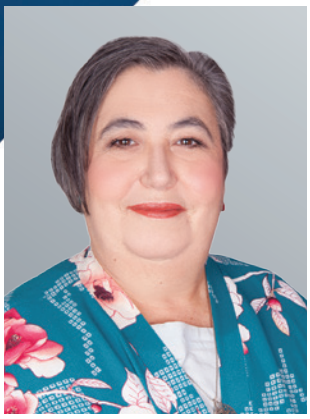

Dkt Glenda Kruss
Isikhulu Esiphezulu Sesikhungo

Isikhungo i-Centre for Science, Technology and Innovation Indicators

Isikhungo i-Centre for Science, Technology and Innovation Indicators (CeSTII) siyingxenye ye-Human Sciences Research Council (HSRC). Sisebenzela iNingizimu Afrika iminyaka engaphezu kwengama-50, i-HSRC yisikhungo esikhulukazi socwaningo e-Afrika esigxile kwezesayensi ephathelene nomphakathi nabantu. Sikhiqiza futhi sisabalalise ulwazi olunegalelo kwinqubomgomo nezinhlelo ekunciphiseni ububha, izixazululo ekunciphiseni isikhala esidalwa ukungalingani nokuqhamuka nokusha ekudaleni amathuba omsebenzi. Singaphezu kokuba umdali wocwaningo nje, izimpiko ze-HSRC nezikhungo zisebenzela ekusetshenziselweni kocwaningo inqubomgomo nomthelela. Ukusebenzisana nokubambisana kuyingxenye yobunjalo bayo benkambiso yokulungileyo futhi i-HSRC isebenza nezinhlangano zasezweni, zasesifundeni, nezomphakathi wamazwe omhlaba, ezizimele nezomphakathi.

I-CeSTII ifaka isandla ezibalweni ezisemthethweni ezilinganisa ezesayenzi, ezobuchwepheshe nokuqhamuka nokusha (STI), okuwumsebenzi ojwayele ukwenziwa izinhlangano ezibhekelele izibalo kwamanye amazwe. Eminyakeni engamashumi amabili edlule, i-CeSTII iye yakha isizinda sedatha esikhulu sedatha eqoqwa ngokulandelana esikhathini esithile ocwaningweni nasekuthuthukiseni (R&D) nokuqhamuka nokusha ukuze isetshenziswe abenzi bezinqubomgomo nabacwaningi emhlabeni jikelele. Inhlolovo yocwaningo nentuthuko yaseNingizimu Afrika izinhlolovo zokuqhamuka nokusha zebhizinisi, kanye nezinhlolovo zokufaneleka kwenqubomgomo zenziwa njalo.

Umsebenzi wethu

I-CeSTII ibheka izindlela ezintsha zokuhlola idatha yocwaningo nethuthuko nokuqhamuka nokusha kwebhizinisi, Ukusiza Ukubhekana Nezinselelo Zentuthuko mayelana nomkhakha wezempilo, indlela yezomnotho eyeseka ukuphilisana phakathi kwabantu nemvelo, imisebenzi yezomnotho ephathelene nezilwandle, ukwakha umbuso okwaziyo ukwenza, ozinikelayo nokwazi ukuphendula ekuletheni intuthuthuko Kawonke Wonke, kanye nemikhakha yezomnotho eseqhulwini yaseNingizimu Afrika. Ifaka isandla ethuluzini lokuhlaziya elinokwehlukahlukana nezimo okuningi, amasu asetshenziswa ukwenza ucwaningo nezinhlelo zezindlela ezisetshenziswa emkhakheni othile wocwaningo ukulinganisa nokuqhamuka nokusha emikhakheni yezebhizinisi engabhekwa uhulumeni nelezokulima, okwakheleke ohlelweni lwendlela esetshenziswa emkhakheni othile wocwaningo wencwadi yemihlahlandlela yokuqoqa, ukubika nokusetshenziswa kwedatha ekuqhamukeni nokusha ye-Olso ye-OECD.

Isikhungo futhi sihlose ukwenza ngcono izindlela izinhlolovo ezenziwa ngayo ngokuhlola ngamathuluzi aphathelene nekhompyutha ne-intanethi nezindlela ezintsha ezisetshenziswa emkhakheni othile ocwaningweni.

I-CeSTII inegalelo emphakathini oyisilinganiso senkomba yezesayensi, ezobuchwepheshe nokuqhamuka nokusha e-Afrika nasemhlabeni jikelele, igalelo elesekwe yilokho okuphokophelelwe kukawonke wonke nentuthuko eqhubekayo.

I-CeSTII ilandela izimiso zezinga ledatha likazwelonke nelamazwe omhlaba, ukuqinisekisa ukulingana nezindlela zokwenza ezemukelekile zamazwe omhlaba zenhlangano ehlanganisa ezomnotho nezentuthuko i-Organisation for Economic Co-operation and Development (OECD), nokuqhamuka nezinyathelo zesimo ezifanele e-Afrika. Isebenzisana kakhulu ne-Southern African Development Community nemiphakathi yocwaningo lwenqubo yokubheka nokurekhoda okubonwayo okuqoqwa njengengxenye yocwaningo nenqubomgomo kwe-Afrika ngokubanzi. Ibamba iqhaza lokuqeqesha nokwenza ngcono ukwenzela isilinganiso sesesayenzi, ezobuchwepheshe nokuqhamuka nokusha e-Afrika, ekusebenzisaneni ne-African Union Development Agency (AUDA-NEPAD), i-African Science Technology Indicators Initiative, i-African Observatory in Science and Technology and Innovation (AOSTI) ne-SADC Social and Human Development Directorate ababhekene nezinhlelo zezesayensi, ezobuchwepheshe nokuqhamuka nokusha.

Izindawo okugxilwe kuzo

Ukulinganisa ukukwazi ukwenza okuthile wucwaningo nentuthuko eNingizimu Afrika

Inhlolovo yocwaningo nentuthuko yaseNingizimu Afrika yaminyaka yonke yithuluzi elibalulekile lokwenza ngcono uhlelo lwenkomba yezesayensi, ezobuchwepheshe nokuqhamuka nokusha lokwenza inqubomgomo okwakhelwe ebufakazini ngokuhlinzeka izibalo zokwenza kahle kocwaningo nentuthuko eziphelele. Le datha ingasetshenziselwa uhlaziyo oluphathelene nezibalo lwakamuva nje nenqubo yokuhlaziya izinto zedatha nobudlelwano bazo kwezinye izinto okukhuthaza ucwaningo olunzulu ekubambeni iqhaza ekuthuthukisweni kwezomnotho eNingizimu Afrika nasezindabeni zenqubomgomo.

Ukulinganisa ukukwazi ukuqhamuka nokusha emafemini asezweni

Okuseqhulwini locwaningo okuwumnyombo ukwenza ngcono izinga nokwelula okugxilwe kukho kokulinganisa ukuqhamuka nokusha kwebhizinisi eNingizimu Afrika. Inhlolovo yokuqhamuka nokusha kwebhizinisi kuzwelonke izotholakala ngezikhawu zeminyaka emithathu, okufaka amafemu emikhakheni yezokukhiqiza, yezimayini neyokuhlinzekwa kwemisebenzi, bese manje yelulelwa emabhizinisini ezolimo ezenza inzuzo.

Inkomba yentuthuko entsha

Uhlelo locwaningo lwenkomba yezesayensi, ezobuchwepheshe nokuqhamuka nokusha lukazwelonke loMnyango Wezesayensi Nokuqhamuka Nokusha luqhakambisa ukuqhamuka nokusha kwentuthuko eqhubekayo nekawonke wonke. Izindlela ezintsha ezihlelekile zokubheka idatha emithombeni eyehlukene zikhuthaza ukusebenzisana nesikhungo i-Africa Institute of South Africa, umkhandlu owelulekayo i-National Advisory Council on Innovation (NACI), i-SADC, i-AUDA-NEPAD, i-AOSTI namazwe ase-Afrika ngokuqhakambisa izinkomba nezinyathelo okufanele ezimweni zase-Afrika nokweseka isu i-Science, Technology and Innovation Strategy for Africa 2024 nohlelo i-Sustainable Development Goals.

Ukuxhumana, ukuxhumana nabanye abantu ukuze kwabelwane ngolwazi, ukwenza ngcono nokusebenzisa idatha yezinkomba zesayensi, ezobuchwepheshe nokuqhamuka nokusha

Ukweseka amaphrojekthi athinta izindawo eziningi, ukuhlanganisa nokugqugquzela umsebenzi we-CeSTII, okufaka isu le-CeSTII lokuxhumana, ukusabalalisa, ukubonakala nokweseka elinokugxila kakhulu kokuphathelene nekhompyutha ne-intanethi. Lokhu kwelula imizamo yokuxhumanisa umqondo nezinye izinhlangano ukuze kubandakanyekane nalabo ababomthelela nabathintwa yinhlangano abafanele komthelela owesekekile, ukugxilisa lokho okuphathelene nekhompyutha ne-intanethi ukwenza ngcono ukubamba iqhaza kwinhlolovo namazinga okuphendula, kanye nokwakha izinqubo zebhizinisi zakamuva nezilula ukwenzela ukwenza ngcono idatha yomphakathi nokuyisebenzisa.

I-CeSTII yenza ucwaningo lwezesayenzi, ezobuchwepheshe nokuqhamuka nokusha lukhombisa izinselelo ezintsha eziphathelene nomphakathi nezomnotho ngaphambi, noma ngokuhambisa, nezinqubo zenqubomgomo. Lokhu kusho ukuthi uma inqubomgomo isiyenziwe, ucwaningo lukhona ukukhuthaza inkulumo nokufanele kwenziwe. Izinyathelo nezinkomba ezintsha zesayensi, ezobuchwepheshe nokuqhamuka nokusha kufanele kube ezifanele kakhulu futhi zikhombise izinselelo zethu zentuthuko e-Afrika eseningizimu. Ngaphambilini, iNingizimu Afrika iye yemukela lokho okuyincazelo kwasemazweni anezomnotho osuthuthukile, kodwa akusizi izinga noma ukuhlanganisa abantu abehlukahlukene. Isibonelo, izinhlolovo zaseYurophu ngokwejwayelekile zilinganisa ukuqhamuka nokusha emkhakheni wezokukhiqiza kuqala, kodwa esimweni sethu, iminotho yase-Afrika yakhelwe kakhulu emkhakheni wezolimo enomkhakha ongabhekiwe uhulumeni omkhulu.

Incazelo emfishane yephrojekthi yakamuva

- Ngale kwenhlolovo yocwaningo nentuthuko yaseNingizimu Afrika yaminyaka yonke, lezi zinhlolovo ezimbili zokuhlaziya isimo samanje ukuhlonza izindawo okufanele kuqalwe kuzo zohlelo zazigxile ekuqhamukeni nokusha ezinkampanini zolimo nezingaqasheliwe uhulumeni, zifaka isandla endleleni entsha yokuhlela isilinganiso ukwenzela ukulandela, ukuqapha nempumelelo yezesayenzi, ezobuchwepheshe nokuqhamuka nokusha efanele izinselelo zentuthuko zamazwe asathuthuka eningizimu lomhlaba. Umsebenzi owenziwa ngaphandle kwasehhovisi wazo zombili izinhlolovo waphela ngo-2019 owenza ukuqoqwa kwedatha entsha ukuthi ikhishwe ngo-2021. Ithimba le-CeSTII lizoqhubeka ukugxilisa le nqubo ngemibuzo emisha eqhuba uhlaziyo locwaningo nentuthuko okukhona njengamanje nedatha eqoqiwe yokuqhamuka nokusha kwebhizinisi, nokwenza idatha entsha eqoqiwe. Lokhu kuhlinzeka ukuqonda okujulile okukhuthaza izinyathelo ezintsha zesayensi, ezobuchwepheshe nokuqhamuka nokusha, nezindlela zokusebenzisa umqondo ukuqhamuka nento entsha ukubhekana nezinto ezibalulekile zenqubomgomo wezesayensi, ezobuchwepheshe nokuqhamuka nokusha.
- Kusetshenziswa isu lezesayensi, ezobuchwepheshe nokuqhamuka nokusha le-Afrika 2024, elibalula izinselelo eziyisithupha eziphathelene nentuthuko, okufaka ezempilo, i-CeSTII ibheka ukuthi ngabe ukuqhamuka nokusha nezinhlelo zocwaningo nentuthuko kwezwe kumi kanjani ukubhekana nezinto ezibalulekile eziseqhulwini.
- Mayelana ne-COVID-19, isikhungo sisebenzisane nenhlangano yezokubalwa kwabantu i-Statistics South Afrika ukuhlola izimvo zomthelela wokuvalwa kwezwe ekwenzeni kahle kwenkampani, okufaka umthelela ekwenzeni kahle kocwaningo nentuthuko nokuqhamuka nokusha. Isinyathelo esilandelayo esokwenza izindlela ezimfishane zokuhlola izinhlelo zocwaningo nentuthuko nokuqhamuka nokusha ukuqinisekisa ukuthi kusebenza ngokulindelekile eNingizimu Afrika ukulinganisa umthelela we-COVID-19 emisebenzini yabo yocwaningo nentuthuko nokuqhamuka nokusha.
- Ekulandeleni ukuhlaziya idatha yenhlolovo ngezindlela ezintsha ukubhekana nezinto eziphathelene nenqubomgomo, i-CeSTII isebenza noMnyango Wezesayensi Nokuqhamuka Nokusha kulokho okuyincazelo kwemfanelo yokutshalwa kwezimali kwalokho okuphokopholelwe kokutshalwa kwezimali kocwaningo nentuthuko nokuqhamuka nokusha eNingizimu Afrika. Umsebenzi wethu ufaka ukubuyekezwa kwedatha elandela indlela ethile nezimo ezisebenzisa ithuluzi lokuhlaziya elenzelwe ukuchaza ukusebenza kwezinkinga eziphathelene nokuthile nelibheka kakhulu izingxenye zokuthile kohlelo kunokubheka uhlelo lulonke, ukuphakamisa nokuhlola lokho okuyincazelo okungcono. Isu elisetshenziswa ukwenza uhlelo locwaningo ukucwaninga izinto ezinomthelela ekufinyeleleni enanini lokusetshenziswa kwezimali selilonke ngaphakathi emngceleni wezwe ocwaningweni nasentuthukweni kanti lokho okuphokopholelwe okuyinani selilonke lempahla ekhiqiziwe nemisebenzi ehlinzekiwe ezweni onyakeni owodwa kuzolandela, ngenhloso yokwandisa umsebenzi uze ufike kwamanye amazwe esifundeni se-SADC.

Umsebenzi wethu unomthelela wokuthatha isinqumo. Isibonelo, idatha yenhlolovo yocwaningo nentuthuko yaseNingizimu Afrika yaminyaka yonke isetshenziswa ngokuqhubekayo - phakathi kwabanye, yiBhangengodla, IKhabhinethi, umkhandlu owelulekayo i-National Advisory Council on Innovation - ngezindlela ezehlukanayo zalokho okuphokophelelwe okuhlangene nezimfanelo ezidingekayo ukuqeda umsebenzi nenhloso kusuka embikweni ophathelene nezibalo, imibiko yohlaziyo, kuya emaphepheni anolwazi olubalulekile ngokuthile, izingxoxo ngenqubomgomo nesezidlangalaleni zokudingida inqubomgomo yesifundazwe okuqonde imikhakha ezimele nekahulumeni.

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