Icyi cyogogo kirangwa n'urusobe rw'imiterere y'ubutaka igenda ihindagurika mu buhaname kuri buri ntera nto (Ishusho ya 18). Imikoreshereze y'ubutaka / ibiri ku butaka muri icyi cyogogo ni umujyi uri gukura ku gipimo cyo hejuru, imitire idakurikije igenamigambi ry'imikoreshereze y'ubuta kandi itujuje ibisabwa ku buryo buteje akajagari nk'uko bigaragara mu ishusho ya 19 (Rwanda YWP, 2021).



Ishusho ya 18: Imiterere y'ubutaka mu cyogogo cya Mpazi



Ishusho ya 19: Imikoreshereze y'ubutaka mu cyogogo cya Mpazi

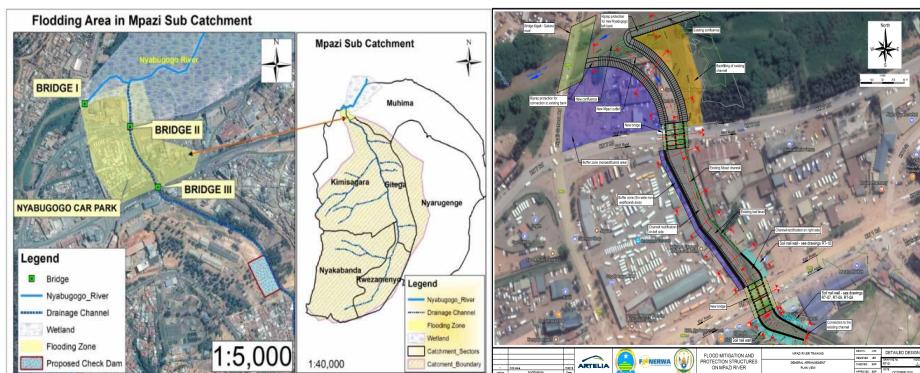
Yaba imiterere y'ubutaka ndetse n'imikoreshereze yabwo mu cyogogo cya mpazi ni byo ntandaro y'ibyzure isenya ikunze kwibasira igice cyo hepfo aho amazi yisukira muri icyi cyogogo.

Ibyavuye mu buryo bw'ikoranabuhanga bwo kugaragaza imyuzure mu ighengarukabihe cy'imyaka 100 bigaragaza ubuso bunini bukijje ahaca uruzi rw'ibanze n'inzizi zirushamikiyeho ari nabwo bwibasiwe n'umwuzure nk'uko bigaragara mu ishusho ya 20 (Rwanda YWP, 2021).



Ishusho ya 20: Ikarita y'ibiza by'imyuzure mu gice cyo hepfo aho amazi yisukira mu cyogogo cya Mpazi.

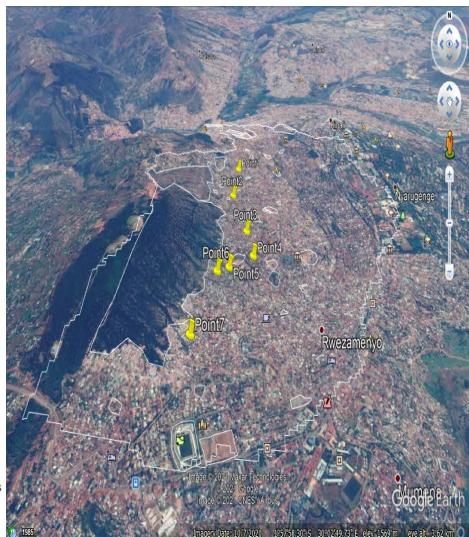
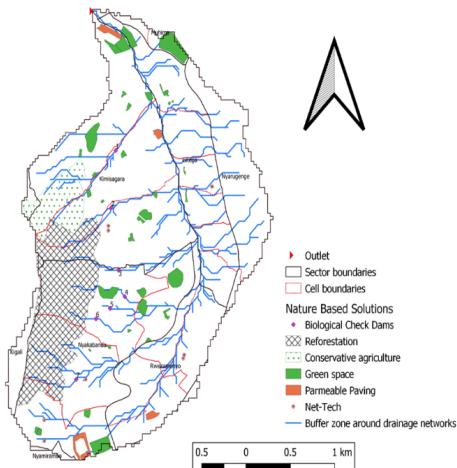
Murwego rwo kureba uko ibyuzure isenza ikunze kwibasira igice cyo hepfo aho amazi yisukira mu cyogogo, umuyi wa Kigali uri kuvugurura ibiraro bibiri biherereye ku mihanda ibiri yo kurwego rw'Ighugu n'igice cy'uruzi giherereyemo hagati nk'uko bigaragara ku ishusho 21.



Ishusho ya 21: Ishusho igaragaza ibiraro bibiri n'igice cy'umuyoboro w'uruzi biri kuvugururwa

Icyakora, Hazirikanwe ko ivugururwa ry'ibi biraro bibiri n'igice cy'umuyoboro w'uruzi/umugezi kiri hagati yabyo bikeneye ingamba zo kugabanya amazi atemba aturuka mu gice cya ruguru bityo bigatuma ibikorwa by'ishoramari biri mu igice cyo hepfo aho amazi yisukira biramba, Urugaga rw'urubyiruko rukora ibijyanye n'amazi bya kinyamwuga mu Rwanda (Rwanda RYWP) rwakoze inyigo igamije kugaragaza ibisubizo bishingiye ku buryo Karemano bikwiriye kwifashishwa mu kugabanya ibyago byo kwibasirwa n'imyuzure mu cyogogo. Bimwe mu bisubizo byasobanuwe harimo kuvugurura amashyamba yacitse, ubuginzi bufata neza ubutaka bukanaburinda gutakara mu gice cya ruguru aho amazi aturuka mu icyogogo kimwe n'ibyifashishwa mu gusasa imbuga mu bice by'umujyi biteye ku buryo butuma amazi abasha kurigita mu butaka. Ikarita ikurikira igaragaza ahaherereye ibisubizo bishingiye ku buryo karemano byateganije (Rwanda YWP, 2021).

PROPOSED NATURE BASED SOLUTIONS MAPPING IN
MPAZI SUB-CATCHMENT

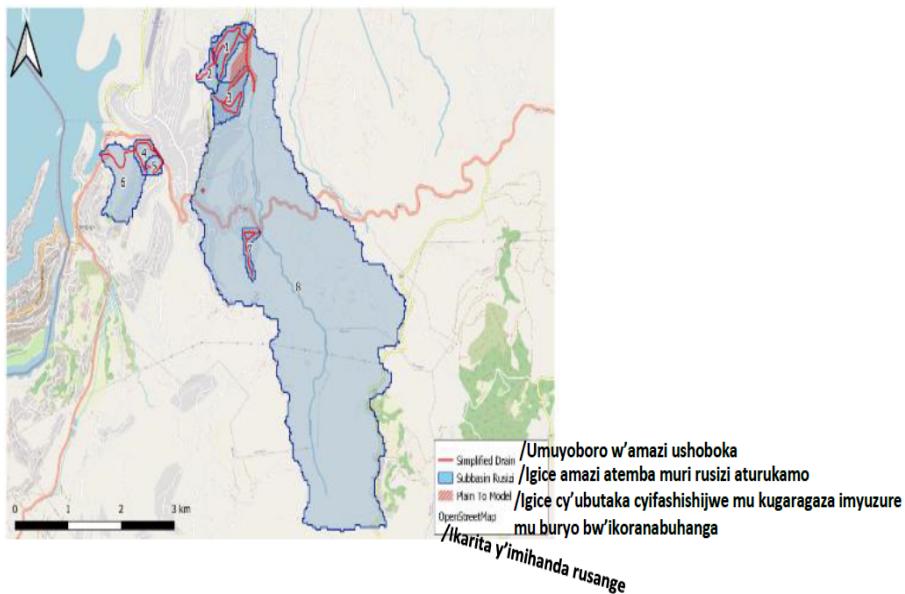


Ishusho ya 22: Ibisubizo bishingiye ku buryo karemano bitemganije mu cyogogo cya Mpazi.

Imbogamizi nyamukuru ku ishyirwa mu bikorwa ry'ibisubizo bishingiye ku buryo karemano ni ibura ry'umwanya kubera ubwiganzo bw'imiturire icucitse cyane kandi idakurikije igenamigambi ry'imikoreshereze y'ubutaka muri icyi cyogogo. Bityo, Igitubizo gikwiriye kwifashishwa mbere y'ibindi cyakagombye kuba icyi kuvugurura imiturire yo muri aka gace, byamahire icyi gisubizo cyikaba cyaratangiye gushyirwa mu bikorwa.

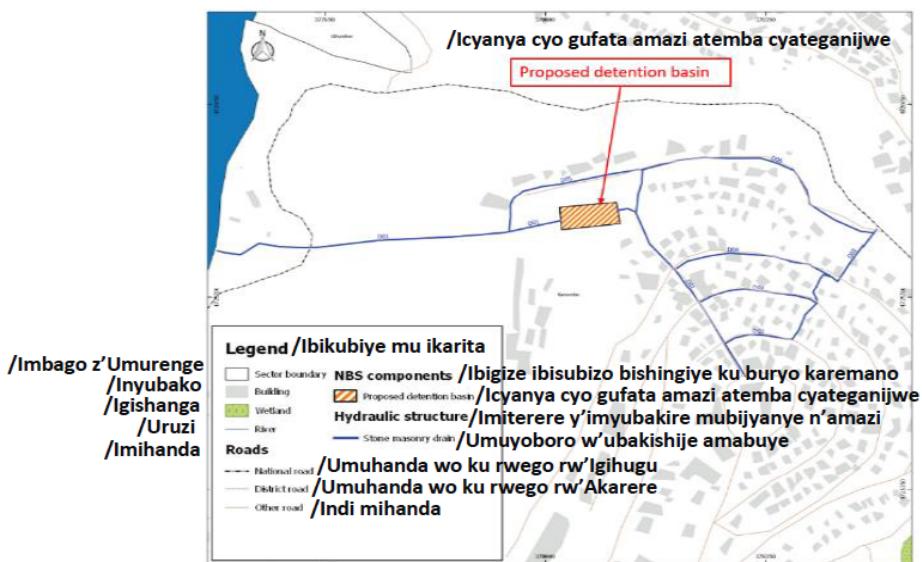
3.5 Icyogogo cya Kamembe-Gihundwe

Uduce twatoranijwe gukorerwaho inyigo mu Murenge wa Kampembe n'uwa Gihundwe yo mu Karere ka Rusizi ni utwogogo duto turi ahantu hatandukanye hakeneye ko hagira icyakorwa byihuse kugirango imyuzure ihibasira ibonewe igisubizo.



Ishusho ya 23: Ahaherereye utwogogo duto twatoranijwe mu mujyi wa Rusizi.

Uduce twatoranijwe hafi ya twose, ibiteganijwe gukorwa ni ukuvugurura cyangwa gushyiraho imiterere mishya y'imiyoboro y'amazi hamwe no gushyiraho ibyanya biteyeho ibyatsi kandi bitunganije ku buryo bufata amazi mu bice bimwe na bimwe bifite ubuhaname budakabije (buri munsi ya 6%). Izindi ngamba harimo kwifashishwa ibisubizo bishingiye ku buryo karemano ku rwego rwa buri rugo nko gutera ibiti biberanye n'umuji, gusasiza imbuga ibikoresho bituma amazi abasha kwinjira mu butaka, ibisenge by'inzu biteyeho ibyatsi no gufata amazi y'imvura. Icyanya kimwe rukumbi cyo gufata amazi cyateganirijwe gucunga ubwiyongere bw'amazi amatembba giherereye ku musozi wa Cyangugu.



Ishusho ya 24: Icyanya cyo gufata amazi atemba cyateganijwe ku musozi wa Cyangungu, i Rusizi

Hazirikanwe ko ahaherereye icyanya cyo gufata amazi atemba giteganijwe ari ahantu hari ubuhaname bukabije, icyi cyanya cyo gufata amazi atemba cyakagombye kubakanwa igikoresho cyubakirwaho kimeze nk'ikiringiti gikorwa mu ruvange rw'ibantu bituma amazi atagicamo ngo akomeze kurigita mu butaka (cyizi nka geotextile mu rurimi rw'icyongereza) kugira ngo bikumire amazi yose ashobora gucengera mu butaka. Ibi ni ingenzi cyane hakurikijweko icyi cyanya cyo gufata amazi atemba cyizaba giherereye ku musozi no kurigita kw'amazi bikaba bishobora gutera ubutaka gusoma amazi menshi, bityo bikaba byatera kwibasirwa n'imikoki cyangwa inkangu.

4. UMUSOZO

Ibyavuye mu nyigo byagaragaje ko kwifashisha ibisubizo bishingiye ku buryo karemano ku rwego rwa buri rugo urugero nk'ibiti byo mu mujyi, gutwikiriza imbuga ibikoresho bituma amazi abasha kwinjira mu butaka, ibisenge biteyeho ibyatsi no gufata amazi y'imvura mu cyogogo icyo aricyo cyose, bishobora kugabanya ubwiyongere bw'amazi atemba ku kigero cya 40%. Icyateye iri gabanuka cyagezweho hakoreshejwe gufatako umugabane w'ingo zikoresha ibisubizo bishingiye ku buryo karemano bwavuzwe haruguru ari 50% usibye ku bisenge biteyeho ibyatsi hafashwe ko ari 5% kubera uko ubu buryo bugoranye. Icyi ni ikigaragaza ko igabanuka ry'ub-wiyongere bw'amazi atemba bityo no kugabanuka kw'ibyago byo kwibasirwa n'imyuzure bishobora kugabanuka cyane mu gihe umugabane munini cyane w'ingo wakwifashisha buriya buryo.

Ni yo mpamvu, Bisabwe ko ingamba ngenderwaho zo kugabanya amazi atemba mu gice cy'umujiyi, zateguwe mu gihe hakorwaga ino nyigo, zisuzumwa zikanifashishwa mu gihe cy'ikorwa ry'igenamigambi mu bijyanye n'imyubakire mu bidukikije nk'imi-handa n'ibyiciro byose by'inubyako. Birakwiriye kuvuga ko amazi ashobora gusigara adafashwe nyuma yo kwifashisha ibisubizo bishingiye ku buryo karemano ku rwego rwa buri rugo ashobora gukomeza gucungwa hakoreshejwe ibisubizo bishingiye kuburyo karemano biherereye by'umwihariko mu gice cyo hepfo aho amazi yisukira nk'ibyanya byo gufata amazi atemba, ibyanya biteyemo ibyatsi bu buryo bifata amazi, n'ibindi bityo n'ibyago byo kwibasirwa n'imyuzure byose bikaba byacungwa.

Intsinzi y'ibisubizo bishingiye ku buryo karemano izashingira ahanini ku bushobozi mu bya tekinike haba ku abatanga amabwiriza no ku abayashyira mu bikorwa, ku bw'ibyo hakaba hakenewe gahunda yo kubaka ubushobozi ku kwifashisha ibisubizo bishingiye ku buryo karemano.

To learn more about our work, please contact us.

GGGI in Rwanda

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