water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

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iPhephandaba Lesibini /KweyoMsintsi 2013

Iziphumo zemisebenzi eseyizuziwe ukuza kuthi ga ngoku

Isifundo ngophando olunzulu luyaqhubeka eMpuma Koloni, kuphandwa ngendawo efanelekileyo enokuveza idama elikhulu ukunikezela iveze iindlela ezininzi zokufakelwa kwamanzi azakusetyenziselwa unkcenkceshela kwezolimo, amanzi azakusetyenziswa ezindlini(ukutya nokusela), kumashishini anezakhiwo zokuqokelela amanzi, nomlinganiselo wamandla wamanzi azakusetyenziselwa oku, kumlambo ombaxa uMzimvubu.

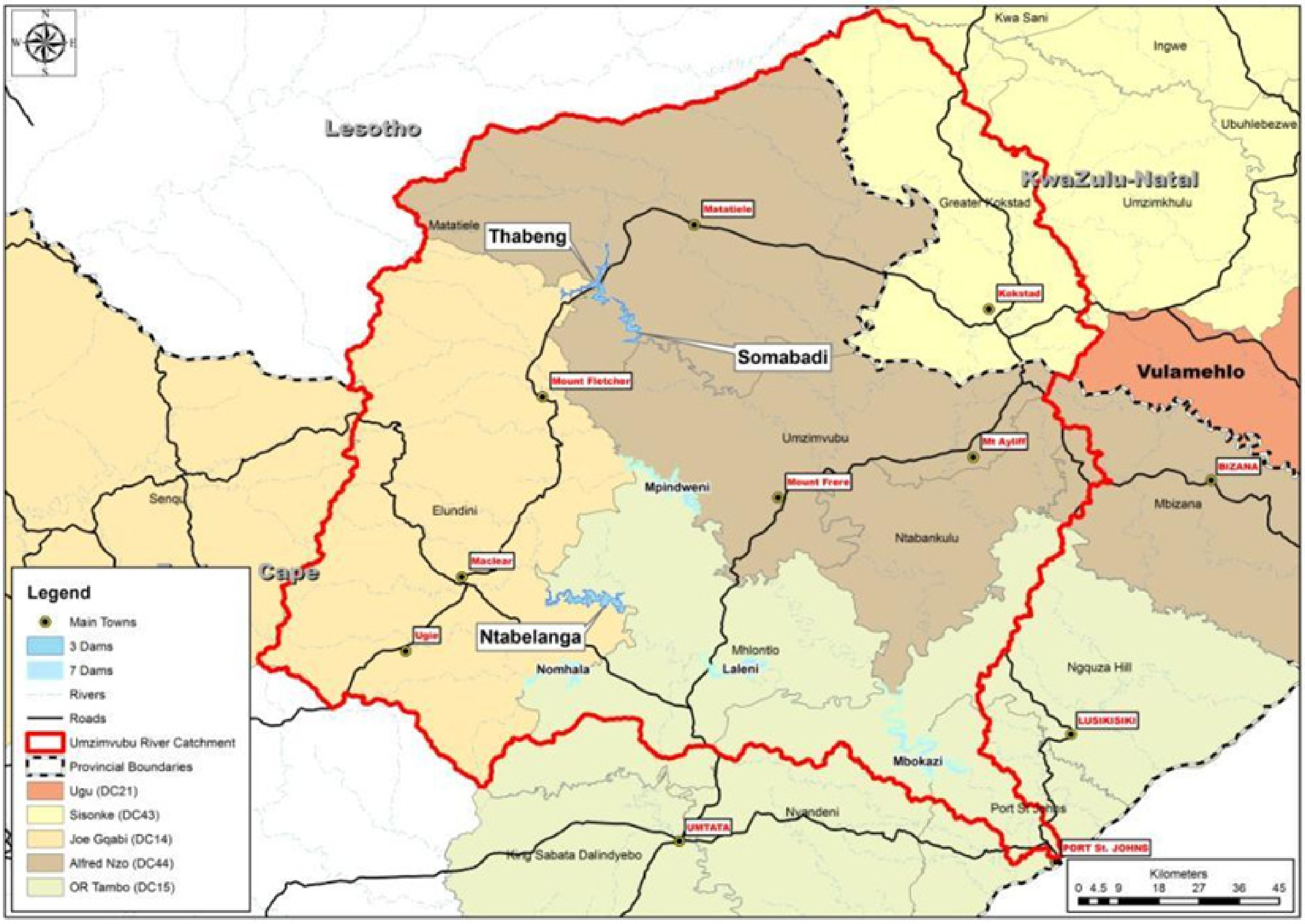
Njengoko kuchaziwe kwi Phephandaba elikhutshwe kw-eYethupha(Agasti) 2012 oluphando, nolwaqala kweY-omqungu(Janyuwari) 2012, lwahlukaniswa ngezigaba ezimbini apho isigaba sokuqala sesigqityiwe, esesibini, sokugqibela sisaqhubeka

Isigaba 1. Esi sigaba siquka ukuhluzwa nokuqwalaselwa kweemeko zophando ezilishumi nesithoba(19)zeendawo ezibonakala zingakulungela ukwakha elidama ezazikhankanyiwe kwizifundo ezenziwe ngaphambili, kwaze kwakhethwa iindawo ezintathu ezabonakala zikulungele ukuhlangabezana neemfuno ezithile, ekubalwa kuzo(ufakelo manzi emizini, ezonkcenkceshelo kwezolimo) nomlinganiselo wamandla amanzi) ngendlela eyamkelekileyo neyanelisayo ukuba ikwazi ukuthwala oluhlobo lomsebenzi ngokwendawo ezikuzo.

Emvakoluphando-banzi, kwezindawo ezintathu ezikhankanyiweyo, nemvume kwiziphathi-mandla ezikhethekelileyo kwenziwe isigqibo kweyodwa yendawo ledami, ukuze kuqhutyekwe ngayo ukwenza uphando oluphangaleleyo kwisigaba sesibini.

Isigaba 1: Ingxelo ngophando oluqhutyiweyo kufundo nzulu lwendawo ezintathu ezikhankanyiweyo lephulo elizakusetyenziselwa ukhethwa kwendawo yedama

Inkqubo yokuchonga iqhubeke ngokwesivumelwano nekomiti (foram) iziphathi- mandla kwakunye namalungu ekomiti aququzela uphuhliso. Kuye kwaphakanyiswa amagama amadama amathathu azakuphuhliswa nanjengokuba zibonisiwe apha ngezantsi: (Ithabeng, Somabadi kunye neNtabelanga).



Umboniso 1: Iindawo ezintathu ezichongelwe ukuhlolisiswa kabanzi ukuphuhlisa amadama

Ezi ndawo zintathu ezikhankanyiweyo ziye zavavanywa ngokuthelekiswa ukuqinisekisa ukuba zilulungele na oluphuhliso,imeko yendawo nganye kwezoqoqosho nezentlalo kwasekuqukwa nalemiba ilandelayo koluphando okudibanisa:

1. Uphando ngobungakanani bamanzi
2. Uphando-nzulu ngobume bendawo
3. Uphando- nzulu ngohlobo lomhlaba.
4. Iimfuno Zamanzi
5. Umlinganiselo wobungakanani bedama
6 . Ingqwalasela yomfutho olindelekileyo
7. Ukuthelekiswa kwamaxabiso

1) Uphando ngobungakanani bamanzi

Kwenziwe uvavanyo- banzi ngobungakanani bamanzi ,kuquka uhlalutyo lobungakanani bamanzi emvula , amanzi asuka emifuleni nomthamo wemilambo iKinira ne Tsitsa. Oluvavanyo lunike isiqinisekiso sokuvavanya ubungakanani obuzakuvezwa ngedama ngalinye kula mathathu akhankanyiweyo kunye nobume bezoqoqosho. Iziphumo zolu vavanyo zisetyenziswe kunye neziphumo zophando-nzulu ngobume bendalo ukuze kufunyaniswe izimvo ezihlaziweyo ngobungakanani bomthamo wamanzi nangokobunzulu nobubanzi bedama ngalinye.

Zininzi indlela zengeniso eziye zavezwa ziquka imilinganiselo ehlukahlukeneyo yengeniso enokuthi ifumaneke ukunika isiqinisekiso samanqanaba ahlukeneyo wemilinganiselo yamadama. Kufumaniseke ukuba, iNtabelanga yeyona enengeniso eliphezulu ngokomthamo ewuthathayo xa kuthelekiswa namanye amadama.

2) Uphando-nzulu ngobume bendawo

Nangona, injongo ebiphambili ibikukuphanda ubume bendalo kwisigaba sesibini , ikomiti ephethe oluphando ithathe isigqibo sokudibanisa oluphando kunye nophando lwesigaba sokuqala ukuze kuphuhliswe ngokuqinisekileyo indawo, ubunzulu nomthamo wamanzi alamadama mathathu, kunye nobalo oluqinisekileyo lwezoqoqosho kwidama ngalinye. Konke oku kuphuhlise intembeko yophando kwisigaba sokuqala.

Le ndlela ibonakalise impumulelo kuba iveze iimpazamo ezinkulu phakathi kweziphumo ezintsha neziphumo ezasetyenziswa kuphando lokuqala.

3) Uphando-nzulu ngohlobo lomhlaba

Ikomiti ephethe uphando ithathe isigqibo sokuba ukudibanisa uphando lobume bendawo nesigaba sokuqala kunganikezela ngolwazi olunzulu nolubalulekileyo ngeempazamo eziyingozi malunga nobunzulu- lwazi bedama ngalinye, nokwazisa ngeziphumo zohlobo lwedama olufanekileyo. Oluphando luveze ulwazi oluphangaleleyo ngeziphumo ezingancedisa kuphando oludingeka kwinqanaba lesibini lwedama elityunjwe kwinqaba lokuqala.

Ngokwesiphelo imeko yesisekelo somhlaba ikulungele ukwakha kuwo womathathu amanxiwa. Kubonakala ngathi iNtabelanga inamatye, isanti, kunye nodongwe olusemgangathweni emantla omfula wedama , ekubeni inkwali yaseThabeng ifumaneka emazantsi omfula, apho kungaba nengxaki yochaphazelo olubi kwezendalo.

4) Iimfuno zamanzi

Ufakelo lwamanzi ezindlini

Kubanjwe iintlanganiso neminyango yezokunikezelwa kwamanzi eAlfred Ndzo, OR Tambo nase Joe Gqabi District Municipality (DM's) ukuze kufunyanwe ulwazi neenkcukacha ngamaphulo aqhubekayo nacetywayo ngokufakelwa kwamanzi, kunye nokufumanisa iindawo ezishiyekileyo kulamaphulo kuMasipala ngamnye. Uphando olongezelweyo luthatyathwe kusetyenziswa ulwazi olunikizelweyo ukuze kuqikelelwe inani labantu abanokufumana amanzi kwidama ngalinye. Kusetyenziswe lamanani ukuthelekisa amadama omathathu. Iimfuno zamanzi adingekayo ziphantsi xa zithelekiswa namanzi afumaneka ngonyaka (Mean Annual Runoff) kwaye nolwazi olufumaneke koluphando lubonisa ukuba kudingeda ugcino -manzi olincinane ukuze kufezeke injongo zokunikezela amanzi ebantwini.

Umhlaba wezolimo onkcenkceshelwayo:

Kwenziwe uphando lwezolimo olongezelelweyo okudityaniswe nophando lomhlaba kwiindawo ezikhethiweyo nomthamo womhlaba omncinane kumanxiwa akhankanyiweyo. Olu phando lufumanise ukuba kwezinye iindawo isilinganiselo somhlaba olungele ulimo olunkcenkceshelwayo sincinane kakhulu kunoqikelelo lwangaphambili.

- Ntabelanga – Uqikelelo lomhlaba 840ha
  Osele uhloliwe wona wangu 500ha
- Somabadi – Uqikelelo lomhlaba 1 327ha
  Osele uhloliwe wona wangu 1 000ha
- Thabeng – Uqikelelelo lomhlaba 1621ha
  Osele uhloliwe wabali 1 000ha

Umboniso 2: Umzekelo womhlaba okwintsimi ekumgangatho ophezulu kumhlaba onkcenkcetshelwayo

5) Umlinganiselo wobungakanani bedama

Uluhlu lobungakanani bamadama oluhloliwe belisuka ku 33 million m^3 liya ku 490 million m^3. Ukukhulisa ubungakanani benani eliphezulu kula akhankanywe ngasentla bukhupha iziqhamo ezingenanzuzo. Iimfuno zamanzi zithelekiswe neziphumo ezikhutshwe kolu luhlu lobungakanani lwamadama. Kubonakale ukuba elona dama elincinane kunamanye libe neziphumo ezithembekileyo zokunikezela ngamanzi aneleyo ebantwini xa amanzi ezosetyenziswa ezindlini nakwezolimo Kusetyenziswe umzekelo wemfuno ephantsi yamanzi kunye nephezulu kwaze kwafunyaniswa ukuba umvuzo walemfuno ephantsi ukulungele ukuhlangabezana neemfuno zamanzi aquka awasezindlini nawezolimo(neemfuno

enzinyanzelekileyo zendalo), uze umvuzo wemfuno ephezulu ulungele ukufakwa kwamanzi xa kukhuliswe isilinganiselo sendawo efakelwa amanzi. Isilinganiselo samanzi agcinwayo kwinxiwa ledama ngalinye libonisiwe kwitafile engezantsi.

	GRAND TOTAL WATER DEMAND		98% Reliable Dam Yield	EWR	DAM SIZE (GROSS VOLUME INCLUDING SEDIMENT ALLOWANCE)		Dam FSL Water Depth	ESTIMATED CONT. HYDROPOWER	
	BASE	HIGH						BASE	HIGH
	Mm^3/a	Mm^3/a	Mm3/a	Mm3/a	MAR x	Mm3	m	MW	MW
NTABELANGA	7.83	21.97	26.80	52.82	0.10	33.00	31.00	0.27	0.27
THABENG	9.19	23.62	24.80	84.33	0.20	58.00	33.00	0.35	0.35
SOMABADI	8.59	21.47	21.32	104.98	0.15	54.15	44.53	0.40	0.40

Tafile 1: Isilinganiselo esidingekayo sedama ukumelana neemfuno zonke zamanzi

6) Ingqwalasela yomfutho olindelekileyo

Kuhlolwe idama ngalinye ukuqinisekisa isilinganiselo esizodingeka samandla angafumaneka ombane xa kunokwakhiwa indawo yokwenza nokugcina umbane. Amanani akuletafile engaphezulu abonisa ukuba kwelona dama lincinane kula mathathu lombane ungabaphakathi kwa 0.27 no 0.40 MW. Isilinganiselo sombane osuka kulamadama amancinane asinakho ukwanelisa imfuno yendawo yokuzakhela iphinde igcine umbane .

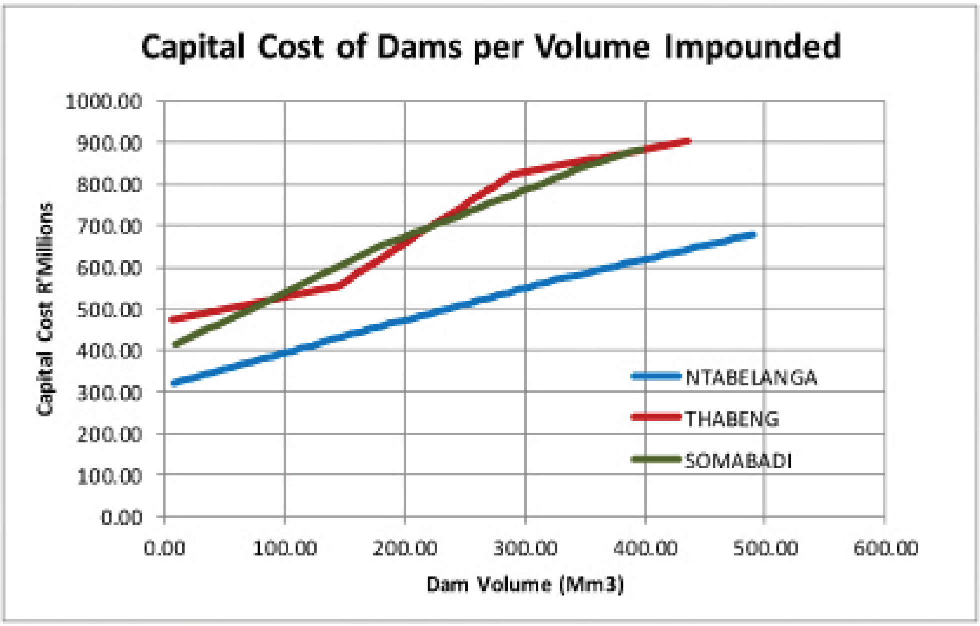
Kwenziwe uphando ukuqwalasela ukuba kufuneka lama dama mathathu abemakhulu kangakanani na ukuze akwazi ukunikezela umthamo wombane ofunekayo kunye nokunikezela ngomthamo wamanzi odingekayo ezindlini nakwezolimo. Kubalwe isilinganiselo sexabiso elikhulayo ukumelana nokwakhiwa kwalamadama makhulu , iinkcukacha zichaziwe ngezantsi.

7) Ukuthelekiswa kwamaxabiso

Kuqikelelwe amaxabiso ukuze kubonakale isaphulelo esingafumaneka xa kuthelekiswa lamadama omathathu. Kubalwe kwaze kwathelekiswa amaxabiso awo omathathu amadama kusetyenziswa imilinganiselo yamadama ehlukahlukeneyo. Iziphumo zobalo zibonisiwe kumboniso wesithathu ngezantsi:

Isishwankathelo sengxelo

Kuqalwe ngokuphanda izigaba kumadama anikezela ngamanzi angacocwanga adingeka ezindlini nakwezolimo engenandawo yokwenza nokugcina umbane. Kuphinde kwaqwalaselwa nezinye izigaba ezidibanisa ukwakhiwa kwamadama amakhulu akwazi ukumelana neemfuno zamanzi ,kwaye anendawo yokwenza nokugcina umbane. Isishwankathelo seziphumo zezi zigaba sibonisiwe ngezantsi kwi Tafile Yesibini (Table 2) neTafile Yesithathu (Table 3)



Umboniso 3: Uthelekiso lwamaxabiso amadama omathathu ngokomthamo

Tafile 2: Ukuthelekiswa kwamadama ngokwezobunzululwazi – Isidingo esincinane

EZOBUNZULULWAZI	NTABELANGA	THABENG	SOMABADI
INANI LABANTU KULOMZEKELO	134,633	111,564	97,303
INANI LABANTU ABASONDELE KWIDAMA NGO 50KM	223,686	94,666	116,337
IIINDAWO EZINKCENKCESHELWAYO NGOKWEZOQOQOSHO (ha)	504	1062	1062
IIXABISO KOKWAKHA IDAMA LAMANZI ANGACOCWANGA (R million)	391	581	546
LINGAKWAZ IDAMA UKUMELANA NOKWENZA NOKUGCINA UMBANE?	NO	NO	NO
IIXABISO ELIKHULAYO LEDAMA ELIKHULU LOKWAKHA UMBANE (R million)	194	287	141
IDAMA ELIKHULU LINGAMELANA NA NEEMFUNIO ZOKWAKHA UMBANE?	YES	YES	YES
AMANZI AKHOYO (Mm^3/a)	113.82	96.88	54.08
IXABISO LAMANZI AKHOYO (R/m^3)	0.27	0.48	0.68

Qaphela:Ixabiso lamanzi akhoo sisilinganiselo ngokwesidingo esipheleleyo samanzi. Iinkucukacha ezipheleleyo zizakwenziwa kwisigaba sesibini.

Ezinye imfuno zokukhetha ngobuchule ngedama ngalinye ziye zaqwalaselwa zaze zabekwa kuluhlu. Zibonisiwe ngezantsi **kwiTafile 3**.

Tafile 3: Ukuthelekiswa kwamadama ngokwezinye iimfuno – Isidingo esincinane

EZINYE IIMFUNO	NTABELANGA	THABENG	SOMABADI
UMHLABA OZAKUSETYENZISIA (km^2) – UNGEKHO UMBANE WASEMANZINI	7.5	7.8	5.8
UMHLABA OZAKUSETYENZISWA (km^2) – UKHONA UMBANE UMBANIEWASEMANZINI	20	16	7.3
IIYAYICHAPHAZELA NA IMIGAQO NEZINYE IZAKHIWO?	LOWER	HIGH	MODERATE
AKHONA NA AMAPHULO ASEBENZAYO/ACETYWAYO?	YES	YES	YES
ELI PHULO LINGASEBENZISANA NA NAMANYE AMAPHULO AMAKHULU?	YES	NO	NO
IZIPHUMO ZOPHANDO NGOBUNGOZI KWINDALO	LOWER	HIGHER	HIGHER
AMATHUBA EMISEBENZI			
EYETHUTYANA KUSAKHIWA	200 to 300	200 to 300	200 to 300
EYEMINYAKA ESISIXHENXE YOKULUNGISWA KWENDAWO YAMANZI	635	635	635
ESISIGXINA KUNIKEZELO KWAMANZI	30 to 50	30 to 50	30 to 50
ESISIGXINA KUNKCENKCESHELO LWEZOLIMO	50	106	106
ESISIGXINA KUNYAKA-LONDOLOZO LWAMANZI	167	167	167

Eli phulo lingasebenzisana na namanye amaphulo amakhulu?

Le mfuno ibalulekile, ingakumbi eNtabelanga kuba elidama lingasetyenziswa ngokubambisana kunye nendawo yokwenza nokugcina umbane eyatyunjwa ngaba Eskom. Eli dami linokusetyenziselwa ukudlulisela inxalenye yamanzi kumlabo i-Orange kwaye lingandisa ukufakwa komthamo wamanzi eMthatha. Olu lwakhiwo lwendawo yokwenza nokugcina umbane lushukuxwe ngokupheleleyo ngezantsi, kwaye nangona ixabiso lokudlulisela amanzi kwezi ndawo zimbini zikhankanywe ngasentla liye labonakala liphezulu izigqibo malunga nalo mba ziyakuhlalutywa ngokupheleleyo kwisigaba sesibini.

Isiphelo-mbono

Xa kuthelekiswa lamanxiwa mathathu amadama iNtabelanga ibonakala iyeyona ilungileyo ngokwexabiso nangomthamo wamanzi olindelekileyo. Kubalulekile ukuba kwaziwe ukuba umthamo wamanzi awo omathathu lamadama uphezulu xa kujongwa ukufakelwa kwamanzi ezindlini nakwezolimo kuphela nangona umthamo opheleleyo wamanzi ungadityaniswanga. Nangona olu luhlu lungacacisi xa kuthelekiswa okanye kubandakanywa ezinye izinto,isiphelo-mbono kukuba idama laseNtabelanga lelona lilungele ukutyunjelwa ukuqhubekekela phambili kwisigaba sesibini.

Enye inzuzo idama lase Ntabelanga eligqwese ngayo kunamanye kukuba lisendaweni efanelekileyo ukuze lisetyenziswe ngokudibeneyo nendawo yokwenza nokugcina umbane kwakulo mlambo omnye ngexabiso eliphantsi, kwanokwandisa ukufakelwa kwamanzi kwezinye iindawo kwangoku okanye kumaphulo alandelayo. Ukuba ke oku kufakelwa kwamanzi kwezinye iindawo kunokwenzeka, umthamo wamanzi weli dama uzokwehla nto leyo engaqinisekisa ukuba elidama lizosebenza ngokugqibelleyo.

Isigaba 2

Isebe lezaManzi liqhubekela phambili nesigaba sesibini sePhulo Lamanzi waseMzimvubu apho lityumbe inxiwa lase Ntabelanga kumlambo iTsitsa njengelona lifanelekileyo . Injongo kukwakha iphulo elidibeneyo apho iNtabelanga ityunjelwe ukunikezela ngamanzi ukuya kwindawo yokwenza nokugcina umbane ezakuba kwi nxiwa ledama laseLaleni kude kufuphi neengxangxasi zomlambo iTsitsa. Eli phulo liqale kwinyanga ka Canzibe.

Iqela leengcaphephe zephulo lihlalutya uphando-nzulu ngezendalo yaseNtabelanga ,kwaye nesebe Lamanzi nalo likwiphulo lokuqesha iingcali zokuhlalutya ezendalo. Eliqela likwa gqibezela uhlalutyo lobungakananai kwamanzi, uhlobo lomhlaba , uhlobo lwedama kunye nokuqulunkqa ngokupheleleyo ukuhanjiswa kwamanzi ezindlini nakwezolimo. Kucetywa ukuba sigaba sesibini sigqitywe ngoTshazimpunzi 2014.

Iinkcukacha ezithe vetshe

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