

# Umgangatho Womoya eKapa

Esinokukwenza ukucoca umoya



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

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# Intshayelelo



**uSodolophu uHelen Zille, no-Andrew Wheedon weBycling Empowerment Network (iBEN) baya emisebenzini yabo ngebhayisekile Ngosuku Lwesizwe Lokungasetyenziswa Kweenqwelo-mafutha.**

Incwadana Engomgangatho Womoya yeSixeko saseKapa yenzelwe ukuncedana nabafundi ngokubenza baqonde indlela abanokuncedisa ngayo kwiinzame zokugcina umoya esiwuphefumlayo ucocekile.

Kunyaka ophelileyo iSixeko saseKapa sizifumene sigutyungelwa ziintsuku ezili-150 apho amaqondo okungcoliseka komoya abengaphezu kwamaqondo awamkelekileyo ngokwemiqathango yehlabathi. Oko ke kuthethe ukuba phantse zifikelele kwisiqingatha sonyaka ka-2006 iintsuku apho abantu besi sixeko bebephefumla imisi nemimoya eyibulalayo impilo yabo.

Kucacile ke ukuba asikwazi tu ukuyivumela le meko iqhubekeke.

ISixeko saseKapa siqulunqe umthetho ngeenjongo zokulawula umgangatho wokungcoliseka komoya ngamashishini kwanabantu, yaye ke sinalo neqela eliqinisekisa ukuthotyelwa kwalo mthetho.

Sikwasebenzisana noRhulumente wePhondo leNtshona Kapa ekuqulunqeni inkqubo entsha yothutho yoluntu, nkqubo leyo injongo zayo ikukwandisa inani labantu abasebenzisa izithuthi zikawonke-wonke kwanokunciphisa inani labantu abaziqhubelayo ze sithintele ukungcoliseka komoya.

Futhi ke kungoku nje sinikezela umbane kuluntu oluphila kwiingingqi eezinamatyotyombe ngeenjongo zokunciphisa isidingo sokusetyenziswa kwamafutha ngeenjongo zokukhanyisa nokupheka.

Onke ke la macebo ayakuncedisa ekugcineni umoya wethu ucocekile.

Kuyo yonke ke le mizamo, singazuza lukhulu ukuba wonke ummi waseKapa unokuqalisa ukukhangela iindlela zokuthintela ukungcoliswa komoya kubomi babo bemihla ngemihla, ukususela ekongeni umbane ukuya ekusebenziseni ngendlela efanelekileyo iinqwelo-mafutha.

Le ncwadana Ingomgangatho Womoya yenzelwe ukwazisa wena, mfundi, ngezinto onokuzenza ekuncediseni.

Ingumsele wolwazi ekumelaneni nemiceli-mngeni ebangelwa kukungcoliseka komoya ngelixa ikwasisikhokelo esisebenzayo ngendlela esinokusebenzisana ngayo ekumelaneni nale miceli-mngeni.

uSodolophu waseKapa  
16 kuTshazimpunzi ka-2007

# Umoya ococekileyo lilungelo lethu – kwanoxanduva lwethu

Apha eMzantsi Afrika sonke sinelungelo lomoya ococekileyo. Eli lungelo ke silifumana kwiSahluko sama-24 soMgaqo-siseko wethu, othi: Wonke ubani unelungelo lokuphila kwindawo engayidodobalisiyo impilo nentlalo-ntlle yakhe futhi nale ndawo kufuneka ikhuseleke, ukuze kuzuze isizalwane esiphila apho ngoku kwa neso siseza kuphila apho, ngokuthi kuqulunqwe amacebo omthetho kwanamanye

- athintela ukugcoliswa kwanokuthotywa komgangatho wendalo
- axhasa ulondolozo lwendalo;
- kwanakhusela uphuhliso nokusetyenziswa kobutyebi bendalo ngelixa ephakamisa uphuhliso olubonakalayo loqoqosho noluntu.

Kodwa ke, kwiingingqi ezininzi zoMzantsi Afrika, eziquka neKapa, asinawo umoya ococekileyo. Umgangatho womoya esinawo awunagalelo kwindalo ephilileyo. Ngamanye amaxesha, enyanisweni, umoya ongekho mgangathweni uye uthintele ezinye iintshukumo zoqoqosho nezoluntu – ingakumbi kubantu abathile abafana nabadala, abahluphekileyo kwanabo bahlelekileyo.

Kuye kubize kakhulu ke ukuzama ukumelana neziphumo zokungcoliseka komoya – kuqoqosho lwethu, impilo yethu, kwanendalo esingqongileyo – kodwa ke umntu oye achaphazeleke kabuhlungu kule meko isoloko ingenguye lowo uqale ngokungcolisa umoya.

Kuthe ke ngo-2004 urhulumente woMzantsi Afrika weza nomthetho iNational Environmental Act: Air Quality Act.

Injongo yawo kukuphucula umgangatho womoya ngokuthi umisele uthotho lwemigaqo nemimiselo, ukumisela imigangatho yovavanyo, ukulawula nokujongana nomgangatho wococeko lomoya; kwano kumisela izohlwayo ezizakufunyanwa ngabantu abathi bophule umthetho.

Okona kubaluleyo kukuba lo mthetho wenza uxanduva lurhulumente bamakhaya ukugcinwa komoya ucocekile, ngokuthi umisele izicwangciso zolawulo lomgangatho womoya (tyhila kwiphepha lesine), imithetho yoorhulumente bamakhaya (tyhila kwiphepha leshumi) kwakunye neminye ke imigaqo-nkqubo.

Apha eKapa, oku kuthetha ukuba abona badlali baphambili kumba wokugcinwa komgangatho ophakamileyo womoya ococekileyo siSixeko saseKapa – nawe.



## Ingaba i-Air Quality Act le ikumisela njani ukugcinwa komgangatho womoya?

### Ngokuthi inikezele

- ngesikhokelo sesizwe sokugcinwa komgangatho womoya osingqongileyo kwakunye kwakunye nemimoya ekhutshwayo (umoya osingqongileyo olapha phandle ngaphandle kwalowo ungaphakathi kwezakhiwo)
- ngenkonzo yokuqokelelwa nolawulo lweenkcukacha ezingomgangatho womoya
- ngezicwangciso zephondo ngalinye zolawulo nezokuqinisekisa ukuthotyelwa kwemigaqo yawo
- izicwangciso zikarhulumente ngingqi ngamnye zolawulo kwane mithetho yaloo rhulumente
- ngenkonzo yolawulo yamafutha athile ezithuthi angcolisa umoya
- ngenkonzo yolawulo lwezixhobo ezithile zokutshiswa kwamafutha ezithuthi
- ngenkonzo yolawulo lothuli, ingxolo kwakunye namavumba amabi
- ngendlela yokukhutshwa kwemvume yokusetyenziswa kwamafutha ezithuthi athile, izixhobo zokuwatshisa kwakunye nezinye iintshukumo.

## Uzakohlwaywa umngcolisi ke ngoku

Umgqaqo othi “umngcolisi kubekohlwaywa” kule National Management Act uthetha kanye oko. Ngokwemigaqo yale mithetho yethu mitsha, nabani na othi angcolise umoya kufuneka ehlawule iindleko zokulungiswa kwaloo monakalo – ehlawula kwindalo ngokwayo kwanakunye nabani na othe wazfumana esesichengeni sempilo enkene-nkene ngenxa yoko kungcoliseka.

Ngokwale mithetho, inkcazelo “yomngcolisi” yebanzi. Nabani na onento yokwenza nomngcolisi – umqeshwa, umphathi, umthunywa okanye umlawuli-nkampani – unokufunyanwa enetyala lokungcolisa, ukuba akathathanga manyathelo okuluthintela oko ngcoliseko.

# Yintoni ukungcoliseka komoya?



Umoya ococekileyo wenziwe ngenitrogen (78,1%), i-oxygen (20,9%) ne-carbon dioxide (0,03%) neminye imimoya engenakuzimela efana ne-argon ((0,9%) umphunga wamanzi, amacetyana (amasuntswana othuli, uthuthu, isanti nomungu). Ezinye iigezi ezifana neneon, ihelium, ihydrogen, i-ozone, icarbon monoxide, imethane nesulphur dioxide zifumaneka zingamasuntswana amancinci emoyeni.

Umoya ongcolisekileyo uqulathe iigesi ezininzi namasuntswana othuli anokwenza abantu okanye izilwanyana zigule okanye zizive zingemndanga; uphazamisane okanye wonakalise izidalwa ezibalulekileyo (ezifana nezityalo okanye isinyithi).

Oku kubulaleka okanye lo monakalo ungenzeka ngoku okanye kwixa elizaya; ukuba ichiza elithile linokwenza abantu bagule okanye lonakalise indalo nokuba kukwisithuba seminyaka engamakhulu amahlanu, oku kusathatyathwa njengokungcolisa.

## Kubangelwa yintoni ukungcoliseka komoya?

Kakade! Thina bantu sizinike "ilungelo" lokuphila nomoya ococekileyo (jonga iphepha lokuqale), kodwa isekwasithi naba baphazamisana nomoya ococekileyo, yaye umoya lo, yeyona ndalo singayikhathalelanga.



**Ukutshisa amafutha yinkqubo yokutshisa ngenjongo amandla, ngokuthi kuhlangukanye amachiza athile nomoya.**

Nayiphi ke enye yeentshukumo zethu ebandakanya ukutshisa (ukushushubeza okanye ukutshisa) zidala izingcolisi-moya. Ezi ntsukumo ke ziquka:

- Ukuqhuba okanye ukubhabha, ukutshisa injini kukhupha izibaso ezingamatye
- Ukwenziwa kwesinyithi, izinyibilikisi, isamente, amaphepha, izitena njalo njalo
- Ukwenziwa kombane kusetyenziswa amaladle
- Ukutshiswa kwezinto zasekhaya okanye imizi mveliso nokutshiswa kwabafi
- Ukupheka kusetyenziswa umbane, amaladle, iparafini, iinkuni okanye igesi
- Imigodi nokutshiswa kwenkunkuma
- Ukutshiswa kwamadlelo, amahlathi okanye ingca zezinye iindlela zokungcolisa umoya

**Ngokwenkcazelo esesikweni, njengoko isitsho imithetho yoMzantsi Afrika, ukungcoliseka komoya kuchazwa njengayo nayiphi na inguqu lilo naliphi na ichiza elikhutshelwe emoyeni lisuka kuyo nayiphi na intshukumo, apho loo nguqu inefuthe elibi empilweni okanye kwintlalo-ntle yabantu okanye ekwakhweni, ekubumbekeni nasekusebenzeni kwezityalo zendalo okanye eziphilisiweyo, okanye kwizixhobo ezilulutho ebantwini, okanye zizakuba nelo futhe ekuhameni duthe.**

## Intlobo zezingcolisi-moya

Izingcolisi – moya zingahlulwa njengezi;

Ezodidi lokuqala izingcolisi – moya

zezikhutshelwa kanye emoyeni okanye

Ezodidi lwesibini izingcolisi – moya ziyimiphumela

yamachiza esiyenzayo phakathi kwezingcolisi

– moya kunye nomoya ococekileyo

### iCarbon monoxide (CO)

Akunakuyinukisa, akunakuyibona, okanye

uyingcamle

Eyona ntloko yemvelaphi yayo kukutsha

okungagqibekanga okusuka kwiimoto nakwi

nkuni ezitshiswayo nenkqubo yemizi mveliso.

### lingceba zeNitrogen (NO)

Initrogen nayo ayinavumba kwaye ayingcamleki,

kodwa ungaliva ivumba le asidi

Ezi gesi zihlangana xa kusitsha ngakumbi

kumaqondo obushushu aphakamileyo

### Isulphur dioxide (SO<sub>2</sub>)

Izikhululo zombane ezisebenza ngamalahle

ngawona ayimvelaphi ye sulfa dayoksayidi

enevumba elibukhali. Iinjini zedizili zezinye

zemvelaphi ebalulekileyo.

### Umgangatho wesibhaka-bhaka (O<sub>3</sub>)

Xa isenzeka phaya phezulu umoya ocwengileyo

nohlaziyayo usikhusela ekutshisweni lilanga

nakwimitha yelanga egqithisileyo. Kodwa

xa isenzeka kufuphi nomhlaba ithathwa

njengesingcolisi-moya sodidi lwesibini

### Ilothe (Pb)

Ilothe ifumaneka kwizibaso ezingenalotho

ezinjenge peyinti, iibhetri nemibhobho. Xa

ishushutyaziwe iyajika ibe ngamanzi ibonakale

emoyeni njengamasuntswana amancinci.

### lingceba zothuli (PM10 and PM2.5)

lingceba ezi ngamasuntswana afumaneka

emoyeni, anjengomsizi, uthuli, umsi, umungu,

uthuthu, ulwelo olutshiswa luxinzelelo lomoya

Iceba ngalinye lilingana nesinye ewakeni

leemilimitha nantonina engaphezu kwemikrons

ezilishumi iyabonakala ngeliso lenyama.

Amasuntswana amancinci amdaka namhlophe

ayabonakala. (ichaphaza lemvela liphakathi

kwe-400 nama-5 000 -eemikroni)

### iCarbon dioxide (CO<sub>2</sub>)

Icarbon dioxide yenziwa kukutshiswa kwezibaso

ezinjengamalahle, ipetroli, nedizile. Yeyona gesi

ibalulekileyo injengendlu yokukhulisela izityalo

ezifuna ukhuselo kwimo-zulu. Incedisana

neenguqu kwi-mozulu kazwelonke.

### lingcetyana eziguququkayo zamachiza

La malungu aguququkayo ajika lula abengu-

mphunga. Adibanisa amachiza neegesi ezifana ne

etheni, butane, bhenzina, utywala imethanol ne etha-

anol. Imvelaphi yazo ivela kakhulu kutshiso lwezibaso.



**Amalahle, imimoya,  
namafutha xa  
zidibene zibizwa  
njengamafutha  
ezithuthi lezibaso  
kuba ziyintsalela  
yezityalo  
zakudala nobomi  
bezilwanyana.**

Imvelaphi: Ulongamelo lukoSinqongileyo  
kula Zwelonki: Umthetho ongo Mgangatho  
wongcoliseko lo Moya (wama 39 kunyaka  
2004)

## Kubonakala ngantoni xa konakele ngokugqithisileyo?

Umoya ongcolisekileyo uqulathe ngaphezulu kunokuba kuqhilekile, ubuninzi begesi ezithile kunye namasuntswana. Umthetho ongongangatho ongcolisko lo Moya umisela umlinganiselo ongena kudlulwa kunye nongangatho wokwanda kwamandla e:

- Umgangatho wesibhaka-bhaka (O<sub>3</sub>)
- initrogen oxide (NO<sub>x</sub>)
- initrogen dioxide (NO<sub>2</sub>)
- isulphur dioxide (SO<sub>2</sub>)
- Ilothe (Pb)
- lingceba zothuli (PM10)
- benzene
- amasuntswana othuli abhabha emoyeni.

# Ulawulo lomgangatho womoya eKapa

Ulawulo lwempawu Zomoya ococekileyo lwaseKapa luyinxalenye yolawulo Lwezempilo leSixeko sisebenzisana neSebe lezaManzi nolawulo lobutyebi bezendalo. ISebe leSixeko leenzululwazi linikezela ngeenkono zolawulo lomoya ococekileyo.

Ulawulo lwempawu zomoya ococekileyo zisebenza ngamaqela amabini: Ulawulo longcoliseko lomoya: novavanyo lwezithuthi zedizili. Zizama ngekudibeneyo ukuqinisekisa

ukuba ilungelo lethu lomoya ococekileyo nokusingqongileyo kukhuselekile ngoku:

- Nika imvume yezinto ezisetyenziselwa ukutshisa, akukho mvume ikhutshwayo ngaphandle kokuphicothwa okanye ukuhlolwa kwendawo ekusetyenzwa kuyo.
- Ukuphicothwa kwezikalazo ezimayela nongcoliseko lomoya.
- Ukubizwa kolawulo ekufakweni kobuxhakaxhaka bokusebenza kwimizi mveliso ukunqanda ungcoliseko lomoya.
- Kwenziwe uvavanyo lwezithuthi zedizili ezindleleni.
- Ugcino loluhlu lwezinto ezikhupha umsi
- Ukulawula ungcoliseko lomoya. Ukukhetha izinto ezincedisa ukungcoliseka komoya phakathi kwemida yeSixeko saseKapa.
- Ukuphumeza imimiselo yolawulo lokungcoliseka komoya.

## Owona moya ucocekileyo e-Afrika

Umbono weSicwangiso sohawubo lomngangatho woNgcoliseko loMoya, weSixeko saseKape, sibe yeyona dolophu inomoya ococekileyo eAfrika.

Umsebenzi wawo kukuthoba iziphumo zomoya ongcolisekileyo kubemi baseKapa ngakumbi ngexesha le Brown Haze (jonga kwiphepha 16).

I AQMP ineenjongo ezi 11 zokuhlangabezana nokuzinikela kwethu, ezi njongo zohlulwa hlulwe ngobuchule namacebo okusebenza:

1. Ukucwangciswa indlela yolawulo lweempawu zomoya ococekileyo kwiSixeko saseKapa
2. Ukubalula ukulandelwa komgangatho ophezulu womoya ococekileyo emasijolise kuzo ngeKapa
3. Ukulawula izingcolisi- moya eziphambili ezidala inkungu eyonakalisa impilo yabantu
4. Ukuphucula impawu zomoya ococekileyo

The image shows a detailed emissions inventory template for the City of Cape Town. The form is organized into several sections:

- CITY INFORMATION:** Includes fields for Population, Approximate Area, Number of Vehicles, and Vehicles/1000 People.
- GEOGRAPHY:** A section for geographical details.
- GENERAL INFORMATION:** A section for general project or city information.
- OTHER INFORMATION:** A section for additional notes or data.
- EMISSIONS ESTIMATION SUMMARY:** A table with columns for various emission categories and their estimated values.
- PROJECT REPORT OUTLINE:** A table with columns for report sections (e.g., Regional Introduction, Participants, Approach and Methods, Emission Estimates and QA/QC, Emission Discussion and QA, Limitations of Methods & Estimates, Next Steps, Complete Methods Documentation) and a 'COMPLETE' checkbox column.
- NOTES AND OTHER INFORMATION:** A section for additional notes or information.

A map of Cape Town is displayed in the center of the form, showing the city's location and surrounding areas.

## Ingaba singakwazi ukuthintela imeko yokudingeka “kukagqirha weli Kapa”?

Ukuba uhlala eKapa, kufuneka uziqhelise ukuthanda umoya osuka emzantsi mpuma okanye emntla ntshona (unqwenele ukuba phephezela yonke imihla) okanye wenze konke onako ukunciphisa ungcoliseko lomoya ngokwakho.

ISixeko esincinci kangaka (sithelekiswa nelizwe lonke) ungcoliseko lweSixeko sethu luphakame ngendlela engaqhelekanga. Yinto ebangelwa kukuba iKapa lisokoliswa yinto ekuthiwa ngamaqondo obushushu aphantsi.

Le mozulu ithetha ukuba umoya opholileyo ulapha nje phezu komgangatho womhlaba, umoya ogcwele zizingcolisi – moya zesixeko ubambeka kumaleko womoya ofudumeleyo ngasentla kwawo. Ngamanye amaxesha lo maleko ubambekileyo lungcoliseko oluhlangeneyo oluphantsi kangange 30m (ngakumbi ebusika).

Umoya ongcolisekileyo awunako ukunyuka uxubane nomoya ojikeleza umhlaba de ubushushu okanye imimoya (umzantsi mpuma) iwophule umaleko ophendulelweyo.

Asinako kwaye akufuneki sitshayelwe yimimoya ngenxa yomoya ococekileyo. Umsebenzi Wolawulo Lwempawu Zomoya Ococekileyo nowethu kukukhusela imfuneko ka gqirha kwasekuqaleni.

ezimbacwini

5. Ukunyanzelisa umthetho ngoku nakwixesha elizayo wolawulo lomoya ococekileyo
6. Ukuqokelela uluhlu olupheleleyo lwezinto ezikhupha ungcoliseko lweSixeko saseKapa
7. Ukulawula ukukhutshwa komoya ongcolisileyo zizithuthi
8. Ukucinga impawu zomoya ococekileyo ekusetyenzisweni komhlaba nakucwangciso lezithuthi
9. Ukumisa ukonakala kwempilo ngemiphumela yomoya ongcolisileyo kubemi beSixeko saseKapa
10. Ukuqulunqa amacebo emfundo noqhakamshelwano oluzinzileyo kulawulo lomoya ococekileyo
11. Ukusoloko sihlola imeko yongcoliseko lomoya sinike ingxelo yenkqubela sihlengahlengise indlela nobuchule beenjongo zethu xa kuyimfuneko

**UBethwell Mbete kunye nnoEd Filby becendelu eliqwalasele umgangatho mongcoliseko loMoya, basebenzisa iinkqubo ezinika inkeukaela ngezelizwe ukwaletsa impvelaphi yezingcolisi-moya eKapa.**



# Ifuthe lokungcoliseka lomoya empilweni



**Eyona ngozi inkulu yongcoliseko lomoya eKapa ngamasuntswana asemoyeni asuka kwidiesel. La masuntswana singawaphefumla ayokutsho ezantsi emiphungeni.**

Ukuphefumla umoya ongcolileyo akulunganga. Kufanele ukuba oku akhusothusi. Uphando lwakutsha nje olupapashiveyo lubonisa indlela ombi ngayo umoya ongcolileyo empilweni yethu apha elizweni.

Ngokwe zifundo eziqhutywe libhunge ngo Phando weze mpilo kunye ne Cape Peninsula University of Technology, ungcoliseko lomoya lodwa lubulala malunga nama 5000 abantu ngonyaka. Uphando olwaqhutywa ngonyaka ka 2000 lubonisa ukuba ungcoliseko lomoya ezidolophini lunoba lubangela ukufa ntliziyo 3,7% kwentliziyo nezifo zokuphefumla, i 5,1% yokufa ngu nokuphefumla kwabadala

**Ukutshaywa komdiza kukungcolisela nangakumbi umoya! Ukuba imiphunga yakho sele iphela kukutshaya, kukho ithuba lokuba mhlawumbi ungangakwazi tu ukumelana nomoya ongcolileyo wangaphandle.**

ne 1% kukufa kwabantwana abangaphantsi kweminyaka emihlanu okubangelwa zizifo ezosulelayo.

Ukutshiswa kwamatye azizibaso kunye nokungcoliseka komoya okumalunga noxinano lwezithuthi zezona zaphuli mthetho bagqiba batsho abaphandi.

Uphando oluchanekileyo lwendawo alukenziwa ngamanani abantu abagula baphuncukane nempilo yabo ngenxa yongcoliseko lomoya. Olu phando luchaza nje amanani abantu abafa ngenxa yongcoliseko lomoya.

## **Kuxakutheni apho amaqondo okungcoliseka komoya athatyathwa “njenga khuselekileyo”?**

Akukho maqondo akhuselekileyo kungcoliseko lomoya. Ukuchanabeka nokuba kuphantsi kangakani na kuthwele ingozi yokwaphuka kwempilo kubantu ababuthathaka.

Amaqondo ongcoliseko lomoya abekwa njenga phantsi, aphakathi, aphakamileyo naphakame kakhulu ngokwemigaqo yempawu zococeko lomoya. Le yindlela emisiweyo yokumanyana eyafunyanwa eUnited Kingdom. Ezi ndlela zomanyano ngokwemigangatho zayanyaniswa kwezinye izinto ezingqubana nezempilo

Eyona ngozi yongcoliseko eKapa zizibaso ezifumaneka kuthuli, inkuni ezibaswayo, nedizili. Olunye uphando lucebisa ukuba izibaso zincinci kangangokuba ziyaphefumleka kwaye zingayingozi yesifo somhlaza.

Ngokuqinisekileyo, izibaso, isalfure dayoksayidi kunye ne nitrojeni ziyawukhuthaza umgangatho wokubandezeleka kubantu abagula sisifuba.

Xa umgangatho wezibaso uphakame kakhulu abantu abagula zizifo zentliziyo nemiphunga

banokufumanisa ukuba imeko yabo iya iba mandundu. Bacetyiswa ukuba babonane noogqirha babo. Le nto yenzeka eKhayelitsha nase Wallacedene, ngakumbi ebusika.

Xa umgangatho we sulfure dayoksaydi uphakame kakhulu, abantu abagula sisifuba kufuneka bandise ukusela amayeza abo, kwaye bayalunyukiswa ukuba babe neziphefumli zabo kufutshane amaxesha onke. Le nto ayifane yenzeke eKapa.

Xa inirojeni dayoksadi iphakame kakhulu abantu abagula yintliziyo okanye imiphunga bangafumana imeko yabo imandundu. Le nto ayifane yenzeke eKapa.

Xa umgangatho wekhabhon monoksadi uthothile abantu abagula zizifo zentliziyo bangazifumanisa benentlungu zesifuba ezigqithileyo xa bengenzi mithambo. Le nto yenzeka kakhulu embindini wesixeko.

Xa umgangatho wekhabhon monoksadi uphezulu abantu abagula sisifo somqala nezinye izifo zentliziyo akufuneki benze mithambo kuba bangeva ubuhlungu bomqala. Le nto ayifane yenzeke eKapa.

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**Izingqiniso (kungabandakanywange ikopi escbhokisilu): Ukuthelekelela uxanduva longcoliseko lomoya phandle kwil zasasi zase zidolophini eMzanzi Africa 2000, indawo ngokubhalwe nguJ. Witi (isebe lobunjini bi kheumkhali .**

## Ivumba eliyingozi lamafutha ezithuthi

**Lonke ixesha ugcwalisa esitishini samafutha, sikhupha umphunga webhenzini ophuma empompeni yomntu okuncedayo. Ukuba uhleli ngaphakathi emotweni yakho iifestile zivaliwe usenoku ngawuphefumli umphunga, kodwa umncedisi wakho uyakuwu phefumla.**

**Ibhenzini yiVOC engena mgangatho okhuselekileyo. Ibhenzini inobungozi besifo somhlaza**

**Amandla ongqubano lwebhenzini kwingingqi yezitishi zobaso kwimpilo yabahlali abakufutshane ayikhange ivavanywe kakuhle emZantsi Afrika. Izifundo zesixeko ezilandelayo ziyakujongana neziphumo zazo. Khawuqonde kwisitishi sakho sezibaso ukuba ziyasetyenziswa na izogqumo ezimpompeni. Ukuba azisetyenziswa bacele bazisebebzise.**



# Ifuthe lokutshiswa kwamafutha kwimo yezulu

## Amaqondo obushushu asezantsi angawenza umahluko



Ubuninzi bethu bantu asizithandi iimeko zezulu ezibaxekileyo. Asibuthandi ubushushu obugqithileyo, okanye ingqele egqithileyo, umoya okanye isichotho. Ngokuqinisekileyo asifuni ukuhlala phantsi kwamanzi, phezu kwecangci lengqele okanye emqwebedwini wentlango.

Kwiminyaka engamawaka alishumi elinesihlanu eyaqqithayo iqondo lobushushu laliphantsi kakhulu. Lalisaziwa njengonyaka wengqele. Eli qondo lobushushu behlabathi laliphantsi nge-5°C kuphela kunangoku.

Ngoko ke xa ezenzululwazi kumhlaba wonke ziqikelela ukuba amaqondo obushushu kumoya ojikelezayo ayakonyuka nge-1,4 °C ngonyaka ka-2025 kunye no-5,8°C ekupheleni kwenkulungwane, sikhona isizathu sokuxhalaba.

Amaqondo obushushu omhlaba anyukile kula mashumi mabini eminyaka idlulileyo, kwaye eyona minyaka ibeshushu kakhulu yile ilishumi yokugqibela.

Igesi ezincedisa kutshintsho lwemozulu zaziwa njengendlu yokukhusela izityalo ezifuna ukhuselo kwimozulu, umphunga ikhabhondayoksadi imethani, initriyas oksadi nekloroflurokhabhoni.

Ezi gesi ngakumbi ikhabhondayoksadi kuze imethane, zakha umaleko ojikeleze umhlaba. Lo maleko uvumela imitha yelanga kodwa ayibuvumeli bonke ubushushu belanga buphume. Umoya ojikeleza umhlaba uyafudumala, ushushubeze umhlaba wonke. Amaqhekeza engqele nolwandle umoya namaqondo obushushu afumaneka kuyo yonke indawo.

Olu tshintsho lwemozulu luyakuba nemiphumela yomhlaba ojika ubeyintlango, ubushushu obunganyamezelekiyo, imbalela, izikhukhula, ukutsha kwamadlelo nokutshabalala kwezilwanyana nezityalo. Ezi ntlekele ziya kuwachaphazela amazwe asaphuhlayo ngakumbi amahlwempu.

### Ukungasetyenziswa kwecarbon

lintetho ezifana nokuthi “makwehliswe ukusetyenziswa kwecarbon”, “mayingahoywa kakhulu icarbon” okanye “makuncitshiswe ukukhutshwa kwecarbon” zonke zibhekisa kwiintshukumo (okanye ekubeni kungenziwa nto), nto leyo ezakukhokelela ekuncipheni komoya omdaka othi ukhutshelwe esibhakabhakeni.

### Isivumelwano saseKyoto

Amazwe aneenkqubo zoshishino atyikitya iSivumelwano saseKyoto ne-United Nations Framework Convention kwimozulu etshintshayo avuma ukuthoba ukusetyenziswa kwekhabon nge-5,2% ngonyaka ka-2012.

uRhulumente wasemZantsi Afrika wenza isiqinisekiso neSivumelwano saseKyoto sangenyanga yeKhala ka-2003 isivumelwano saba yimbophelelo ngenyanga yoMdumba ka-2005. Kuba uMzantsi Afrika usaziwa njengelizwe eliphuhlayo awunyanzelekanga ukuba uncamathele kolu hliso kujoliswe kulo.

I-United States, ilizwe elivelisa eyona gesi eyindlu yokukhulisela izityalo ezifuna ukhuseleko kwimo-zulu ayikasilyikityi esi sivumelwano.



**linguqu kwimo yezulu zisoloko zichana abantu abakwiingqi ezihlelekileyo. Kumfanekiso ongaphesheya umonakalo owenziwe yinkanyamba eManenberg ngasentla umlilo owenziwe ngumoya ovuthuzayo kwaLanga.**

Asinako ukuzibiza njenge ntlekele zendalo. Ayizizo intlekele zendalo yimiphumela yemisebenzi yethu, ukutshisa kwethu izibasos enjenge oli namalahle (jonga kwiphepha 2) nokugawulwa kwemithi yendalo.

EKapa iintlekele ezininzi ziyanyaniswa nokutshintsha kwemozulu. Ezi ziquka izikhukhula zaseCape Flats (ngo-1994 nango-2001) inkanyamba yase Manenberg ka (ngo-1999 nango-2002) imililo yomzantsi penentsula ka (ngo-2000) Imililo yasezimbacwini zaseJoe Slovo ka (ngo-2000, ngo-2004, nango-2005) izaqhwithi ezimandla zika (ngo-2003, ngo-2004, nango-2005) nembalela emandla ede yaphinda-phinda (ngo-2002 ukuya ku-2005)

## **iSixeko siphendula kwiintlekelelo zeenguqu zemo yezulu**

Enye yendlela iKapa eliceba ukuphungula inyathelo lwekhabhoni kukhuthaza ukusetyenziswa kwamandla ombane ahlaziyekayo angasuki kwizibasos .

U Lawulo Lwamandla Okutshintsha Kwemozulu, lweSixeko lunenjongo zokwenza umthetho wokuba zonke izakhiwo ezitsha zisebenzise ukushushutyezwa kwamanzi ngelanga. Ubuncinane i 10% yezindlu ezingama (850 000) ziyakube zisebenzisa ilanga ukushushubeza amanzi ngo 2010. ISixeko siya kuthengisa umbane oveliswe ngomoya.

ULawulo Lwezinto Zendalo lweSixeko, luphuhlisa “Icebo elingu B” ukwenzela ukuba abahlali base Kapa bazame ukuthoba utshintsho lwemozulu olu bizwa ngokuba, “ Licebo Lokwenza Utshintsho lweSixeko” Ezi nguqu zijonge kwinkqubo yokunikezelwa kwamanzi, ulawulo lwamanzi esaqhwithi, iyantlukwano, ulawulo lwemililo, ezempilo, intlalo nemida eselunxwemeni.

## **Yintoni enye ebangelwa kukungcoliseka komoya?**

### **Imvula ye-asidi:**

Xa isulphur dayoksadi nenitrasi oksayidi zixubene nomphunga emoyeni, ziba yi asidi ye sulfure. Lo mxube uwela phantsi emhlabeni njengemvula ye asidi.

Imvula ye asidi iyawuchaphazela iimpawu ezilungileyo zamanzi esiwaselayo. Ichaphazela iintlanzi nazo zonke ezinye izidalwa ezihlala emanzini nezilwanyana ezimpilo ixhomekeke kuzo.

Ukwengeza imvula ye asidi itya izakhiwo zamanye nezalinye lekalika, ziyawabulala amahlathi nezivuno.

### **Ukutshatyalaliswa kwezixhobo**

I ayoni, izinki, ikopolo, ilothe, itoni, isinyithi, isileyiti sokuxhoma amaphahla, zonke zifa ngokukhawuleza ngakumbi imizi mveliso ngenxa yongcoliseko lomoya.

I ozoni eluhlobo oluthile lwe oksijini yenza buthathaka imiqhaphu, yomise irabha, isenza ukuba iqhekeke.

Introjeni oksadi yona inga tshabalalisa ipeyinti nemiqhaphu edayiweyo.

### **Isibhaka-bhaka esimnyama esinomsi**

Ngubani ofuna ukuhlala okanye ukundwendwela isixeko esinobuhle bendalo obufihlwe lungcoliseko lomoya?

**Inkululeko yethu, ubuncwane, inkqubela yethu, zonke ziimveliso zecarbon yendalo yakudala, ethi yakutsha ivelise lo moya umdaka, ongowona usadlala indima enkulu ekungcolisweni kwehlabathi. Izizukulwana zethu zezona zizukulwana zinethamsanqa ezakhe zaphila. Yaye ezi zizukulwana zethu zisenokuba zezona zakhe zanethamsanqa nakwilixa elizayo. Sphila kwixesha epho senza khona imbali yendalo nokuphilisana koluntu nale ndalo”  
nguGeorge Monbiot, HEAT, p x 1, 2006, Penguin**

# Ukuba akunakho ukuyithintela, yilungise ke....

## Umthetho olawula ungcoliseko lomoya



iSixeko esingenamsi. Iindawo ezicacisiweyo apha emepini zindawo zalapha eKapa ezingenamsi. Kule ngingqi akukho namnye ovumelekileyo ukuba akhuphe umsi emzini wakhe.

Ngonyaka ka-2003 iSixeko samisa umthetho ngenjongo zokulawula ungcoliseko lomoya, nokunyanga umonakalo othe wadaleka.

Lo mthetho woMasipala woNgcoliseko loMoya unxamnye owenza ibe luxanduva luka Rhulumente wePhondo ukulawula ungcoliseko lomoya kwindawo ephantsi kolawulo lwalo. Inkcazelo yongcoliseko lomoya uyifumana kwiphepha 2.

### Uthini umthetho wesi sixeko ngam?

- Awunakwenza nto inentsingiselo yongcoliso – moya.
- Awunakudala nantoni ebeka umoya ococekileyo esichengeni songcoliseko.
- Awunakho ukuba yinxalenye yongcoliseko lomoya.
- Ukuba uyabandakanyeka ekungcoliseni umoya, uyakuyilungisa kangangoko lo ngxaki ngokwakho.
- Inkcazo yongcoliseko – moya ayithathangwa nje naphina. Tyhila kwiphepha 13 ubone inkcukacha zomgangatho wezingcolisi – moya ezamkelekileyo.

**Ingcaciso esemthethweni ngendalo ngokwemithetho yoMzantsi Afrika ithi indalo le “koko kungqonge abantu oko kwenziwe ngezi zilandelayo: umhlaba, amanzi nomoya wendalo yomhlaba, impilo yezityalo neyezilwanyana. Nayiphi na ke ingxenye okanye indibanisela yezi zingentla apha: Eziphilayo, amachiza, ezokuzonwabisa kwakunye neempawu zebkcubeko kwakunye neemeko zoku kungentla, ezinika ifuthe kwimpilo nentlalo-ntle yabantu.**

## Uthini umthetho wesi Sixeko ngesi Sixeko?

- iSixeko masiphande, sivavanye siqonde ukungqubana kwezixhobo zokutshisa ezifana nezokubalisa amanzi, ezivelisa amandla ombane, ezicola isanti namatye izitshizi zepeyinti, nezitshisi nkunkuma.
- iSixeko masithathe inyathelo, siqhuubekeke ngokuthatha amanyathelo kubophuli bomthetho.
- iSixeko masithathe la manyathelo ngokukhawuleza.
- Ukuba umntu ongcolisa umoya akathathi manyathelo okulungisa isenzo sakhe, isixeko masithumele ngqo umntu lowo iphepha lesaziso setyala lakhe.

## Lo mthetho wesixeko uyazithabatha na izigqibo:

- Ngobungakanani na bomsini onokukhutshwa kwindawo ekungahlalwa kuzo.
- Ungakanani na umsi onokukhutshwa kwindawo ekuhlalwa kuzo.
- Ungakanani na umsi onokukhutshwa zizithuthi.
- Ngubani onelungelo lokufaka, alungise, okanye atshintshe izixhobo zokutshisa.
- Kungenziwa phi, nini ukutshiswa kwenkunkuma.
- Ukukhutshwa komsi okuphazamisayo.

## Ingingqi Yolawulo Lokungcoliseka Komoya waseKapa

Ngokommiselo, yonke indawo ephantsi kolawulo lwaseKapa ibhengezwe njengokuba yi Ngingqi Yolawulo Longcoliseko lomoya.

Le nto ithetha ukuba isixeko singenza imithetho emitsha nokuba mingaphi:

- Ingathintela ukukhutshwa kwezingcolisi – moya kuzo zonke iindawo.
- Ingathintela utshiso lwezibaso ezithile.
- Ibhengeze iingingqi ezingenamsi.
- Imisele imfuno ezahlukileyo kwindawo ezahlukileyo zokuhlala.



# Ingaba siza kuba nolunye usuku lomoya ombi?

## Ukuhlolwa kwamaqondo okungcoliseka komoya waseKapa

**Ngo-2006 amaqondo okungcoliseka komoya afumaniseke emahle, ephezulu okanye ephezulu kakhulu (engaphezu kwamaqondo amiselwe ngamazwe ehlabathi) kwiintsuku ezili-177 kwezingama-365 zonyaka.**

Xa ujonga nje phandle ngefestile ungabona ukuba kukho inkungu, umsi okanye uthuli. asisayi kukuxelela ngeegesi ezingabonakaliyo ezingenavumba, ezoshushubeza isibhakabhaka sisonakalisa impilo yakho.

Ezi zingcolisi – moya nezi zibonakalayo iKapa lisebenzisa izitishi ezili 11 ezinezixhobo zodidi oluphezulu zoqwalaselo longcoliseko lomoya.

| Indawo  | Amasuntwana (PM-10) | Nitrogen Dioxide | Sulphur Dioxide | Carbon Monoxide | Ozone |
|---|---------------------|------------------|-----------------|-----------------|-------|
| Athlone   |                     |                  | X               |                 | X     |
| Bellville South                                       | X                   |                  | X               |                 |       |
| Bothasig  |                     | X                | X               |                 |       |
| Umbindi weDolophu yase Kapa (emacaleni endlela)       |                     | X                | X               | X               |       |
| Umbindi weDolophu yase Kapa (lindawo zasezidolophini) |                     |                  |                 |                 | X     |
| Goodwood  | X                   | X                | X               | X               | X     |
| Khayelitsha   | X                   | X                | X               | X               | X     |
| Killarney   | X                   | X                | X               |                 |       |
| Potsdam   |                     |                  | X               |                 |       |
| Table View  | X                   | X                | X               |                 |       |
| Wallacedene   | X                   | X                | X               | X               | X     |

Ezona zingcolisi moya ziphambili

- Nitrogen dioxide
- Sulphur dioxide
- Carbon monoxide
- Ozone

Izixhobo ezincimci ezihleli nje zifakwe kwiziza ezili 10 kufutshane nalapho kucolwa khona ioli. Zezokulinganisa ibhenzini, netolini. Uphando luzakwandiswa kwamsinyane kongezwe izixhobo zolawulo lwesampulu.

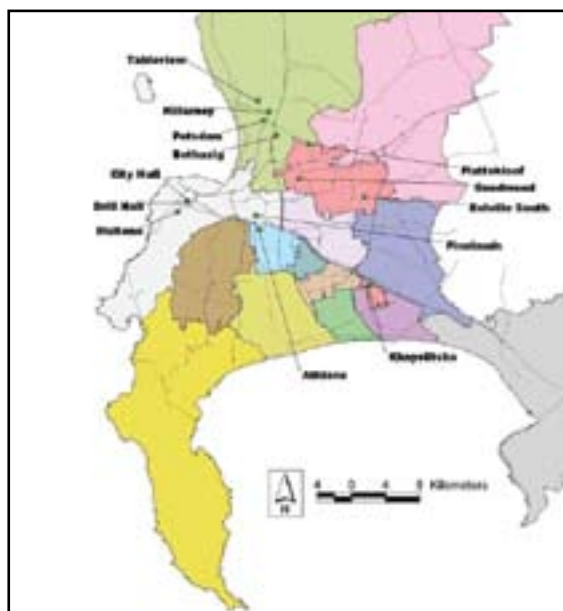
Ikhobhon monoksadi ilinganiswa kwindawo ezixakekileyo zezithuthi kwiziza ezine.

Ulwazi olugciniweyo lusetyenziswa kuphando lwemvelaphi nemiphumela yongcoliseko lomoya nokucebisa abenzi bemithetho yezothutho.

Ulwazi lwamasuntwana aphakamileyo lukhokhelele kwiSicwangciso-qhinga Sokujongana Nokungcoliseka Komoya eKhayelitsha (Jonga kwiphepha-14) nokuqinisekisa ukuba imizi mveliso yesixeko yenza iplanti eziphucukileyo zokuthoba uncoliseko.

**Ngentla: Izitishi ezilishumi elinanye, eziqwalasela umgangatho wongcoliseko lomoya kwiSixeko ngokubanzi, ziqwalasela izinga lezona zingcolisi-moya ziphambili kunye namasuntwana.**

**Ekunene: lindawo ezi kuzo izitishi eziqwalasela uncoliseko lomoya eKapaTown's 11 monitoring stations.**



| Isingcolisi -moya  | 10 imizuzu ubuninzi   | 1 iyure ubuninzi       | 8 iiyure ubuninzi      | 24 iiyure ubuninzi     | Umdlili ngonyaka       |
|--|-----------------------|------------------------|------------------------|------------------------|------------------------|
| Isalfure dayoksadi (SO <sub>2</sub> )  | 500 µg/m <sup>3</sup> | 350 µg/ m <sup>3</sup> |                        | 125 µg/ m <sup>3</sup> | 50 µg/ m <sup>3</sup>  |
| Initrojeni dayoksadi (NO <sub>2</sub> )  |                       | 200 µg/ m <sup>3</sup> |                        |                        | 40 µg/ m <sup>3</sup>  |
| Ikhahon monoksadi (CO)   |                       | 30 µg/ m <sup>3</sup>  | 10 µg/ m <sup>3</sup>  |                        |                        |
| Ipatityuletsi (PM-10)  |                       |                        |                        | 75 µg / m <sup>3</sup> | 40 µg / m <sup>3</sup> |
| I ozoni  |                       | 200 µg/ m <sup>3</sup> | 120 µg/ m <sup>3</sup> |                        |                        |
| Ilothe (pb)  |                       |                        |                        |                        | 0.5 µg/ m <sup>3</sup> |
| Ibhenzini (C <sub>4</sub> H <sub>4</sub> )<br>Qaphela: Akukho mgangatho ukhuselekileyo we bhenzini |                       |                        |                        |                        | 5 µg/ m <sup>3</sup>   |

µg = microgrammes per cubic metre (m<sup>3</sup>)

**iSebe Lemicimbi Yendalo Notyelelo lithe laqulunqa imigangatho yesizwe ngomlinganiselo owamkelekileyo, wezingcolisi-moya ezahlukeneyo, kumoya osingqongileyo. La maqondo emilinganiselo ke, alinganiswa kwiqondo elithile lobushushu (25) noxinzelelo (101.3 Kpa).**



## Vula ikhompuyutha yakho ufumane ulwazi oluchanekileyo ngomoya

Ukuze ube nokufumana ulwazi ngomgangatho womoya ococekileyo ngena kwiwebsite yeSixeko saseKapa Ejongene Nomgangatho Womoya, eyile [www.capetown.gov.za/airqual](http://www.capetown.gov.za/airqual)

Cofa kwisiqhakamshelwano kwicala elisekunene lekhompuyutha uye kumbhalo "monitoring site" uvule leyo ikufutshane kuwe. (Ie website iyahlaziywa, ihambelane nexesha elimiyo yonke imihla, ngaphandle kwange mpela-veki)

Indawo ebhalwe "Real Time Info" ibonisa "izinga langezolo."

Umbhalo "episodes" ophantsi kwesiqhakamshelwano "Reports" unika inkcukacha ezithe ngqo ngezinga longcoliseko lomoya ngentsuku, ngeveki okanye iminyaka engaphambili (ukufumana inkcukacha ezongezelelekileyo, jonga phantsi kombhalo "links" kunye nalowo "guidelines" kwi website.

Amazinga ongcoliseko lomoya ahlelwe ngokwalawo aphantsi; aphakathi; aphezulu okanye aphakame kakhulu, ngokwezikhokelo kunye ne "Banding system" yomgangatho wongcoliseko lomoya, ngoko kwamkeleka kwayo e United Kingdom, emva koko kwiNgxeko yango 1988 ngeMo yokuSingqongileyo yeSixeko. Lamazinga angezintlu, athi emva koko adityaniswe nezinye impembelelo zempilo ezi zezinye.



# Ukucocwa komoya eKhayelitsha

## Isicwangciso-qhinga Sokujongana Nokungcoliseka Komoya eKhayelitsha



Kwindawo ezininzi zaseKapa umoya uvuthuza ngokumandla utshayela izingcolisi – moya. Akunjalo eKhayelitsha kuba umoya uvusa uphakamise uthuli olusuka kwindlela ezingalungiswanga, ujikelezise umsi osuka kwimililo yeenkuni. Nakumakhaya anawo umbane kusetyenziswa umlilo weenkuni ukupheka nokufudumeza kuba umbane wona usebenza kuphela ekukhanyiseni nakumabonakude.

Kangangokuba iKhayelitsha ineengcetyana ezingama-25% ngaphezu kwe Goodwood ekufutshane kuyo neKapa ne 70% ngaphezu kombindi weKapa.

Ubuchule bokulwa ungcoliseko lomoya lwase Khayelitsha yohlulelana nesixeko, neCape Peninsula University of Technology neUniversity of Cape Town, zinephulo eli lingwayo yokuphucula ungcoliseko lomoya kwiindawo zamatyotyombe eKapa. Iyakuquka uphando olweziwa emakhaya, kumashishini, nakwezinye indawo ezinemvelaphi yongcoliseko lomoya eKhayelitsha, ukuze kumiswe indlela yokuthotywa kongcoliseko lomoya. Ezi ndlela zizakucalula iimpawu zomoya ococekileyo. Abantu abazakwenza uphando bayakufunyanwa, baqeqeshwe kwasekuhlaleni.

Iphulo eli ihlawulelwa yiNkqubo Ejongene Nokuncitshiswa Kwentlupheko yesizwe kunye neSebe Lemcimbi Yendalo Nokhenketho. Iingcetyana (PM 10) eziphakamileyo ziyaxhalabisa kuba ziyayichaphazela impilo yabantu abagula sisifuba zikhulise inani labantu abangeniswa ezibhedlele ngenxa yeengxaki zokuphefumla, ukukhohlela, nokuphelelwa ngumoya.

Ngeli phulo abantu abahlala kwezi ndawo

bayakuluqonda ungqubano lomoya ongcolisekileyo nempilo yabo. Ukugcinwa komoya ucocekile akusayi kuba yinzuzo kubantu bezi ndawo bodwa, koko iziphumo zawo ziyakuba kukulondolozwa kwemali kwezempilo ngokukhula kwemveliso kwindawo zempangelo.

linjongo zeSicwangciso-qhinga Sokujongana Nokungcoliseka Komoya eKhayelitsha zezi:

- Kukufumana imvelaphi ephambili yongcoliseko lomoya (PM10) ekuhlaleni ngokwenza uphando emakhaya, kumashishini, nakwizithuthi ezingunobangela wongcoliseko lomoya.
- Ukuphucula izakhono zabantu basekuhlaleni abakule projekti, nokukhulisa amathuba okufumana ingqesho
- Ukufundisa abantu emakhaya ngengozi zomoya ongcolileyo, nendlela esingaluthoba ngayo ongcoliseko lomoya
- Sixhase ukusetyenziswa kwezibaso ngendlela ecocekileyo
- Ukukhetha iindlela zokulinga ukuphucula impawu zomoya ococekileyo ngokweziphumo nokwamkeleka ekuhlaleni.



## “Basa njengomakhulu” Umzekelo waseMpumalanga

**Indlela entsha yokulayita umlilo ingqina ukuba ngamanye amaxesha impendulo zendlela zokugcina umoya ucocekileyo zisuka kuthi, ngaphandle koncedo lweenjineli ezintsonkothileyo.**

**Kwesi isihlo, uNkosikazi Nobelungu Mashinini ominyaka ingama-63 waseMbalentle eSecunda, wafumanisa ukuba ngokubeka amagaqa amalahle ngaphezu komlilo ngexesha elifanelekileyo, iphucula ukutsha kwamalahle angaphantsi. Kungoko kwazalwa iprojekti entsha yococeko lomoya eyabizwa ukuba yi “Basa njengo Magogo” ukumnika imbeko.**

**Ngokubanzi le ndlela isekelwe ekubeni umsi udalwa bushushu obusemdeni. Ngokuqhelekileyo amalahle angaphantsi ngawo abangela ukuvutha, umsi uphuma kumalahle abandayo ubaleke. Xa amalahle ebekwe ngaphezulu umsi uphuma kumalahle ashushu. Le yindlela entsha ethoba ungcoliseko lomoya phakathi endlwini, imiphumela yeyokongiwa kwamalahle nemali.**

**Esi Sixeko sinesikhululo esihlola-hlola umgangatho womoya kwingingqi yaseSite C eKhayelitsha. Esi sikhululo ke siyakuqhubeka sihlola-hlola umgangatho womoya ze sikhangele nokuba ayasebenza kwisi na amacebo akunqanda ukungcoliseka komoya**



# Ingxaki ngezothutho



Izithuthi (ezika wonke wonke nezangasese, ezepetroli nezediesel zinetyala lama-50% kwizityalo ezifuna ukhuselo kwimo-zulu eMzantsi Afrika kwaye zingunobangela wongcoliseko lomoya.

EKapa, iinqwelo mafutha zinobutyala benkungu engqindilili esoloko ijinga phezu konxweme lwase False Bay. Ngokwe ngxelo ka-“Brown Haze” ka-1997 isibini esithathwini songcoliseko lomoya lubangelwa zizithuthi ezikhupha umoya ongcolileyo ngakumbi ezedizili. Umoya okhutshwa yidizili ukwanayo ikhabhoni exubene ne nitrate isulphate, isinyithi kunye nobunye ubungqina bongcoliseko-moya.

Ngonyaka ka-2000, iKapa laseka iyunithi ezimiseleyo yokuhlola ungcoliseko moya lwedizili, ngaphaya kwama-20 000 lwezithuthi zedizili sezihloliweokoko yaqaliswa (izinga lokungaphumeleli luthu chu ngokwehla ukusuka ku-17% ukuya ku-1,8%).

Abahloli bongcoliseko- moya bazihlola nje izithuthi zedizili ngokucela umqhubi anyathele umcephe wesithuthi ngelishesha umhloli esebenzisa imitha ethile yokulinganisa ubumnyama bomsu ophuma kumbhobho womoya.

Isizukulwana esitsha senjini zedizili zenzelwe ukuba zikhuphe umoya ococekileyo kangokuba imitha ekufundwa ngayo ifunda uzero. Ufundo olungaphantsi kwama-20 HSU ibonisa ukuba isithuthi sigcinwe kakuhle.

Xa ufundo lungaphezulu kwama-20 HSU, umsi uyabonakala ubesisizathu sokuxhalaba kodwa kusekuhle ngokwemida yommiselo. Umqhubi wesithuthi esingaphumelelanga uvavanyo angafumana isigwebo se-R500. Isaziso sokulungiswa kwesithuthi eso sinikwa umqhubi ukuba asinike umnini sithuthi . Umnini sithuthi akugqiba ukusilungisa usibuyisela kwaku vavanyo phakathi kweentsuku ezingama-30.

**Abahenkethi beli nabamazwe angaphandle batyelela iKapa kuba lilihle. Kwaye liselihle okwangoku. Khawufan' ucinge ngobuhle besi sixeko obugqunywe yinkungu emdaka, sifuthaniseleke kwisulphur... Ucinga ukuba abahenkethi basezakulibona ubuhle?**

## Abona nobangela baqhelekileyo abakhupha umsi zizithuthi zediesel

| Amalungu enjini                                   | Izizathu zokukhutshwa komsi omnyama   | Indlela yokukhusela umsi omnyama |
|---|---|----------------------------------|
| Impompo yezibaso                                  | Ukuguga kwempompo yezibaso yintsusa yokungena kwedizili kwimpompo   | Linganisa ububanzi bombhobho     |
| Isitofu sezibaso                                  | Isitofu sezibaso esinengxaki asikwazi ukutshiza idizili ngokulungileyo  | Lungisa okanye tshintsha injini  |
| Isihluzi moya                                     | Isihluzi moya esivalekileyo sivalela umoya ungangeni kwinjini, izihluzi ezonakeleyo zivumela umoya ungene ngqo kwinjini | Coca okanye utshintshe isihluzi  |
| Isithintelo senjini                               | Ukuguga kwenjinikwenza utshiso olungaphelelanga   | Ngciba injini                    |
| Umbhobho wokukhupha umoya                         | Umsizi nobumdaka obufumaneka kumbhobho womoya uyakwenza ukuba umsi nobumdaka bukhuphe iigesi ezimdaka                   | Coca okanye utshintshe umbhobho  |
| Umqulu wentsimbi ohla usenyuka embhobheni wenjini | Ezikrazukileyo  | Tshintsha                        |

Wakungaphumeleli ukuthobela umthetho wokulungisa isithuthi sakho ungafumana esinye isohlwayo se-R1500.

## Ayijoliswanga kubaqhubi bezithuthi ezisebenzisa idiesel kuphela...

Yintoni enokwenziwa ukuphelisa inkungu emdaka?

- Cima isithuthi sakho ukuba uzakusiduduzelisa ndaweni-nye ngaphezu kwemizuzu embalwa. Ilori yedizili itshisa iilitha zezibaso ezintlanu ngeyure nganye. Sebenzisa idizili ene sulfure ephantsi xa ifumaneka.
- Gcina amatayala akho egcwele kwaye elungelaniwe.
- Ukuba uthenga isithuthi esitsha khetha esinembobo ongajiki bala.
- Qhuba ngobulumko musa ukuvumela injini yakho ibile, musa ukuqhuba nge giye engafanelekanga kwaye musa ukufaka umthwalo ongaphezulu kwisithuthi sakho.
- Lungisa isithuthi sakho rhoqo

## Uthini umthetho wesixeko kulo mba?

**Kulula: Kumgaqo kawonke-wonke akuvumelekanga ukuba uqhuba okanye usebenzise isithuthi esikhupha umoya omnyama.**

- Sebenzisa isinikimoya xa kufanelekile, vula ifestile, umoya ococekileyo ungakukhumbuza ukuba kutheni kufuneka ubonise inkathalo.
- Hamba ngobulumko: sebenzisa isithuthi somntu wonke emsebenzini, ibhayisekile, okanye uhambe ngenyawo xa unako.

## IKapa liyashukushukuma kumba wothutho

“Izithuthi zika wonke wonke emva kuka-2010,” utsho uSodolophu waseKapa uHelen Zille.

Kwizithuthi zika wonke wonke kufuneka



siqinisekise ukuba isiporo, iibhasi, ushishino lweetekisi luhambisa abantu ngobuchule ukuze kunciphe ukusetyenziswa kwezithuthi zangasese.

Icebo laseKapa lokuhamba ungasebenzisi sithuthi liphume phambili lafumana ibhaso emhlabeni wonke. Injongo yayo kukwandisa ukusetyenziswa kweebhayisekile nokuhamba ngenyawo njengendlela yokuhamba ezidolophini.

Sele kwakhiwe iindlela zebhayisekile kwisixeko ngokubanzi. Sele kufunyenwe inkxaso mali yeprojekti ezi-14 ezintsha zokuphucula indlela zabahamba ngenyawo.

## Ukusetyenziswa kweebhayisekile ngeenjongo zokugcina umoya ococekileyo

Ugqirha Ivan Toms, umphathi weSebe Lezempilo lwaseKapa ukholelwa ukuba ukuhamba ngebhayisekile nokuhamba ngenyawo zindlela ezilungileyo ezincedisa kwimpawu zomoya ococekileyo nempilo engcono.

“Qala kancinci usebenzele ukuya phezulu,” uyacebisa, Hamba ngenyawo ukuya evenkileni ukuya kuthenga iphepha lakho. Hamba ngololiwe okanye ibhasi ukuya emsebenzini nokuba kukanye ngeveki xa ungena zintlanganiso zangaphandle.

Ukuhamba ngebhayisekile kuneziphumo ekwakheni umzimba kwimini exakekileyo. “Ndihamba ngebhayisekile kuba indigcina ndisempilweni, ipholisa nentloko yam.”

Kwindawo ezininzi zaseKapa ukuhamba ngebhayisekile ngexesha lokuphithizela kwezithuthi kokona kukhawulezayo kunokuhamba ngesithuthi.

Jonga iwebsites kwiphepha 24 ngengecebiso zokuhamba ngebhayisekile.



# Umoya ococekileyo ugala ekhayeni

Amaxesha amaninzi ungcoliseko lomoya lungabonwa ngathi yimposiso yomnye umntu. Ukuba akunamzi mveliso musa ukubasa iinkuni ekuphekeni nasekufudumezeni, musa ukuqhuba isithuthi esiphuma umsi omnyama awunikezeli kucoceko lomoya.

Uyakuphefumla umoya ongcolisekileyo, utshe phantsi kwesibhakabhaka esishushu kungekho nto unokuyenza.

Imvelaphi enkulu yongcoliseko lomoya isuka kwizinto esizenzayo eziquka ukutshisa. Nokuba akubasanga mlilo wamalahlle, ubase isibilisi manzi kumzi mveliso, utshise inkunkuma unalo uxanduva lokuba zisenzeka ezi zinto.

Indaba ezimnandi zezokuba nantoni na oyenzayo yokulondoloza ubutyebi bendalo iyakuluthoba ungcoliseko lomoya.

## Yisa kancinci etipini

IKapa linendawo ezintathu ekusetyenzelwa kuzo (zenkunkuma) ezithatha amakhulu eehektare zomhlaba. Njengokuba inkunkuma ithe chu ibola ikhupha igesi eyimethani eyona inekhabhon dayoksadi (indlu yokukhuliselaizityalo ezifuna ukhuselo kwimozulu) (jonga kwiphepha 8)

Okona ukupha inkunkuma encinci ukuba iqokelelwe sisixeko kucutheka ukuphuma kwegesi eyi methane (igesi efunyanwa emgodini wamalahlle). Zama la macebo ukunciphisa inkunkuma yasekhaya:

- Lungisa izinto ebezisetyenzisiwe zibe nokusetyenziswa kwakhona ekwenzeni into entsha, phinda usebenzise, lungisa
- Zama ukuba ungathengi imveliso ezibotshelelwe ngeplastiki ezifana nemifuno
- Thenga ngesambuku kuba ufumana imveliso eninzi kucutheke nopakisho
- Khetha izikhongozelo eziphinda zibuyiswe neziphinda zisebenziseke
- Thenga imveliso ezigalelwayo nezandayo kuba zona zisebenzisa izikhongozeli ezimbalwa
- Khetha impahla ezomeleleyo kunokuthenga ezizakufuna ukuba uphinde uyokuzithenga
- Khetha imveliso enokuphinda isebenziseke (lo nkcazelo ibhaliwe kwisiquqatho eso)
- Thenga imveliso yendawo okuyo njengoko inciphisa iziquqatho
- Zama ukuthenga izinto eziyimfuneko. Yonke into oyithengayo ilandela inkqubo ethile yothutho neyopakisho
- Khetha imveliso engankonkxwanga enjenge ziqhamo ezitsha kunenkonkxiweyo, zisebenzisa ubutyebi bendalo obunganeno zicuthe nenkunkuma

**Ukubuyisela kwisimo sokuphinda lisetyenziswe itoni yephepha konga imithi elishumi elinesihlanu, iinkonkxa ezili-2,5 zamafutha, i-4 132 kWh zombane, 2, 26m zomhlaba, malunga ne-i20 000 yeelitha zamanzi ze kuthintele nama-26,8kg zezingcolisi zomoya ekubeni zifikelele emoyeni!**



## Musa ukungawusebenzisi ngendlela umbane

Lonke ixesha sisebenzisa umbane ovela kwizibaso, sinegalelo kungcoliseko lomoya. Unobangela kukuba ubuninzi bezitishi zombane zisebenzisa amalahle njengamandla ezibaso, oku kusisizathu segesi ezifana nendlu yokukhulisela izityalo ezifuna ukukhuselwa kwimozulu. Ukonga umbane kunciphisa ukwenziwa kwawo

- Thenga ibhalbhu ezonga umbane zona zisebenzisa i-80% ngaphantsi kwebhalbhu eziqhelekileyo kwaye zona zihlala ixesha elide.
- Songela isixhobo sokufudumeza amanzi ngengubo yaso, gquma imibhobho ngerabha.
- Thenga izixhobo zombane ezifanelekileyo okanye usebenzise irhasi.
- Cima izinto zombane ezingasebenziyo umz. umabonakude, xa engabukelwanga.
- Pheka iimbiza ngexesha elinye, uzivale iziciko zazo.
- Bilisa ukutya ngeqondo eliphezulu, wandule ukuthoba iqondo lobushushu xa zibhadlayo de kuvuthwe.
- Gcina ucango lwe oveni luvalwe gingci de kuvuthwe ukutya (sebenzisa isibane se oveni ukujonga ukutya). Lonke ixesha uvula ucango lwe oveni ubushushu buyehla, kufuneka ukuba buphinde bubuyiselwe.
- Uhlambo olufutshane lwamanzi abandayo nopulo komatshini bokuhlamba izitya nempahla benzelwe ucutho lwamanzi namandla. Musa ukuhlamba impahla zakho rhoqo xa ubuzinxibile.
- Qiniseka ukuba isifudumezi manzi sakho sisebenza ngendlela efanelekileyo kwaye umlinganiso wobushushu awukho kwiqondo eliphezulu.
- Kungcono ufakele isishushubezi selanga. Singaxabisa malunga nama-R3000 ukuya kwi-R18 000 ukusithenga, kodwa emva kweminyaka emine nangaphezulu ulondolozo lungaphezu kwexabiso lokuthenga.



IFOTO: Willir' Energy Savers

**Lonke iwaka leewaats zombane othi uzonge zinciphisa ekuncitshisweni komoya omdaka obunokukhutshelwa esibhaka-bhakeni. Ukukhupha isibane "esiqhelekileyo" nesiingama-60 eewatts ze ufake esili-11 leewatts (iCFL) liyakonga malunga nama-570 omoya omdaka ngethuba usebenzisa le CFL.**



**Amakhaya asebenzisa amashumi amane ekhulwini awo wonke umbane waseKapa.**

# Ukungcoliswa komoya yimizi-mveliso



Imizi mveliso yaseKapa ngoku inoxanduva longcoliseko lomoya olukuma-20% lifekitri zichithe izigidi ukunciphisa ukukhutshwa komoya ongcolisayo ngeguquko yezityalo, indlela zokucoca imveliso nohlolo longcoliseka lomoya. Ezinye inguqulelo zezityalo ziquka izixhobo ezinjenge zokucoca umoya, izibambi hlalutye neziqokeleli.

Isixhobo sokucoca umoya sisusa uthuli nevumba emoyeni ngokuzanyazanyiswa namachaphaza amanzi.

Iziqokeleli ezibukhali zizixhobo ezisusa amasuntswana omhlaba njengoko iziqokeleli ezibuthuntu zisusa amasuntu amakhulu. Ezi zixhobo ezinokuxabisa ngaphezulu kwama-R42 ezigidi, zisebenzisa amandla ombane ukususa amasuntswana emoyeni nakwiziqokeleli.

## “Oonomadudwane abaluhlaza”

Abahloli Kwicandelo Lolawulo Lwendalo Esingqongileyo benza uthungelwano nabaxhasi basemthethweni abasuka kumasebe karhulumente awohlukeneyo. Badume ngokuba “ngoonomadudwane abaluhlaza.”

Abahloli boLawulo lokuSingqongileyo bahlola baqinisekise imithetho ethile yendalo. Ziquka abagcini bamahlathi, amagosa ezolondolozo lwendalo, amagosa empawu zomoya

ococekileyo, amagosa alawula ezonxweme, amagosa olawulo lwenkunkuma namagosa ahlola uphuhliso lwesixeko.

Umthetho wabahloli ka 2005 owazisa abahloli bolawulo lweziSingqongileyo wabuya wazisa umthetho omtsha wamatyala obugebenga. Lo nto ithetha ukuba wakungaphumeleli ukuthobela isaziso esikhutshwe ngabahloli boLawulo LokuSingqongileyo lulwaphulo mthetho olo.

## Ingaba ithini imithetho yesizwe ngemizi-mveliso?

Umthetho i-Environmental Conservation Act ka-1989 ka-1989 uthi, “iinkqubo ezihlengahlengisiweyo ezidweliswe KwiSecond Schedule to the Atmospheric Pollution Prevention Act ka-1965 zinefuthe elibi kwindalo esingqongileyo. Naliphi na ishishini elithatha inxaxheba kule nkqubo kufuneka lingene kwinkqubo yovavanyo lwefuthe lale nkqubo kwindalo esingqongileyo.

Umthetho i-Atmospheric Pollution Prevention Act, unikezela ngoluhlu lweenkqubo ezingama-73 ezikumila kunje.

Ezi nkqubo ke ziquka:

- Inkqubo yokwenza iglasi
- Inkqubo yokwenza amaphepha

**Ebutsheni bonyaka 2007, amazanga e Sulphur Dioxide (SO) kwenye yendawo zemizi-mveliso eKapa yadlulisa isikhokelo semizuzu eli 15, izihlandlo ezithile. Oku kwaziwa njenge “episode”. Imvelaphi yaye isentshona yesixhobo soqwalaselo. Icandelo lolawulo longcoliseko loMoya leSixeko latyelela yonke imizi-mveliso kulommandla ucaphazelekayo laze lalatha umophuli-mthetho.**

**Lomzi-mveliso ucaphazelekayo kutsha nje uthe wafakela isibilisi esi sebenza ngombane ngezizathu zokusingqongileyo kananjalo nokonga inkcitho yawo ophakamileyo. Nangona kunjalo, ngenxa yokumane kucima umbane, kuye kwafuneka okokuba baphinde babase isibilisi sabo esimandla esisebenzisa I-oyile esebenzisa umthamo we Sulphur ophakamileyo ukuqhuba umsebenzi wabo.**

**Ingxelo yamanani ethe yafumaneka kwisiqwalaseli iyangqinelana kunye namaxesha okuqala kokusebenza kwesibilisi, kananjalo nasemva kothetha-thethwano kunye nenjineli, umzi-mveliso wavuma ukusebenzisa amandla e sulphur asezantsi.**

- Ukutshiswa kweenkuni
- Ukutshiswa kwesinyithi
- Inkqubo yotshiso lwenkunkuma
- Inkqubo yokwenziwa kwezitena
- Inkqubo yokwenza isichumiso

## Uthini umthetho weSixeko ngemizi-mveliso?

Akukho mzi mveliso mawufake, uguqule, wandise okanye ubuyisele nasiphina isixhobo sokutshisa izibaso ngaphandle kwemvume ebhaliweyo yeSixeko saseKapa. Isixeko kufuneka siqinisekise ukuba amashishini anendlela eyiyo yokulawula ungcoliseko moya, kungenjalo mawufake izixhobo ezilungileyo ngendleko zeshishini elo.

## Ukuba ngumvelisi ococekileyo

Ukuvelisa Ngendlela Ecocekileyo ligama elaqala ukutyenziswa yinkqubo i-United Nations Environment Programme (i-UNEP) elichaza inkqubo yokuvelisa

- elondoloza izinto, amanzi, nombane
- ishenxisa ityhefu nezinye izinto eziyingozi
- iphungula ubuninzi betyhefu kuzo zonke iinkqubo zokukhutshwa kwenkunkuma ngexesha lenkqubo mveliso

Ngale ndlela, Ukuvelisa Ngendlela Ecocekileyo kunciphisa ingozi empilweni yethu, longa imali, luphucula amandla kwaye lukhulisa uphuhliso oluzinzileyo.

Amashishini ayakhuthazwa ukuba asebenzise iindlela Zokuvelisa Ngendlela Ecocekileyo zisebenzisana nenkqubo yesixeko iWaste Wise kwakunye Namaqela Azinikele Ekunciphiseni Inkukuma.

La maqela anjongo kukucutha Inkukuma kwimizi mveliso yeplastiki nemizi-mveliso yemoto ayahlangana rhoqo abonisane

ngendlela yokunciphisa inkunkuma phambi kokuba baqale imveliso.

Iqela ngalinye liyaziqhayisa ngempumelelo yalo nolondolozo. Umzi-mveliso womqhaphu othile uphumelele ukonga ama-625 069 eekwh zamandla ngonyaka (amandla okanye umbane ovela kwizibaso ngunobangela omkhulu wongcoliseko lomoya).

Ngonyaka omnye elinye lamaqela athatha inxaxheba kwiWMC likwazile ukuthumela isiqingatha senkunkuma etipini. Longa imali engange-R1500.00 ngenyanga ngokufakela imibhobho ebengezelayo nezibane ezonga umbane.

Ifektri yopakisho yaseKapa yaphumelela ukunciphisa inkunkuma yayo nge 10% (ngokuhlola nokuphucuka kolawulo lomzi) yonga i-8% kwinkcitho zombane.



**Ngo-2006 iBellville South Environmental Forum yazuza ibhaso iNational Association for Clean Air Management ngenxa ngemizamo yayo egqwesileyo yokuthoba umgangatho wongcoliseko-moya eBellville South.**

**I BELSEF le inamaqela ahlukeneyo amashinini, abantu jikelele nabahlali nabameli bakarhulumente (kwisixeko nakwiNtshona Kapa) injongo yayo enkulu kukunyusa ukhuseleko lokusingqongileyo nezempilo kwingingqi yaseBellville South.**

**Iinkampani zaxhasa ekuthengweni kwesitishi sokujonga nokulawula iimpawu zomoya ococekileyo. Esi sitishi sakhawe kumabala ase SANS FIBRES kwaye sijonga iimpawu zomoya ococekileyo iiyure ezingama-24 ngosuku.**

# Musa ukucaphuka nje ... Khalaza



Omnye wemisebenzi yeCandelo Lolawulo Lomgangatho Womoya kukuphanda kwizikhalazo ngabantu okanye imizi-mveliso ethe yophula imigaqo yomthetho wesixeko i-Air Pollution Control Bylaw (jonga kwiphepha leshumi)

Wonke umsebenzi we-Ofisi ejongene Nolawulo Lomgangatho Womoya unikwa uxanduva lokujongana nengingqi ethile yesi Sixeko. Lithi ke eli Candelo lakufumana isikhalazo, iinkcukacha zifakwe kwisikhundla esikwikhompyutha ze igosa elijongene naloo ngingqi liphande kwisithuba seentsuku ezimbini. Kufuneka ke ube kwimeko yokuba ungakwazi ukuya kuvela enkundleni njengengqina.

Ukuba umntu okanye umzi-mveliso lowo ngokwenene uyophule imigaqo yalo mthetho, igosa elo liyakumyala lowo ngomlomo (ukuba yingxaki encinane nekulula ukuyisombulula efana nokutshiswa kwezivuno ngaphandle kwemvume), limyalele ukuba alungise umonakalo okanye likhuphe isohlwayo esingephi.

Ukuba umntu okanye inkampani leyo ayiyithobeli imiqathango ebekwe kuloo myalelo, ingatshutshiswa. Ukuba umntu ufunyaniswe enetyala angazibona endyondya ejele isithuba seminyaka emibini okanye afumane isohlwayo esiyimali efikelela kuma-R40 000.

**Isaziso sokuthothisa yincwadi eyalela umophuli-mthetho ukuba "athothise" – ayeke- ukwenza eso senzo sokophula umthetho.**

## I-Ofisi Yolawulo Lomgangatho Womoya

Kwa-246 kuMgaqo iVoortrekker

eVasco

7460

PO Box 16548, eKapa, 8000

Inombolo Yomnxeba: 021 590 1419

Inombolo Yefeksi: 021 590 1621



**Yiba nguntamni olungileyo**  
**Xa ufaka isikhalazo kwi-ofisi yempilo yendalo, nika igosa elilapho iinkcukacha ezininzi kangangoko unakho (ziquke imifanekiso, ukuba kuyakwazeka)**  
**• Yintoni • Nini • Phi • Ngubani**  
**Ungasifaka isikhalazo ngefeksi, umnxeba okanye i-email**

# Uluhlu lwemibuzo ekufuneka uzibuze ngokukhawuleza?

## Ekhayeni

- Ingaba ndiyacutha, ndiyibuyisele kwisimo sokuphinda isetyenziswe, ze ndiphinde ndiyisebenzise?
- Ingaba ndiyawenza umgquba ngenkukuma ekufaneleyo oko?
- Ingaba ndiyazicima izixhobo zombane xa ndingazisebenzisi? Ingaba ezi zixhobo ziyawonga umbane?
- Ingaba ndinayi imbawula yamanzi esbenza ngelanga kuphahla lwam?
- Ingaba ndisebenzisa izibane eziwongayo umbane?
- Ingaba ndiyihlamba kumanzi adikidiki okanye abandayo impahla yam, endaweni yashushu?
- Ingaba ndiyayitshisa inkukuma?

## Ezivenkileni

- Ingaba kuyimfuneko ukuyithenga le nto? Okanye mhlawumbi ndingasebenzisa le ndisenayo?
- Ekuvelisweni kwayo, ingaba le mveliso idale ukungcoliseka komoya?
- Ingaba le mveliso yeyalapha okanye yenziwe kwelinye ilizwe? Ingaba ihambe kangakanani ukuza kufika kum? Futhi ingaba lingakanani igalelo layo ekungcolisekeni komoya?
- Kuyanzeka ntoni kule mveliso/kwesi singxobo xa ndigqibile ngaso?
- Ingaba ndithenga kwiivenkile ezizinikeleyo ekongiweni kwamandla kwanasekunciphiseni ukukhutshwa komoya omdaka?
- Ingaba ndingetha iimveliso ezingasongelwanga kakhulu?

## Emsebenzini

- Ingaba umbutho wethu lilungu leqela elizinikeleyo ekuncitshisweni kwenkukuma?
- Ingaba siyawonga umbane kwisakhiwo okanye umzi-mveliso wethu?
- Ingaba umbutho wethu usebenzisa iindlela ezicocekileyo zokuvelisa?

## Ekuhamba-hambeni

- Ingaba kuyimfuneko ukuluthabatha olu hambo? Namhlanje?
- Ingaba kuyimfuneko ukulwenza ngenqwelo-mafutha olu hambo, okanye mhlawumbi ndingasebenzisa isithuthi sikawonke-wonke, ndihambe ngeenyawo zam okanye ngebhayisekile?
- Ingaba isithuthi sam ndisiphethe kakuhle yaye sihlolisiswa rhoqo?
- Ingaba amavili esithuthi esi anomoya ofanelekileyo?
- Ingaba isithuthi sam sikhupha umsi omnyama ngala mbhobho ukhupha umsi omdaka?
- Ingaba ndisebenzisa iisibazo okanye igezi kwisithuthi sam?
- Ingaba inqwelo-mafutha yam iyawonga amafutha okanye iyawagongqoza?
- Ingaba inombolo yokunikezela ingxelo ngemeko yokungcoliswa komoya ikho kumnxeba wam?

# Ukuze ube nokufumana ulwazi oluphangaleleyo

## Malunga neenguqu kwisimo sezulu

**Heat: How to stop the planet burning,**

nguGeorge Monbiot, wePenguin

**Scorched: South Africa's Changing Climate,**

nguLeonie Joubert, weWits University Press

**South African Sustainable Energy and  
Climate Change Project (SECCP)**

[www.earthlife.org.za/seccp/](http://www.earthlife.org.za/seccp/)

**Campaign against Climate Change**

[www.campaigncc.org](http://www.campaigncc.org)

**Intergovernmental Panel on Climate Change**

Igqiza elisekwe yiWorld Meteorological Organisation (iWMO) neNkquboYesimo Sezulu yeZizwe Ezimanyeneyo (i-UNEP) [www.ipcc.ch](http://www.ipcc.ch)

**An Inconvenient Truth**

[www.climatecrisis.net](http://www.climatecrisis.net)

**Greenpeace**

[www.greenpeace.org.uk](http://www.greenpeace.org.uk)

**Centre for Alternative Technology**

[www.cat.org.uk](http://www.cat.org.uk)

## Malunga nemithetho nezivumelwano phakathi kwamazwe ngamazwe

La maxwebhu adweliswe ngezantsi apha ayafumaneka kwiSebe Lesizwe Lemicimbi Yendalo Nolyelelo – [www.environment.gov.za](http://www.environment.gov.za)

Ibakala A Incwadi Yokuqala: Global CFC Smuggling Trends and need for a fast phase-out

Ibakala A Incwadi Yesibini: Controlling the Ozone Depleting Substance (ODS) trade: The need to strengthen licensing systems

Ibakala A Incwadi Yesithathu: The continued illegal trade in ozone-depleting substances

Ibakala A Incwadi Yesine: Is there a hole in the Montreal Protocol?

Ibakala A Incwadi Yesithandathu: Ozone-depleting substances

## Malunga nokungcoliseka komoya nempilo

**A comparative risk assessment for South**

**Africa, 2000: Preliminary findings towards promoting health and preventing disease**

nguRosana Norman\*, uMichelle Schneider, uDebbie Bradshaw, uJane Joubert, uRia Laubscher, uNdine Nannan, uBeatrice Noliqana, uDesiree Pieterse, uTheo Vos kwakunye namaqela eengcaphephe e-SA CRA

**United States Environmental Protection Agency (USA)**

[www.epa.gov](http://www.epa.gov)

**American Lung Association**

[www.lungusa.org](http://www.lungusa.org)

**World Health Organisation (WHO)**

The United Nations specialised agency for health [www.who.int](http://www.who.int)

## Malunga nokuhlolwa komgangatho womoya

**AirNow**

Eyiwebsite kaRhulumente wase-USA esebenza ngamaqumrhu ahlukeneyo nenikezela ngeenkukacha zomgangatho womoya wase-USA <http://airnow.gov>

## Malunga Nothutho oluzinzileyo

**The Bicycling Empowerment Network**

Engumbutho waseMzantsi Afrika ongekho phantsi kolawulo lukarhulumente okhuthaza ukusetyenziswa kweebhayisekile njengeqhinga lokumelana nothutho olufikelelekayo kwanokuphucula impilo [www.benbikes.org](http://www.benbikes.org)

**Transportation Alternatives, New York**

Eliqela loluntu lokuhlala elisebenzela ukusetyenziswa kweebhayisekile nokuhamba ngeenyawo ngendlela engcono, kwanokuphilisana kakuhle koluntu, neenqwelomafutha ezimbalwa [www.transalt.org](http://www.transalt.org)

**Bicycle Transportation Alliance, Oregon States**

"Sivula iingqondo nemigaqo ukuze kusetyenziswe iibhayisekile" [www.bta4bikes.org](http://www.bta4bikes.org)

**World Car-free Network**

Izibonelelo zabayili bezindlu, abacwangcisi,

ootitshala/oonjingalwzi, abafundi, abasemagunyeni kwakunye nabeni abazibandakanyayo [www.worldcarfree.net](http://www.worldcarfree.net)

## Malunga nolawulo lomgangatho womoya ngokubanzi

**The Air & Waste Management Association**

(AWMA) (ese-USA)

[www.awma.org](http://www.awma.org)

**South African National Association for Clean Air**

[www.naca.org.za](http://www.naca.org.za)

[www.slb.mf.stockholm.se/e](http://www.slb.mf.stockholm.se/e)

## Indlela Ecocekileyo yokuvelisa

**National Cleaner Production Centre, South Africa**

<http://www.ncpc.co.za>

**Waste Minimisation Clubs of South Africa**

[www.ncpc.co.za/wmc/](http://www.ncpc.co.za/wmc/)

## Imibutho ephakamisa izixeko ezizinzileyo

**The CBD Energy Efficiency Initiative**

I-EEI le liphulo leCape Town Partnership, yaye liceba ukuqinisa likhawulezise ukuziswa kwamaphulo afanelekileyo okusetyenziswa kombane ngendlela eyiyo kwizakhiwo ezikumbindi weKapa. [www.capetownpartnership.co.za](http://www.capetownpartnership.co.za)

**iSouth African Cities Network**

Le yintlanganisela yezixeko zoMzantsi Afrika kwakunye namahlakani akhuthaza ukwabelana ngolwazi, amava kwakunye nezona ndlela zikumgangatho wehlabathi kwicandelo lophuhliso lweengingqi ezisezidolophini kwanolawulo lwezixeko. [www.sacities.net](http://www.sacities.net)

**ICLEI (Local Governments for Sustainability)**

Engumbutho wezizwe ngezizwe ohlanganisa oorhulumente bamakhaya, imibutho yamazwe neyemimandla oorhulumente bamakhaya ethe yazibalula ekuzinikeleni kwiinzame zophuhliso oluzinzileyo. [www.iclei.org](http://www.iclei.org)

## Imithetho yendalo esingqongileyo

Ukuze ube nokufikelela kwimithetho engezantsi apha (kwaneminye), tyelela le dilesi [www.capetown.gov.za](http://www.capetown.gov.za) ze ulandele amakhonkco akhokelela kwi-Environmental Resources Management >> Publications and Resources >> Environmental Legislation

i-Atmospheric Pollution Prevention Act (45 ka-1965)

i-Environmental Conservation Act (73 ka-1989)

iNational Environmental Management Act (107 ka-1998), nezilungiso zayo

iNational Environmental Management: Air Quality Act (39 ka-2004)

## Isicwangciso seKapa Solawulo Lomgangatho Womoya

Ukuze ube nokuzifumanela ikopi, tyelela le dilesi: [www.capetown.gov.za/health](http://www.capetown.gov.za/health) ze ulandele amakhonkco akusa >> kwi-Air Quality Management >> Air Quality Management Plan

## Inkcazelo yamagama

**Imithetho yoMzantsi Afrika inikezela iingcaciso ezicacileyo zamagama namabinzana asetyenziswa kwimithetho ejongana nokungcoliseka komoya. Fumana ke ezinye iinkcazelo ezisemthethweni:**

**“Ukungcoliseka komoya”** kubhekisa kuzo naziphi na iinguqu kwisimo somoya, nguqu ezo zidalwa ngumsi, udaka loms, uthuli (oluquka uthuthu olubhabhayo), umsi ongcilileyo, amaceba aqinileyo alo naluphi na uhlobo, imimoya, amavumba atsarhasyo, izixhobo zokukhupha amavumba.

**“Uthuli”** lubhekisa kuyo nayiphi na into ekwisimo esibonakalayo okanye esisasazekileyo ekwaziyo ukusasazwa okanye igcinwe emoyeni.

Ukukhuphela ecaleni: kubhekisa kuyo nayiphi na intshukumo yokukhutshelwa ngaphandle [kusuka] kwindawo [kwisikhundla esithile], kwindawo engacacanga [engabonakali kuyaphi] okanye kwindawo eshukumayo ethi ibangele ukungcoliseka komoya.

**“Isixhobo sokutshiswa kwamafuthai”** kuthetha nasiphi na isixhobo sokutshisela, esokubilisa, esokutshisela inkukuma, okanye nasiphi na isixhobo, esiquka itshimili:

eyenzelwe ukutshisa okanye ekwaziyo ukutshisela amachiza, umoya okanye amafutha ezithuthi abonakalayo enzelwe ukulahla nayiphi na into okanye inkukuma okanye

eyenzelwe ukufaka ichiza, umoya okanye amafutha aqingqiweyo kuyo nayiphi na inkqubo ebandakanya ubushushu.

**“Iskade”** kubhekisa nakuyiphi na imeko engaqiqiswanga yokungenelela kwintlalo ebangelwa kukungcoliseka komoya okuthi kuphazamisane:

Nempilo okanye intlalo-ntle yakhe nawuphi na umntu okanye isidalwa esiphilayo, okanye ke

nokusetyenziswa nokonwatyelwa kwempahla yakhe namphi na umnini.

**“Ivumba elingathandekiyo”** libhekisa kulo naliphi na ivumba elithi libe siskade kumntu osezinqondweni.

**“Umsi”** ubhekisa kwimimoya, amaqhekezana kwakunye neemveliso okutshiswa kwamafutha athi akhutshelwe omoyeni xa kukho nto itshiswayo okanye ibekwe ebushushwini ibe iquka udaka loms, amatyana kwakunye nezinye iingceba zamaty ezi nomsi.

**Ukuze ube nokunikezela ingxelo ngeenqwelo-mafutha zediesel ezikhupha umsi omnyama, okanye ukuze ube nokunikezela ingxelo ngayo nayiphi na imiba yokungcoliswa komoya, tsalela kule nombolo 021 590 1419**

# Iziqulatho

- 1** Umoya ocekeleyo lilungelo lethu – noxanduva lwethu
- 2-3** Yintoni ukungcoliseka komoya?  
Kubangelwa yintoni ukungcoliseka komoya?  
Iintlobo zezingcolisi-moya
- 4-5** Ukulawula umgangatho womoya eKapa
- 6-7** Ifuthe lokungcoliseka komoya empilweni
- 8** Ifuthe lokutshiswa kwamafutha kwindalo  
EsiSixeko siphendula kwiintelekelelo zeenguqu zemo Yezulu
- 9** Eznye iindlela zokubonakala kwefuthe lokungcoliseka komoya
- 10-11** uMthetho waseKapa woLawulo lokuNgcoliseka koMoya:  
Ukuba akukwazi kuyithintela, yilungise ke...
- 12-13** Ukuhlola amaqondo okungcoliseka komoya waseKapa:  
Ingaba siza kuba nolunye usuku lomoya ombi?
- 14-15** Ukutyhila umoya waseKhayelitsha: Isicwangciso-qhinga Sokumelana nokungcoliseka Komoya waseKhayelitsha
- 16-17** Uqhushululu kwezothutho
- 18-19** Umoya ococekileyo uqala ekhayeni...
- 20-21** Ukungcola okusuka kwimizi-mveliso
- 22** Musa ukuphelela ekuvutheni ngumsindo... khalaza!
- 23** Uluhlu lwezinto emaziqwalaselwe ngokukhawuleza
- 24** Ukuze ube nokufikelela kulwazi oluphangaleleyo
- 25** Iingcacizo zamagama