

2022/2023

ANNUAL REPORT



science & innovation

Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA



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PART

**GENERAL
INFORMATION**

I. CONTACT INFORMATION

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2. LIST OF ABBREVIATIONS

| | |
|-----------|--|
| AAMP | Agriculture and Agro-processing Master Plan |
| ABIPP | Agricultural Bioeconomy Innovation Partnership Programme |
| AGSA | Auditor-General South Africa |
| ARC | Agricultural Research Council |
| ASSAf | Academy of Science of South Africa |
| AU | African Union |
| BBSA | Biodiversity Biobanks of South Africa |
| BRICS | Brazil, Russia, India, China and South Africa |
| CAE | Chief Audit Executive |
| CPD | continuing professional development |
| CPUT | Cape Peninsula University of Technology |
| CSIR | Council for Scientific and Industrial Research |
| DALRRD | Department of Agriculture, Land Reform and Rural Development |
| DPME | Department of Planning, Monitoring and Evaluation |
| DPSA | Department of Public Service and Administration |
| DSI | Department of Science and Innovation |
| ERRP | Economic Reconstruction and Recovery Plan |
| ERM | Enterprise Risk Management |
| ESIEID | Economic Sectors, Investment, Employment, and Infrastructure Development |
| EU | European Union |
| Exco | The DSI Executive Committee |
| GIP | Grassroots Innovation Programme |
| HCD | human capital development |
| HERA | Hydrogen Epoch of Reionization Array |
| HOA | home-owner's allowance |
| HSRC | Human Sciences Research Council |
| HySA | Hydrogen South Africa |
| IAA | Internal Audit Activity |
| IBP | Innovation Bridge Portal |
| ICAO | International Civil Aviation Organization |
| ICT | information and communication technology |
| IK Act | Protection, Promotion, Development and Management of Indigenous Knowledge Act |
| IKS | indigenous knowledge systems |
| IKSDC | Indigenous Knowledge Systems Documentation Centres |
| IMC | Interministerial Committee on STI |
| IP | intellectual property |
| IPPF | International Professional Practices Framework |
| IPR Act | Intellectual Property Rights from Publicly Financed Research and Development Act |
| LED | local economic development |
| M&E | monitoring and evaluation |
| MCS | Modified Cash Standard |
| MDA | maritime domain awareness |
| MTSF | Medium-Term Strategic Framework |
| MICT SETA | Media, Information, Communication and Technology Sector Education and Training Authority |

2. LIST OF ABBREVIATIONS (CONT.)

| | |
|---------|---|
| NACI | National Advisory Council on Innovation |
| NASA | National Aeronautics and Space Administration |
| NDP | National Development Plan |
| Nedlac | National Economic Development and Labour Council |
| NEP | National Equipment Programme |
| NEPAD | New Partnership for Africa's Development |
| NGRP | National Grains Research Programme |
| NIKMAS | National Indigenous Knowledge Management System |
| NIPMO | National Intellectual Property Management Office |
| NPDO | National Policy Data Observatory |
| NRF | National Research Foundation |
| NSFAS | National Student Financial Aid Scheme |
| NSI | national system of innovation |
| NSTIIP | National STI Data and Information Portal |
| NUMERI | Nuclear Medicine Research Infrastructure |
| OHS | occupational health and safety |
| OTT | office of technology transfer |
| PFMA | Public Finance Management Act |
| R&D | research and development |
| RDI | research, development and innovation |
| RI | research infrastructure |
| RISP | Regional Innovation Support Programme |
| S&T | science and technology |
| SAAO | South African Astronomical Observatory |
| SAASTA | South African Agency for Science and Technology Advancement |
| SACNASP | South African Council for Natural Scientific Profession |
| SADC | Southern African Development Community |
| SAEON | South African Environmental Observation Network |
| SAIF | South African Isotope Facility |
| SALGA | South African Local Government Association |
| SAMERDI | South African Mining Extraction Research and Development Innovation |
| SAMRC | South African Medical Research Council |
| SANBI | South African National Biodiversity Institute |
| SANReN | South African National Research Network |
| SANSA | South African National Space Agency |
| SAQA | South African Qualifications Authority |
| SARIR | South African Research Infrastructure Roadmap |
| SARS | South African Revenue Service |
| SAWiSA | South African Women in Science Awards |
| SDGs | Sustainable Development Goals |
| SCOPA | Standing Committee on Public Accounts |
| SCM | Supply Chain Management |
| SEOBI | SA Essential Oils Business Incubator |
| SETA | sector education and training authority |

2. LIST OF ABBREVIATIONS (CONT.)

| | |
|--------|---|
| SETI | science, engineering, technology and innovation |
| SKA | Square Kilometre Array |
| SMME | small, medium and/or micro-enterprise |
| STI | science, technology and innovation |
| THENSA | Technological Higher Education Network South Africa |
| TIA | Technology Innovation Agency |
| TISC | Technology and Innovation Centre |
| TVET | technical and vocational education and training college |
| UKZN | University of KwaZulu-Natal |
| UoT | university of technology |
| WHO | World Health Organization |
| WIPO | World Intellectual Property Organization |



3. FOREWORD BY THE MINISTER



Dr BE Nzimande, MP
Minister of Higher Education,
Science and Innovation

In an age defined by massive transformations fuelled by rapid technological shifts, rising climate and biodiversity pressures, deep global economic changes and the spectre of deepening social inequalities, the development and optimal employment of science, technology and innovation is indispensable for promoting an inclusive, more equal and sustainable society.

In the period under review, the Department of Science and Innovation (DSI) continued to make targeted investments in key sectors that we believe are critical to support South Africa's Economic Reconstruction and Recovery Plan and enhance the role of science, technology and innovation in improving the quality of life of our people.

During this period, the South African Mining Extraction Research, Development and Innovation research centre initiative was launched, with contracts issued for the establishment of centres at several universities. The centres are intended to develop human capabilities and a new generation of researchers, with the first cohort of students already being supported.

Through our Agriculture Bioeconomy Innovation Partnership Programme we will continue our efforts to revitalise agriculture and agribusiness. These include the development and diffusion of new technologies, and support for agroprocessing initiatives and technology services for farmers. In partnership with the private sector, the Department funded eight multistakeholder programmes in the agricultural sector. Approximately R73,4 million has been leveraged from the private sector, which includes funding from the grain and oilseed industries.

As part of our contribution to reducing carbon emissions, in January 2023, we successfully demonstrated carbon capture and utilisation technology at a cement plant in Limpopo. This technology captures carbon dioxide from flue gas and then converts it into a fertilizer salt using ammonia.

The Department will continue to invest in technologies and partnerships that are aimed at addressing food security, mitigating the impact of climate change, reducing poverty and inequality and boosting job creation with specific focus on marginalized sections of society. We will harness all the potential of our existing and international research partnerships – both on the African continent and beyond – to provide more resources in tackling these challenges.

As part of our efforts to unlock new energy sources and facilitate a just transition from a carbon-intensive to a carbon-neutral economy, our Department launched the Hydrogen Society Roadmap in February 2022. The Hydrogen Valley Programme was registered with Infrastructure South Africa under Strategic Integrated Projects in December 2022.

The South African National Space Agency (SANSA), an entity of the Department, continues to develop South Africa's space capabilities. The Department provided financial support to SANSA for the construction of a 24/7 operational space weather centre in Hermanus, which I launched in November last year. To date, SANSA has trained a new cohort of young, black space weather forecasters who will provide services to various clients, including the aviation sector. The benefits of a South African space weather programme include, inter alia, having better modelling tools for predicting impact of space weather impacts on energy and telecommunications grids and satellite services such as global positioning systems (GPS), together with the secondary and tertiary functions it supports in our economy and society.

The DSI, in partnership with the Council for Scientific and Industrial Research, Statistics South Africa, the South African Revenue Service and the Department of Planning, Monitoring and Evaluation, established the National Policy Data Observatory (NPDO), which used data to provide scientific analysis that informed government-wide economic recovery interventions during Covid-19 and will continue to do so.

The NPDO provides South Africa with future capability to track the socio-economic and health impacts of pandemics to support rapid and effective policy responses and support decision-making to protect our citizens.

This capability was vividly demonstrated with the enterprising work of the NPDO in modelling work on the impact of floods in KwaZulu-Natal and the energy crisis in the country.

Among other progress made in institutionalising the Indigenous Knowledge-Based Bioinnovation Programme, high-level funding has been obtained to improve research facilities at the Universities of KwaZulu-Natal, the Free State and Pretoria.

Under the BioProducts Advancement Network South Africa, the DSI is piloting an indigenous product programme fund in collaboration with the Technology Innovation Agency. Seven projects have received funds totalling R36 million for high-end product development, agri-businesses, and manufacturing natural products.

A world-class African natural medicines laboratory at the University of the Free State has been constructed and equipped, and is being used to do research into HIV/Aids, TB, long Covid and diabetes. A second laboratory is planned for the University of KwaZulu-Natal.

In the period under review, the Department continued supporting the development of a local mRNA vaccine technology transfer hub by a consortium made up of the DSI, the Medicines Patent Pool, Biovac, Afrigen Biologics and Vaccines, the South African Medical Research Council, a network of universities and the Africa Centres for Disease Control and Prevention. The purpose of the hub is to diversify vaccine manufacturing and accelerate vaccine production in Africa.

Phase I clinical trials on the Covid-19 vaccine candidate developed by Afrigen are expected to be conducted in the 2023/24 financial year.

To ensure a viable local vaccine manufacturing industry and to address concerns about security of supply on the continent, we are also in the process of finalising a vaccine development, innovation and manufacturing strategy for South Africa.

In February this year, I launched the 3D Construction Printing for Sustainable Human Settlements Project. This technology aims to create smart, sustainable and green human settlements. Through this, we also aim to help address the national housing backlog. This project has the support of the KwaZulu-Natal Department of Human Settlements.

The Department of Science and Innovation will continue to strengthen its human capital development interventions, increase investments in science infrastructure and, together with our various local and international partners, continue to enhance of continent's scientific capabilities through strategic projects such as the Square Kilometre Array radio telescope.

Astronomy tourism in South Africa is growing, especially in Sutherland in the Northern Cape, which is the site of the Southern African Large Telescope. To capitalise on this, we are in the process on engaging important stakeholders in the sector with a view to developing and implementing an astro-tourism strategy for our country.

As the Minister of Higher Education, Science and Innovation, it gives me great pleasure to present the Department's Annual Report for the 2022/23 financial year.

I wish to thank the Deputy Minister, the Director-General and the staff of the Department for the continued support and hard work that has enabled us to achieve all we have in the period under review.



Dr BE Nzimande, MP

Minister of Higher Education, Science and Innovation

ISANDULELO-MAZWI KANGQONGQOSHE

Enkathini enezinguquko ezinkulu ezibangelwa ukushintsha ngokushesha kwezobuchwepheshe, ukuqina kwezincindezi zesimo sezulu nezezinhlobo ngezinhlobo zezinto eziphilayo, ushintsho oluya lujula kwezomnotho emhlabeni wonke nokungalingani kwezenhlalo okuya kuba nzima, kubalulekile ukuthuthukiswa nokusetshenziswa kwesayensi ngendlela efanele, ubuchwepheshe nokusungula izinto ukuze sakhe umphakathi obandakanya bonke abantu, umphakathi onamathuba alinganayo, uphakathi ozingile.

Phakathi nenkathi esiyibuyekayo, uMnyango Wezesayensi Nokusungula Izinto (i-DSI) uqhubekile nokutshala izimali ngezinhloso ezithile emikhakheni esemqoka esikholelwa ukuthi ibalulekile ekwesekeni uHlelo Lokuvuselela Umnotho WaseNingizimu Afrika kanye nokuthuthukisa indima yesayensi, eyozobuchwepheshe neyokusungula izinto ezintsha ekufukuleni izinga lezimpilo zabantu bakithi.

Phakathi nale nkathi, kwethulwe uhlelo lwesikhungo socwaningo lwe-South African Mining Extraction Research, Development and Innovation, kwakhishwa nezinkontileka zokwakhiwa kwalezi zikhungo emanyuvesi amaningana. Lezi zikhungo zihloselwe ukuthuthukisa amakhono abantu kanye nesizukulwane esisha sabacwaningi, futhi selikhona iqembu lokuqala labafundi eselixhaswa kakade.

Ngohlelo lwethu lwe-Agriculture Bioeconomy Innovation Partnership sizoqhubeka nemizamo yethu yokuvuselela ezolimo nebhizinisi lezolimo. Lokhu kubandakanya ukuthuthukiswa nokusatshaliswa kobuchwepheshe obusha, nokwesekwa kwezinhlelo zokugaya imikhiqizo yezolimo kanye nezinsizakalo zabalimi kwezobuchwepheshe. Ngokubambisana nezinkampani ezizimele, uMnyango uxhase ngezimali izinhlelo eziyisishiyagalombili zababambiqhaza emkhakheni wezolimo. Ilinganiselwa ezigidini ezingu-R73,4 imali eseyitholwe ezinkampanini ezizimele, okuhlanganisa noxhaso lwezimali ezimbonini zokusanhlamvu nezimbewu.

Njengengxenywe yegalelo lethu ekunciphiseni umusi ongcilile ophumela emoyeni, ngoJanuwari 2023, sabonisa ngempumelelo ubuchwepheshe bokudonswa nokusetshenziswa kwekhabhoni embonini kasimende eLimpopo. Lobu buchwepheshe budonsa umoya ongcilile wamagesi aphuma ezimbonini eziphehla amandla bese buwuguqula lowo moya ube usawoti kamanyolo kusetshenziswa i-ammonia.

UMnyango uzoqhubeka nokutshala izimali kwezobuchwepheshe nakwimifelandawonye okuhloswe ngayo ukuqisekisa ukutholakala kokudla, ukunciphisa

umthelela wokuguquka kwesimo sezulu, ukunciphisa ubumpofu nokungalingani kanye nokugququzela ukwakhiwa kwamathuba emisebenzi ngokugxila kakhulu ezingxenyeni ezinganakiwe zomphakathi. Sizosebenzisa wonke amandla esinawo nabalingani bethu kwezocwaningo esivele sinabo nabasemazweni ngamazwe – ezwekazine lase-Afrika nangale kwalo – ukuze sihlizzeke ngezinsiza ezengeziwe zokulwa nalezi zinsalelo.

Emizamweni yethu yokuvula imithombo emisha yamandla nofaka umfutho woguquko kusuka emnothweni odla kakhulu ikhabhoni siguqukele emnothweni ongayisebenzisi ikhabhoni, uMnyango wethu wethule i-Hydrogen Society Roadmap ngoFebhuwari 2022. Lolu hlelo lwe-Hydrogen Valley lwabhaliswa ngoDisemba 2022 njengophiko lweNgqalasisiza YaseNingizimu Afrika ngaphansi kohlelo lwaMaprojekthi Obuhlakani Adidiyelwe.

I-South African National Space Agency (i-SANSA), okuwuphiko loMnyango, iyaqhubeka nokuthuthukisa amakhono eNingizimu Afrika kwezasesemkhathini. UMnyango uxhase i-SANSA ngezimali ukuze kwakhiwe isikhungo sesimo sezulu esisebenza ubusuku nemini eHermanus, engasethula ngoNovemba nyakenye. Kuze kube manje, i-SANSA isiqeqeshe iqeqebana elisha lababikezeli bezulu abangabantu abasebasha abamnyama, abazosiza amakhasimende ahlukehlukehle, abandakanya nomkhakha wezezindiza. Izinzuzo zohlelo lwesimo sezulu eNingizimu Afrika zihlanganisa, phakathi kokunye, ukuba namathuluzi angcono okubikezela umphumela womthelela wesimo sezulu kwezamandla nasebuxhakaxhakheni bezokuxhumana nasemisebenzini yamasathelayithi efana nezinhlelo zenkombandlela (global positioning systems (GPS)), kanye nemisebenzi esiza kuyo emnothweni nasemphakathini wethu.

I-DSI, ngokubambisana noMkhandlu WaseNingizimu Afrika Wezocwaningo Lwesayensi Nezimboni, Nezibalo, uPhiko Lwezentela ZaseNingizimu Afrika noMnyango Wezokuhlala, Ukuqapha Nokuhlola, basungule i-National Policy Data Observatory (NPDO), eyasebenzisa ulwazi locwaningo ekuhlaziyeni ngokwesayensi, okwasiza

uhulumeni ezinhlelweni zokuvuselela umnotho ngesikhathi se-Covid-19 futhi izoqhubeka nokuhlinzeka ngalolu lwazi.

I-NPDO inikeza iNingizimu Afrika ubuhlakani besikhathi esizayo bokulandelela imithelela kwezenhlalo-mnotho nasezimpilweni zabantu ebangelwa yizifo eziwubhubhane ukuze kwesekwe inqubomgomo yokusabela ngendlela esheshayo nephumelelayo kanye nokwesekwa kwezinqumo ukuze kuvikelwe izakhamuzi zethu.

Ezinyangeni zamuva nje, lobu buhlakani buboniswe ngokucacile ngomsebenzi oncomekayo we-NPDO wokubonisa umthelela wezikhukhula KwaZulu-Natal nowezinkinga zamandla ezweni.

Phakathi kwenqubekelaphambili eseyenziwe ekusungulweni koHlelo Lokusungula Izinto Ngokusekelwe Olwazini Lwezendabuko, kutholwe uxhaso lwezimali olusezingeni eliphezulu ukuze kuthuthukiswe izikhungo zocwaningo eNyuvesi yaKwaZulu-Natali, eyaseFreyistata neyasePitoli.

Ngaphansi kwe-BioProducts Advancement Network South Africa, i-DSI yenza isikhwama sohlelo lwemikhiqizo yendabuko ngokubambisana noPhiko Lokusungula Ubuchwepheshe. Amaphrojekthi ayisikhombisa athole imali efinyelela ezigidini ezingu-R36 zokuthuthukisa imikhiqizo esezingeni eliphezulu, amabhizinisi ezolimo kanye nokwenza imikhiqizo yezinto zemvelo.

Ilabhorethri yemithi yemvelo yase-Afrika esezingeni lomhlaba eNyuvesi yaseFreyistata yakhiwe futhi yafakelwa izinto ezidingekayo, futhi isetshenziselwa ukwenza ucwaningo nge-HIV/Aids, i-TB, i-Covid nangesifo sikashukela. Ilabhorethri yesibili ihlelelwe iNyuvesi YaKwaZulu-Natal.

Phakathi nale nkathi esiyibuyekazayo, uMnyango uqhubekile nokweseka ukuthuthukiswa kwesikhungo sakuleli sokudlulisela ubuchwepheshe bomuthi wokugoma we-mRNA, okwenziwa ngumfelandawonye owakhiwe yi-DSI, i-Medicines Patent Pool, i-Biovac, i-Afrigen Biologics neVaccines, uMkhandluWezocwaningo Lwezokwelapha ENingizimu Afrika, amanyuvesi kanye ne-Africa Centers for Disease Control and Prevention. Inhloso yalesi sikhungo wokusabalalisa ukukhiqizwa kwemithi yokugoma nokusheshisa ukukhiqizwa kwemithi yokugoma e-Afrika.

Ucwaningo lwezokwelapha lweSigaba I lomgomo we-Covid-19 owenziwa yi-Afrigen kulindeleke ukuba lwenziwe ngonyaka wezimali ka-2023/24.

Ukuze kuqinisekise ukusebenza kahle kwemboni yakuleli ekhiqiza imithi nokuba kubhekwane nokukhathazeka mayelana nokuvikeleka kokuhlinzeka kwemithi ezwenikazini, sisohlelweni lokuphothula amasu okwenziwa, ukusungulwa nokukhiqizwa komuthi womgomo eNingizimu Afrika.

NgoFebhuwari walo nyaka, ngethule i-3D Construction Printing for Sustainable Human Settlements Project. Ngalobu buchwepheshe kuhloswe ukuba kwakhiwe izindawo zokuhlala ezinobuhlakani, ezisisimeme nezonga amandla. Ngalokhu, sihlose nokusiza ekubhekaneni nokusilela emuva ohlelweni lwezindlu kuzwelonke. Lolu hlelo lusekelwa uMnyango Wezokuhlaliswa Kwabantu KwaZulu-Natal.

UMnyango Wezesayensi Nokusungula Izinto uzoqhubeka nokuqinisa igalelo ekuthuthukisweni kolwazi namakhono abasebenzi, wandise ukutshalwa kwezimali kwingqalasizinda yesayensi futhi, ngokubambisana nozakwethu abahlukahlukene basekhaya nabamazwe ngamazwe, sizoqhubeka nokuthuthukisa amakhono esayensi yezwekazi ngemisebenzi yamasu efana neyesibonakude i-Square Kilometre Array.

Ziyanda izivakashi ezibuka izinkanyezi eNingizimu Afrika, ikakhulukazi eSutherland eNyakatho Kapa, okuyindawo yeSibonakude Esikhulukazi ENingizimu Ye-Afrika. Ukuze sizuze kulokhu, sisohlelweni lokubandakanya ababambiqhaza abasemqoka kulo mkhakha ngenhloso yokuthuthukisa nokusebenzisa isu lezivakashi ezizobuka izinkanyezi ezweni lethu.

NjengoNgqongqoshe Wezemfundo Ephakeme, Isayensi Nokusungula Izinto, kungijabulisa kakhulu ukwethula uMbiko Wonyaka WoMnyango wonyaka wezimali ka-2022/23.

Ngifisa ukubonga iPhini LikaNgqongqoshe, uMqondisi-Jikelele kanye nabasebenzi boMnyango ngokuqhubeka nokuseseka nokusebenza ngokuzikhandla okusenze sakwazi ukufeza konke esikufezile kule nkathi esiyibuyekazayo.



Dkt BE Nzimande, MP

Ungqongqoshe Wezemfundo Ephakeme, Isayensi Nokusungula Izinto

SELELEKELA KA LETONA

Mehlang ena e hlalose ke diphetoho tse kgolo tse susumetswang ke diphetoho tse potlakileng tsa theknoloji, dikgatello tse ntseng di eketseha tsa maemo a lehodimo le mefuta-futa ya dihlophileng, diphetoho tse tebileng tsa moruo wa lefatshe le maikutlo a ntseng a eketseha a ho se lekane setjhabeng, ntlafatso le kgiro e nepahetseng ya saense, theknoloji le boiqapelo di bohlokwa haholo bakeng sa ho kgothaletsa setjhaba se kenyeletsang bohle, se lekanang le se tswelang pele.

Nakong ena e tlasa tlhahlobo, Lefapha la Saense le Boqapi (DSI) le tswelapele ho etsa matsete a rerilweng makaleng a bohlokwa ao re dumelang hore a bohlokwa ho tshahetsa Leano la Kahobotjha le Tsosoloso ya Moruo wa Afrika Borwa le ho matlafatsa seabo sa saense, theknoloji le boqapi ho ntlafatseng boleng ba bophelo ba batho ba habo rona.

Nakong ena, bohato ba setsi sa dipatlisiso tsa Dipatlisiso tsa Ho Ntshwa ha Merafo ya Afrika Borwa, Ntlafatso le Boqapi bo ile ba thakgolwa, ka dikonteraka tse fanwang bakeng sa ho theha ditsi diyuivesithing tse mmalwa. Ditsi di reretswe ho ntlafatsa bokgoni ba batho le moloko o motjha wa bafuputsi, mme sehlopha sa pele sa baithuti se se ntse se tshahetswa.

Ka Lenaneo la rona la Selekane sa Boqapi ba Moruo wa Dihlahiswa le Ditshebeletso tsa Tlhaho tsa Temo re tla tswela pele ka matsapa a rona a ho tsosolosa temo le kgebo ya temo. Tsena di kenyeletsa ntlafatso le kabo ya ditheknoloji tse ntjha, le tshahetsa bakeng sa matsapa a ho lokisa temo le ditshebeletso tsa theknoloji bakeng sa dihwai. Ka kopanelo le makala a poraefete, Lekala le ile la tshahetsa mananeo a robedi a nang le seabo se fapaneng lekaleng la temo ka ditjhelete. Ho na le tjhelete e kaalo ka dimilione tse R73,4 ho tswa lekaleng la poraefete, le kenyeletsang ditjhelete tse tswang di-indastering tsa dijo-thollo le ya peo ya oli.

Jwalo ka karolo ya nyehelo ya rona ho fokotsa tlhahiso ya khabone, ka Pherekong 2023, re ile ra bontsha ka katleho theknoloji ya ho hapa le ho sebedisa theknoloji femeng ya samente Limpopo. Theknoloji ena e tshwara carbon dioxide kgaseng ya flue ebe e e fetola letswai la manyolo ka ammonia. Lefapha le tla tswela pele ho tsetela ho ditheknoloji le ditshebedisano-mmoho tse reretswang ho sebetsana le polokeho ya dijo, ho fokotsa tshusumetso ya phetoho ya maemo a lehodimo, ho fokotsa

bofuma le ho se lekane le ho matlafatsa tlhahiso ya mesebetsi ho tsepamisitswe maikutlo a kgethehileng dikarolong tsa setjhaba se sotlehileng. Re tla sebedisa bokgoni bohle ba bolekaneng ba rona ba dipatlisiso tse seng di ntse di le teng le ba matjhaba – kahara kontinente ya Afrika le ka nqane ho yona – ho fana ka mehloodi e mengata ho sebetsana le diphephetso tse.

E le karolo ya boikitlaetso ba rona ba ho notlolla mehloodi e metjha ya matla le ho tsamaisa phetoho e nepahetseng ho tloha moruong wa khabone ho ya moruong o se nang lehlakore la khabone, Lefapha la rona le ile la thakgola Morero wa Mokgatlo wa Hydrogen ka Hlakola 2022. Lenaneo la Hydrogen Valley le ngodisitswe le Infrastructure South Africa tlasa Merero e Hlophisitsweng e Kopanetsweng ka Tshitwe 2022.

Mokgatlo wa Naha wa Sepakapaka wa Afrika Borwa (SANSA), e leng mokgatlo wa Lefapha, o ntse o tswela pele ho ntlafatsa bokgoni ba sebaka sa Afrika Borwa. Lefapha le fane ka tshahetsa ya ditjhelete ho SANSA bakeng sa kaho ya setsi sa boemo ba lehodimo se sebetsang sebakeng sa nako ya 24/7 Hermanus, seo ke se thakgotseng ka Pudungwana ngwahola. Ho fihlela jwale, SANSA e kwetlisitse sehlopha se setjha sa balepi ba boemo ba lehodimo ba batho ba batjha, ba batsho ba tla fana ka ditshebeletso ho bareki ba fapaneng, ho kenyeletswa le lekala la difofane. Melemo ya lenaneo la boemo ba lehodimo ba sebaka sa Afrika Borwa e kenyeletsa, hara tse ding, ho ba le disebediswa tse betere tsa tshahetsa bakeng sa ho bolela esale pele phello ya boemo ba lehodimo sebakeng sa motlakase le dikgokahano tsa mehala le ditshebeletso tsa sathelaete jwalo ka ditsamaiso tsa boemo ba lefatshe (GPS), hammoho le mesebetsi ya tsona e mahareng le e phahameng moruong wa rona le setjhabeng.

DSI, ka tshahetsano mmoho le Lekgotla la Dipatlisiso tsa Saense le Diindasteri, la Dipalopalo la Afrika Borwa, Tshahetsa ya Lekgetho ya Afrika Borwa le Lefapha la Merero, Bodisa le Tshahetsa, e thehile Lekgotla la Naha la Tlhokomelo ya Boitsebiso ba Leano la Naha (NPDO), le ileng la sebedisa datha ho fana ka tshahetsa ya saense e susumeditseng mehato ya mmuso ya ntlafatso ya moruo nakong ya Covid-19 mme le tswela pele ho etsa jwalo.

NPDO e fa Afrika Borwa bokgoni ba kamoso ba ho latedisa diphelelo tsa moruo wa phedisano le bophelo bo botle ba mafu a sewa ho tshahetsa dikarabelo tse potlakileng le tse sebetsang tsa maano le ho tshahetsa ho nka diqeto ho sireletsa baahi ba rona.

Dikgweding tse sa tswa feta, bokgoni bona bo ile ba bontshwa ka ho hlaka ka mesebetsi o matla wa NPDO

wa ho etsa mosebetsi phelong ya dikgohola KwaZulu-Natala le bothata ba motlakase kahara naha.

Hara kgatelopele e nngwe e entsweng mabapi le ho theha Lenaneo la Boitsebiso ba Maemo a Setjhaba le Thehilweng ka Tsebo ya Setjhaba, ho fumanwe ditjhelete tsa boemo bo hodimo bakeng sa ho ntlafatsa disebediswa tsa dipatlisiso Diyunivesithing tsa KwaZulu-Natala, Foreisetata le Pretoria.

Tlase Kgokahano ya Tswelo-pele ya Dihlahiswa tsa Tlhaho Afrika Borwa, DSI e lekola letlole la lenaneo la dihlahiswa tsa matswallwa ka tsebedisano-mmoho le Setsi sa Boqapi ba Theknoloji.

Laboratori ya maemo a hodimo ya meriana ya tlhaho ya Afrika e hauwe le ho hlomellwa Yunivesithing ya Foreisetata, mme e sebedisetswa ho etsa dipatlisiso ka HIV/Aids, TB, Covid ya nako e telele le lefu la tsekere. Ho na le morero wa ho etsa laboratori ya bobedi bakeng sa Yunivesithi ya KwaZulu-Natala.

Nakong ena ya tlhahlobo, Lefapha le ile la tswela pele ho tshhetsa ntlafatso ya setsi sa lehae sa phetisetso ya theknoloji ya kentelo ya mRNA ke mekgatlo e ikopantseng e entsweng ke DSI, Medicines Patent Pool, Biovac, Afrigen Biologics and Vaccines, Lekgotla la Dipatlisiso tsa Bongaka la Afrika Borwa, kgokahano ya diyunivesithi le Ditsi tsa Afrika tsa Taolo le Thibelo ya Mafu. Sepheo sa setsi sena ke ho fapanyetsana tlhahiso ya kentelo le ho potlakisa tlhahiso ya kentelo Afrika.

Diteko tsa bongaka tsa Mokgahlelo wa Pele ho mokgethwa wa kentelo ya Covid-19 tse entsweng ke Afrigen di lebelletswe ho etswa selemong sa ditjhelete sa 2023/24.

Ho netefatsa hore ho na le indasteri e sebetsang ya tlhahiso ya kentelo ya lehae le ho sebetsana le dingongoreho tse mabapi le tshireletseho ya phepele kahara kontinente, re boetse re mothating wa ho phethela leano la ntlafatso ya kentelo, boqapi le leano la tlhahiso bakeng sa Afrika Borwa.

Ka Hlakola monongwaha, ke ile ka thakgola Morero wa Kaho ya 3D wa Kgatiso ya Bodulo ba Batho ba Moshwelella. Sepheo sa theknoloji ena ke ho theha dibaka tsa bodulo tsa batho tse tswetseng pele, tse tsitsitseng le tsa tlhaho. Ka sena, re boetse re ikemiseditse ho thusa ho rarolla tshallomorao ya naha ya matlo. Morero ona o tshheditswe ke Lefapha la Bodulo ba Batho la KwaZulu-Natala.

Lefapha la Saense le Boqapi le tla tswela pele ho matlafatsa ho kena dipakeng ha lona ha ntlafatso ya moruo wa batho, ho eketsa matsete ho meralo ya motheo ya mahlale mme, mmoho le balekane ba rona ba fapaneng ba lehae le ba matjhaba, ho tswela pele ho matlafatsa bokgoni ba mahlale a kontinente ka diporojeke tsa lewa tse kang sebonela-hole sa seya-le-moya sa Square Kilometre Array.

Bohahlaudi ba bolepi ba dinaledi Afrika Borwa bo ntse bo hola, haholoholo Sutherland e Kapa Leboya, e leng sebaka sa Sebonela-hole se Sehlo sa Afrika Borwa. Ho sebedisa sena hantle, re mothating wa ho buisana le bankakarolo ba bohlokwa lekaleng lena ka sepheo sa ho hlahisa le ho kenya tshibetsong leano la bohahlaudi ba dinaledi bakeng sa naha ya rona.

Ke le Letona la Thuto e Phahameng, Saense le Boqapi, ho nthabisa haholo ho hlahisa Tlaleho ya Selemo ya Lefapha ya selemo sa ditjhelete sa 2022/23.

Ke rata ho leboha Motlatsi wa Letona, Motsamaisi-Kakaretso le basebetsi ba Lekala ka tshebetso e tswelang pele le mosebetsi o boima o re thusitseng ho fihlella tsohle tseo re nang le tsona nakong ena ya tlhahlobo.



Ngaka BE Nzimande, MP

Letona la Thuto e Phahameng, Saense le Boqapi

4. REPORT OF THE ACCOUNTING OFFICER



Dr MP Mjwara
Accounting Officer

The Department of Science and Innovation (DSI) continued to implement its mandate in the year under review, working hard to enable the achievement of national priorities through science, technology and innovation (STI).

Significant progress was made in its support for the Economic Reconstruction and Recovery Plan, which the Department will continue by scaling up the implementation of the Innovation Fund, an investment-support intervention aimed at the early development and expansion stages of technology-based South African firms.

4.1 INTRODUCTION

The Department is implementing the 2019 White Paper on Science, Technology and Innovation through the STI Decadal Plan, exploiting new industries based on new sources of growth, e.g. the circular and digital economies, indigenous knowledge-based bioinnovation and 4th industrial revolution technologies.

Its successes in the year under review are set out in detail in the body of the Annual Report, but a brief overview of the Department's operations and significant achievements are set out below.

4.2 OVERVIEW OF THE OPERATIONS OF THE DEPARTMENT

To ensure the efficient and effective functioning of the Department, there are various governance structures in place. These structures provided the necessary oversight in the year under review.

The Department has an Audit Committee and an Enterprise Risk Management Committee for a combined assurance approach. The Audit Committee provided the governance oversight necessary to mitigate against operational deficiencies and optimised overall assurance. The Enterprise Risk Management Committee provided guidance on risk mitigations strategies and monitored their implementation.

The Department reports regularly to the Portfolio Committee on Higher Education, Science and Innovation. In the year under review, the annual performance plans and annual reports of the Department and its entities were presented, as well as quarterly budget and

performance reports, and reports on some of the DSI's projects.

4.3 SIGNIFICANT EVENTS AND MAJOR PROJECTS THAT TOOK PLACE DURING THE YEAR

Below are some of the significant events that took place in the 2022/23 financial year. More detail is given in the performance overview sections for specific Programmes.

Knowledge utilisation for economic development

To support the reduction of the country's carbon intensity in line with international trade requirements, as well as to help make South African goods and services globally competitive, the Department partnered with EPCM, an SMME, and cement producer Pretoria Portland Cement (PPC) to launch the CoalCO₂-X demonstration technology at the PPC Cement factory in Dwaalboom, Limpopo, on 25 January 2023.

The technology involves capturing carbon dioxide from flue gas emerging from a coal-fired boiler and its conversion into a fertilizer salt. The launch was attended by policy makers, academics, flue gas providers and potential investors.

The flue gas provider for the CoalCO₂-X project is Kelvin Power Station, which will use CoalCO₂-X technology to reduce emissions from their coal-fired power station to meet their commitments to the Department of Forestry, Fisheries and Environment and help to reduce the country's carbon tax. The DSI has held meetings with EPCM and Kelvin Power Station

to initiate the processes for putting the CoalCO₂-X demonstration system on the ground at the power station during the 2023/24 financial year.

Responsive, coordinated and efficient national system of innovation

The DSI secured a South African pavilion at the International Hydrogen and Fuel Cell Expo (Fuel Cell Expo) held in Tokyo, Japan, from 15 to 17 March 2023. The Fuel Cell Expo is a leading international conference, with exhibitions showcasing various hydrogen and fuel cell-related technologies, components, materials, devices and complete fuel cells. The Expo covers hydrogen and fuel cell research, development and innovation (RDI) and manufacturing, with the focus on technologies for the production, transportation, storage and use of hydrogen.

In addition to Hydrogen South Africa (HySA), the DSI invited South African companies (big companies and SMMEs) and the ports to join the exhibitors in the South African pavilion. The eight companies that participated used the opportunity to explore strategic partnerships in Japan, with the aim of enabling the incorporation of locally developed intellectual property into the supply chains of global original equipment manufacturers. The participation of the DSI-supported HySA centres of competence reinforced South Africa's claim to be well positioned to manufacture fuel cell components from locally developed intellectual property. Industrial players and representatives of special economic zones explored partnerships focused on the export of green hydrogen and its derivatives to the Japanese market.

Human capabilities and skills for the economy and for development

In support of human capabilities and skills development for the economy, the DSI has secured additional funding of R2 534 437,50 from the Energy and Water Sector Education and Training Authority for training under the energy storage skills programme. This will allow more unemployed university of technology and technical and vocational education and training college graduates to be recruited for the 12-month internship programme at the energy storage pilot facilities. It is expected that participation in the programme will enhance their employment opportunities. The University of Limpopo (Nelspruit campus) focus is on the development of lithium-ion battery precursor materials, the University of the Western Cape focuses on battery assembly and testing, and Nelson Mandela University focuses on battery testing, accreditation and codes and standards.

The DSI, through the Agricultural Bioeconomy Innovation Partnership Programme (ABIPP), is supporting interventions for diagnostics, surveillance, monitoring and early warning systems for plant and animal health and food safety. In October 2022, the DSI and the Department of Agriculture, Land Reform and Rural

Development (DALRRD) supported the launch of the National Biosecurity Hub by both Ministers. The hub aims to provide sanitary and phytosanitary capacity building and information, support research services to clients in the public and private sectors, and strengthen biosecurity to meet international trade requirements. In terms of modernising agriculture, ABIPP funded the development of a digital platform at Innovation Africa @UP to support the piloting of digital decision-support systems for biosecurity for farmers and industry. This hub is in support of the Agriculture and Agro-processing Master Plan (AAMP), which is led by DALRRD. The DSI and DALRRD further concluded a collaboration agreement that supports the implementation and co-funding of priorities (including biosecurity) in the STI Decadal Plan and the AAMP.

National Intellectual Property Management Office

During the 2022/23 review period, the National Intellectual Property Management Office (NIPMO) continued to provide financial and non-financial support to the offices of technology transfer (OTTs). It approved a total of R18 360 305,90 for five new OTT Support Fund agreements over a three-year funding cycle. The funding will support new and existing positions in OTTs, as well as activities such as technology marketing and other technology transfer activities.

In addition to the OTT Support Fund, NIPMO managed the Intellectual Property (IP) Fund, as mandated under the Intellectual Property Rights from Publicly Financed Research and Development Act. The NIPMO IP Fund provides financial support for a range of activities to secure IP rights generated following or associated directly with a product, process or service that resulted from publicly financed research and development. During the reporting period, NIPMO refunded 50% (R21 874 384,69) of all protection and maintenance costs for eligible IP rights following submissions to NIPMO by 21 higher education institutions and science councils.

NIPMO continued to provide training/skills development to personnel at OTTs, SMMEs, researchers and students. Together with its partners, the Companies and Intellectual Property Commission, the World Intellectual Property Organization and the Technology Innovation Agency, NIPMO upskilled a large number of trainees in IP and technology transfer awareness, and provided formal training sessions, including a Technology and Innovation Support Centres workshop. The move to online platforms originally necessitated by Covid-19 has been a particular success and NIPMO continued to provide training sessions in a hybrid format. This allowed NIPMO to exceed its target for the number of trainees, with 310 individuals upskilled instead of the planned 275.

A highlight during the financial year was a series of three knowledge exchange workshops in August

2022 on international best practice for IP rights from publicly funded research and development (R&D). The workshops were given by Innovate UK KTN in collaboration with NIPMO and the World Bank Group. NIPMO's counterparts in the UK, Canada, Brazil and Singapore shared their knowledge and experience of priority areas identified by NIPMO, namely, IP ownership (workshop 1), the commercialisation of IP (workshop 2) and IP rights enforcement, incentives, benefit sharing and open science (workshop 3).

The findings of these workshops have been compiled in a report and are intended to support NIPMO, where relevant, in the revision of the Intellectual Property Rights from Publicly Financed Research and Development Act. Given their particular socio-economic and legislative landscapes, different countries deal with IP from publicly funded R&D in different ways. The various approaches to IP commercialisation were of particular interest, as was the similarity of the issues grappled with in South Africa and in countries with much more experience than South Africa.

Innovation priorities and instruments

During the 2022/23 review period, the DSI continued to provide support for technology innovation and commercialisation, and for building innovation ecosystems through various innovation instruments such as the Innovation Fund, Seed Fund and Innovation Bridge Portal.

Since its inception, the Innovation Fund (IF) has served a critical catalytic role in strengthening the South African economy and placing the venture capital industry on a sustainable footing for the future. The IF is making good progress in mobilising further funding from various sources, which is clear from the amount of private sector investment that it has attracted in the space of two years. At the beginning of 2022/23, a total of R525,230 million was disbursed in as part of the pilot phase. The funds went to several implementation partners and initiatives. Of the total disbursed amounts, R19,715 million was allocated to the Biomanufacturing Enterprise Development and 6,032 million to the mRNA Technology Transfer Hub. Approximately 89,4% (R469,483 million invested by the DSI in the Innovation Fund for the first and second disbursements in the pilot phase) was allocated to the Public Investment Corporation (23,3%), TIA (34,7%), the SA SME Fund (24,8%) and Anza Capital (6,7%)¹. The DSI investment attracted R3,064 billion in co-investments from the private sector. This translated (as at March 2023) to approximately seven times the private sector investment leveraging effect. One of the 2022/23 highlights for the Innovation Fund was the creation of the Venture Capital Fund of Funds, which on its own has secured about R330 million private sector investment to date.

As of October 2022, a total of 75 innovative enterprises/SMMEs received Innovation Fund support for various stages of the business development life cycle. The majority (64%) of the IF beneficiaries were based on IP previously generated from publicly funded investments. Depending on the nature of the business, the IF supported interventions ranging from improving access to health care, food and communication, to economic sector improvements and competitiveness, to market expansion and export earnings. The impact of the IF on the recipients of support is indicated in the number of offtake agreements and orders (16), the number of start-ups, spin-outs and/or companies established as a result of IF support (8), the number of products and technologies commercialised or in the market from the science councils, universities and private sector (37), the number of jobs (direct and indirect) created from the investments made (311), and the growth in revenue/sales of companies supported (R12 million).

The third and last disbursement of the pilot phase amounting to R448,337 million was completed at the end of 2022/23. The initiatives for which it was allocated will commence during the second quarter of the 2023/24 financial year.

The Seed Fund assists innovation actors such as higher education institutions, science councils and SMMEs to advance their research outputs and/or ideas (develop prototypes, proofs of concept and business cases). The instrument can be used as a springboard to access further funding. During 2022/23, the DSI invested R11,8 million in the Seed Fund, resulting in 53 prototypes developed, 29 intellectual property rights registered, 19 technology demonstrations, three licensed technologies and four products launched.

With respect to building the innovation ecosystem, the DSI invested R8 million in the Innovation Bridge Portal (IBP) in the year under review. The IBP is an innovation showcasing instrument that provides investment matchmaking and partnership through innovative finance. In 2022, the IBP recorded about 460 innovators and entrepreneurs and 220 investors who had become members of the IBP community.

The DSI has also invested in developing innovation management and entrepreneurship skills, targeting the youth through programmes such as the Technology Top 100 (TT100) Learnership and Internship Programme and the Technological Higher Education Network South Africa (THENSA) human capital development programme. During 2022/23, a DSI investment supported 40 unemployed youth through the TT100 programme. In addition, a R28 million investment for three years was made to THENSA, whose venture creation programme provides entrepreneurship skills training to TVETs in partnership with the industry, for 12 to 18 months, targeting 100 young people a year. This

1. The percentages are approximate.

training helps young people with no skills to set up their businesses, from the ideation stage through to pitching to investors for further investments and to the start-up development stage.

Technology transfer hub for mRNA vaccines

Following the establishment of the mRNA vaccine technology transfer hub by the World Health Organization (WHO) and the Medicines Patents Pool in 2021, with South Africa as the host, the hub has made good progress. It has identified suitable platform technologies and disease targets that will form the foundation of hub and entered into appropriate agreements to make these technologies available to the hub and its recipients.

With the support of an expert group, the WHO has selected 15 spokes to receive technology transfer on the mRNA vaccine from Afrigen, a member of the consortium involved in the hub. A multilateral training and technology transfer hub that includes elements of technology demonstration and technology scale-up has been established at Afrigen, and the staff of several spokes were trained.

Sustainable funding was secured to establish the hub and support preclinical and clinical studies, as well as manufacturing support. A platform for innovation in vaccine discovery, development, testing and manufacturing was created in partnership with leading universities and research institutions in South Africa.

Laboratory-scale mRNA vaccine production is now taking place. The hub is currently scaling up and validating production in preparation for Phase 1 and 2 clinical trials. While the current focus of the hub is on Covid-19 vaccines, the hub has identified other disease areas of importance to South Africa such as tuberculosis, HIV/Aids and respiratory syncytial virus. The mRNA hub has also identified a range of other potential diseases for vaccine R&D and possible manufacturing by the spokes. These include, malaria, Zika, Leishmaniasis, the human papillomavirus, the herpes simplex virus, Lassa fever, Dengue, Rift Valley fever and influenza.

Building a pipeline for other vaccines has been an important consideration due to the need to ensure that the infrastructure that is being developed is sustainable.

Space science and technology

There was continued progress in the development of infrastructure and a space value chain for a viable space programme that delivers products and services responding to the needs of users in South African and Africa.

In November 2018, South Africa, through the South African National Space Agency (SANSA), was designated a regional centre for the provision of space weather information to the international aviation sector by the International Civil Aviation Organization (ICAO). In 2020, the DSI supported the construction of a 24/7 Space Weather Centre to enable SANSA to fulfil its ICAO obligations. The centre was officially launched on 3 November 2023 by Minister Nzimande.

The DSI has been supporting the development of domestic rocket engine technologies since 2010 towards the creation of launch capability for South Africa and Africa. The support is also aligned to the strategic goal of space industry development to encourage R&D, human capital development, local private sector development and advanced manufacturing.

The Aerospace Systems Research Institute at the University of KwaZulu-Natal (UKZN) received funding and spearheaded the development of rocket engine technologies in both liquid and solid rockets. Between 13 and 17 March 2023, UKZN tested the Phoenix IC and Phoenix ID hybrid demonstrator rockets, achieving objectives related to test recovery, avionics and telemetry systems in flight.

International cooperation and partnerships

The DSI engaged in 49 resource-leveraging engagements with a range of international partners, including the European Union, UNESCO, the Bill and Melinda Gates Foundation and Germany, in areas supporting the White Paper and the Decadal Plan. Significant success was achieved in a wide range of collaboration areas, including health, energy, water, the circular economy and innovation. The European Union remained one of the largest contributors during the financial year, through its General and Sector Budget Support programmes.

The DSI itself has invested in 20 projects supporting the African Union Agenda 2063 and 22 initiatives supporting the objectives of the Southern African Development Community's Regional Indicative Strategic Development Plan. During the year under review, 27 STI plans of action were actioned as part of bilateral cooperation agreements with African partner countries.

Research and innovation infrastructure

National Equipment Programme Evaluation Report

In the 2021/22 financial year, the Department commissioned DNA Economics to conduct a six-year evaluation of the National Equipment Programme (NEP) for the period 2014/15 to 2019/20.

The service provider assessed the implementation and impact of the NEP, providing information that could be used to build on what was being done effectively and efficiently, and to address any potential problems and challenges in the design of the NEP for the benefit of the entire national system of innovation.

During the third quarter of the year under review, the service provider concluded the evaluation report and it was adopted by the evaluation steering committee. The report made strategic and operational recommendations that will transform the national system of innovation by ensuring that funds for equipment are distributed equitably and inclusively. The DSI will consider how to implement the recommendations.

Five-year review of the South African Research Infrastructure Roadmap

The Department also commissioned a study evaluating the performance, progress and roll-out of research infrastructure established between 2016/17 and 2021/22. This covered the following:

- The Expanded Terrestrial and Freshwater Environmental Observation Network.
- A nuclear medicine research facility, NUMERI.
- The South African Population Research Infrastructure Network.
- The South African Centre for Digital Language Resources.
- The Natural Science Collections Facility.
- Shallow Marine and Coastal Research Infrastructure.
- The Distributed Platform for “Omics” Research.

The study was conducted by a carefully selected expert committee comprising four South African researchers and two international experts in the field of research infrastructure (RI). The review was initiated to identify gaps, shortcomings, challenges, successes and key lessons so that the South African Research Infrastructure Roadmap (SARIR) could be adapted or refocused where required. In addition, the review sought to assess the alignment of the roll-out with the approved proposals and expectations set out in the initial contract; to assess the extent of the infrastructure’s alignment with emerging STI priorities; to assess the sustainability of the facilities and networks in terms of their finances, governance, operations, hosting institutions, etc.; and to evaluate all aspects of the RI lifecycle, components and requirements.

The report also highlighted recommendations that would benefit SARIR and assist the DSI, researchers and students to work together to ensure cohesiveness and a transformed, vibrant science system.

South African Quantum Technology Initiative

The DSI-funded South African Quantum Technology Initiative is making an impact on the specific target areas of quantum sensing and imaging (more sensitive measurements), quantum communications (security in data transfer) and quantum computing (faster computation). The initiative has established five strong quantum nodes, at UKZN, the University of Zululand, the University of the Witwatersrand, Stellenbosch University and the Cape Peninsula University of Technology, with a focus on quantum imaging and sensing, quantum communications and quantum computing.

There are 51 students and postdoctoral fellows at the various nodes, supported by 12 staff. The core expertise and infrastructure at the centres includes quantum entanglement, cold atoms, trapped ions, on-chip devices, a state-of-the-art high-resolution transmission electron microscope, machine learning/artificial intelligence and quantum computing access and expertise. Members of the initiative published 62 papers in 2022/23, including several in high-profile Nature and Science-family journals, with some making the front cover of the journal and international news.

Launch of Biodiversity Biobanks of South Africa

Since SARIR was launched in 2016, 11 of 13 planned RIs have been established. The Biodiversity Biobanks of South Africa (BBSA) was one of the 11. The decision to host the BBSA at the South African National Biodiversity Institute (SANBI) was informed by the strong similarities between the Biobanks infrastructure and the Natural Science Collections Facility already hosted by SANBI. Both facilities deal with natural scientific collections, and both take the form of a distributed network of collections, whose preservation is coordinated, planned, facilitated and monitored from a central hub.

The establishment of the BBSA is aligned with the 2013 Bio-economy Strategy and the 2019 White Paper on STI in terms of improved coherence and coordination, and the principles of open science. The roll-out of the BBSA started in 2017/18 and it was officially launched in March 2023, formalising its establishment and the partnerships that will help its future growth. The BBSA is a bilateral partnership between the DSI and the Department of Forestry, Fisheries and the Environment.

Current Good Manufacturing Practice lab for African natural medicine

The DSI supports research, development and innovation in African natural medicine. A cGMP-based laboratory has been completed at the University of Free State. The focus for 2022/23 will be on constructing and commissioning a cGMP facility to produce safe, efficacious and quality medicines. The DSI, in collaboration with the Gauteng Department of Agriculture and Rural Development and the national Department of Small

Business Development, supports over 20 SMMEs in research and product development. This financial year will be dedicated to high-end African natural medicines for cancer, diabetes, neurodegenerative diseases and infectious diseases like long Covid.

Human capital development

The National Research Foundation (NRF) and other relevant entities report a cumulative total of 2 359 PhD students awarded an annual bursary by 31 March 2023, surpassing the cumulative annual target of 2 200 PhD students supported. This is an over-achievement of 7,2% of the set annual target. Of the students supported, 1 759 (74,6%) were black, 1 224 (51,9%) women, 41 (1,7%) people with disabilities, 1 007 (42,7%) black women, 2 091 (88,6%) South Africans and 2 124 (90,8%) young people.

Similarly, the cumulative annual target of 4 200 pipeline (honours and master's) students supported was exceeded by 11,3%, with 4 673 pipeline students (2 112 BTech/honours + 2 561 master's) awarded an annual bursary by the NRF and other relevant entities by 31 March 2023. Of these, 4 264 (91,2%) were black, 2 947 (63,1%) women, 64 (1,4%) people with disabilities, 2 718 (58,2%) black women, 4 670 (99,9%) South Africans and 4 641 (99,3%) young people.

MeerKAT telescope team wins Royal Astronomical Society Award

The Royal Astronomical Society (RAS) awarded its 2023 Group Achievement Award to the MeerKAT team on 13 January 2023. In its citation, the RAS recognised the MeerKAT team “for a series of spectacular observations in radio astronomy, the highlight being the images of the Galactic Centre region and the spectacular radio bubbles. In addition, the MeerKAT team has supported the development of science and technology in Africa and stress-tested technology for the Square Kilometre Array”. Since its inauguration in 2018, the 64-dish array has supported not only extensive scientific output, but an intensive programme of human capital development in Africa. More than 1 000 scholarships have been awarded to science and engineering students in South Africa and the broader African continent, and many of the scholarship recipients are now emerging researchers and lead authors of MeerKAT publications.

Astro-tourism strategy and implementation plan

The growth and development of astronomy in the country, especially investments in infrastructure, human capacity, outreach, community development, socio-economic impact projects and the growing tourism market, led to the development of the National Astro-tourism Strategy, a joint DSI-Department of Tourism project to unlock opportunities in the astro-tourism sector. The strategy was developed by a service

provider that facilitated a consultative process with the tourism and astronomy communities. The aim of the strategy is to position South Africa to become a world-class astro-tourism destination that will yield sustainable benefit-sharing opportunities by maximising appropriate investments, improving marketing efforts, and enhancing visitor experience in South Africa. The strategy will also be used to educate the public about the importance of preserving the dark skies and radio silence in the Northern Cape, as this is a geographic advantage that needs to be protected for astronomy and astro-tourism to thrive.

Protection, Promotion, Development and Management of Indigenous Knowledge

Regulations under the Act

The National Indigenous Knowledge Systems Office, with the help of a service provider, conducted a countrywide consultation campaign across all nine provinces on the draft Regulations under the Protection, Promotion, Development and Management of Indigenous Knowledge Act (IK Act) before subjecting the Regulations to the Parliamentary process. The aim of the consultation campaigns was to stimulate awareness of and garner opinions and comments about the IK Act Regulations. The DSI accelerated the consultation programme to ensure that the consultation period was completed within 60 days, as required by the Constitution.

Smart village using indigenous knowledge

This indigenous knowledge-led smart village pilot project in the Eastern Cape is a collaboration between the DSI, Tshwane University of Technology, the University of Venda, the Nyandeni Royal House, Nyandeni Local Municipality, OR Tambo District Municipality and the Nyandeni community. The project was rolled out in March 2022 with a feasibility study, which is focused on two communities in Nyandeni Local Municipality, namely, Marubeni and Mtombe Villages. The smart village project is aimed at operationalising the IK Act and is driven by innovative or smart solutions based on the communities' indigenous knowledge systems and cultural, economic, social and environmental resources repurposed to build resilience and create socio-economic opportunities.

Indigenous Knowledge Registration System

The Department has established Indigenous Knowledge Systems Documentation Centres (IKSDCs) in all nine provinces of South Africa and, in partnership with the Council for Scientific and Industrial Research (CSIR), has developed a National Indigenous Knowledge Management System (NIKMAS), which is currently managing data and multimedia items collected from the communities.

To date, the DSI has equipped over 70 unemployed young people in qualitative data collection tools and using technology to record knowledge in their

respective indigenous languages. All the data from IKSDCs is saved on NIKMAS. The IK Act applies to indigenous knowledge, which (a) has been passed on from generation to generation within an indigenous community, (b) has been developed within an indigenous community and (c) is associated with the cultural and social identity of that indigenous community. This knowledge is collected in order to protect it for the benefit of the community that owns it.

Recognition of prior learning

On 25 January 2023, the Parliamentary Portfolio Committee on Higher Education, Science and Innovation made an oversight visit to the recognition of prior learning (RPL) programme for indigenous knowledge systems being piloted in KwaZulu-Natal. Representatives of the KwaZulu-Natal provincial steering committee established by the Minister for the pilot, including representatives of traditional Koi and San leadership and the Traditional Health Organization's leadership, were present. The Portfolio Committee shared their admiration of how civil society had been integrated in the work of the Department. The University of KwaZulu-Natal, North-West University and the University of Venda are partnering in the RPL work in their respective provinces.

5th National Conference on Global Change

The DSI and NRF, in partnership with the national Global Change Science Committee, jointly organised the 5th National Conference on Global Change in Bloemfontein in early 2023, with the University of the Free State as the host. The opening plenary was chaired by the Director-General of Science and Innovation. The conference was attended by over 420 delegates, of which 190 were registered postgraduate students. A total of 229 abstracts were presented, including 152 oral presentations, 88 of which were made by students. A total of 159 students, mostly from historically disadvantaged institutions, received financial support to attend and make presentations at the conference. The late Professors Maarten De Wit and Robert Scholes, and Dr Johan Pauw (retired Managing Director of the South African Earth Observation Network) were recognised for their contribution to global change research. The National Conferences on Global Change are held every second year to bring global change role players and actors together to share their experiences and the advances that have been made, and discuss topical issues and solutions to some of the pervasive problems facing South Africa, the continent and globe.

Electronic participation and policy modelling for South Africa

A project to pilot electronic participation in municipal policy processes has commenced. A joint implementation team with members from the Human Sciences Research Council, the CSIR and UKZN was appointed in mid-2022

and has been engaging with municipalities. An initial prioritisation and mapping of participation processes has been completed in three municipalities (Emalahleni Local Municipality, Rustenburg Local Municipality and eThekweni Municipality) to identify where technology could be of benefit. The main expectation is that ICTs can support the active involvement of more young people in policy deliberations. In addition, a global landscape analysis of electronic participation projects has highlighted a diverse range of methods and tools that could be adapted locally. These projects will be explored with stakeholders from participating municipalities. The project includes a capacity building component, training municipal officials who can use ICT tools to improve the participation of youth in policy formulation processes. The researchers at doctoral and postdoctoral level anchoring this initiative will be supported through UKZN.

3D construction printing for human settlements

The 27 January 2023 ministerial launch of a joint DSI-Department of Human Settlements project on 3D construction printing technology signalled a new era for the provision of government-subsidised houses. The technology, which reduces construction time and costs, could create new norms, standards and routines for the sustainable human settlement sector, while creating economic participation opportunities for SMMEs in the supplier value-chain. The piloting of housing units has been earmarked for the demonstration through 3D printing technology in partnership with provincial departments of human settlements and private sector partners.

Remotely piloted aircraft system/drones for economic inclusion

In using innovation to achieve inclusive development, the CSIR conceptualised and is implementing a spatial monitoring project to demonstrate state-of-the-art unmanned aircraft technology with the potential to achieve some of government's broad development objectives in the 4th industrial revolution arena. The project resulted in the acquisition of a suitable commercial-grade, remotely piloted aircraft system; the identification and recruitment of a suitable small enterprise; the preparation of a business case for the small enterprise; and the training and licensing of remote pilots, including unemployed graduates. The programme is being scaled-up to support unemployed graduates pursuing entrepreneurship opportunities in the drone market.

Procurement of locally developed technologies

The Technology Acquisition and Deployment Fund is an initiative implemented by the DSI to strengthen the procurement and utilisation of locally developed technologies by government departments and municipalities. This instrument is part of the DSI's support for municipalities in the context of the District Development Model and has been successfully piloted in KwaZulu-Natal with the acquisition and deployment of local technologies to schools in and around the eThekweni Metropolitan Municipality. These technologies are intended to improve teacher-parent communication, improve learning outcomes for Physical Science, Mathematics and Technology, and to combat crime in communities in the Ugu District Municipality. Technologies piloted for acquisition include Memeza Shout, the Sisanda Universe App and the Digital Schools Management system.

Memeza Shout is an ICT-based community safety technology that enables a community to respond to crime, including gender-based violence and femicide. It makes it easy to broadcast the need for assistance to local support networks such as the South African Police Service, community policing forums and community members, enabling citizen-to-citizen policing. The initiative, funded by the DSI, will install 349 community alarm units over an 18-month period and has been endorsed by the Civilian Secretariat for Police. The technology units will be deployed in the Ugu District Municipality.

The Sisanda Universe App is a virtual science laboratory that was invented by a young South African entrepreneur. It uses the power of a camera and real-time three-dimensional content to give grade 12 learners the opportunity to experiment and conduct physical science laboratory experiments anywhere and anytime through virtual reality. This app is enabling students and teachers to experience enhanced learning in science subjects, and increasing interactive learner participation. In partnership with the KwaZulu-Natal Department of Education's uMhlathuzana Circuit, the technology is being deployed in Ukusa Senior Secondary School and Sikhethuxolo High School in Hammarsdale, Durban.

The Digital Schools Management system is a technology for digital inclusion, primarily focusing on neglected township schools and communities. The DSM communicator considers the conditions under which township schools operate and the level of technology literacy in communities. It is being deployed to 15 schools in the eThekweni Municipality to enable parent-teacher communication. Communication from the school to parents will be improved and homework requests or important messages are sent directly to parents instead of being taken home on paper by learners.

Living Labs Programme

In pursuit of a broader innovation footprint and the democratisation of innovation in South Africa, the Living Labs infrastructure and innovation support programme is being provided in rural, peri-urban and township communities. It supports grassroots innovators that innovate to address systemic challenges in their communities. Eleven Living Labs have been supported; seven are fully equipped and four are under construction. They are located in KwaMashu, Cator Manor and Kokstad (KwaZulu-Natal), Bofolo, New Brighton, Kariega and Helena View (the Eastern Cape), Athlone (Western Cape), Rakgatla and Mosiane View (North-West), Barkley West and Kuruman (Northern Cape) and Phuthaditjhaba (Free State). Innovators received training and mentoring at the seven active sites, resulting in 201 beneficiaries enrolled in the Innovation Support Programme. Furthermore, 28 prototypes were developed, 17 products were made market-ready and four intellectual property rights were registered.

Innovation champions for local economic development

To support municipalities in innovation-driven local economic development (LED), the DSI and its local partners in the Vhembe and OR Tambo District Municipalities are deploying innovation champions to LED offices as resources to LED managers. The champions are deployed to oversee the mapping of local innovation systems using the Local Innovation Advancement Toolkit to inform planning and place innovation at the centre of integrated development planning processes. They help to incorporate innovation in LED strategies, create linkages among actors and agents in local innovation systems and ensure linkages with institutions such as the CSIR, Agricultural Research Council and Technology Innovation Agency so that funding and expertise can be sourced from the national system of innovation. Six innovation champions have been deployed at the OR Tambo site and seven in Vhembe. Using a participatory process inclusive of all LED stakeholders in Vhembe, including communities, a new LED strategy was developed – the first in the country to draw on the 2018-2028 National Framework for LED, which mainstreams innovation.

Reducing plastic pollution through science, technology and innovation

On 21 November 2022 the CSIR launched the #SolvePlasticsAfrica STI Hub. This was a result of the research grant project on “Reducing Plastic Pollution: A Comprehensive, Evidence-based Strategy for South Africa” funded under the Waste RDI Roadmap. The project was undertaken to build local capacity in the utilisation of the Pathways Tool developed at the University of Oxford in partnership with the Pew Charitable Trusts. The data modelling framework assisted in providing an evidence-based approach for

South Africa, helping to improve the management of plastics and reduce plastic leakage into the environment. The tool was used to model a business-as-usual scenario, an extended producer responsibility scenario and an optimal system change scenario. The optimal system change scenario seeks to identify the best possible solution for South Africa's sustainable development, one that balances the environmental imperative to minimise plastic pollution and greenhouse gas emissions with the socio-economic imperative to minimise costs and maximise jobs. This is well aligned with the systems approach of the STI Decadal Plan.

Plastic pollution is a growing concern and current levels are set to double by 2040 if no interventions are made. Globally, most attention is focused on marine plastic pollution. However, the findings from the Pathways Tool reveal that in South Africa plastic pollution is dominated by the open burning of waste and land pollution, with aquatic (fresh water and marine) pollution being a relatively small component of the country's problem.

Interventions are required to improve waste collection services and management at landfills, including upgrades to achieve sanitary conditions that effectively contain all waste disposed. There is little source separation of plastics, and plastics collection for recycling is predominantly carried out by the informal sector from mixed waste found on pavements or at landfill sites. The important role of informal waste pickers highlights the need to integrate the informal sector into recycling and waste management, as envisaged in the National Waste Management Strategy 2020 and extended producer responsibility regulations. With the National Treasury, the DSI has started a pilot project to register waste pickers to learn how many of them are active and what are they collecting.

A combination of strategies is needed for the system change required to reduce plastic pollution in South Africa effectively. This will require a collaborative approach between all stakeholders and a commitment to support the necessary changes across the value chain. It is our understanding that this is the first time the Pathways Tool has been applied at country level, and that India has reached out to the CSIR to assist them in undertaking a similar modelling exercise for India.

The Sector Innovation Fund Programmes

The DSI's Sector Innovation Fund Programme is aimed at incentivising the private sector to increase investment in RDI, with the ultimate aim of increasing competitiveness. The DSI implemented the third phase of the Sector Innovation Fund through ongoing support for five industries, namely, horticulture (postharvest innovation), viticulture, forestry, paper manufacturing and agroprocessing, as well as supporting a sixth industry, the South African rooibos industry, for the first time. Each industry RDI portfolio addresses key

competitiveness challenges for the industry, for example, sustainability, pest and disease control, and accessing new export markets. This third phase is being funded by the EU Sector Budget Support programme for the national system of innovation, and despite severe delays in National Treasury releasing the DSI's portion of the funding (eventually released in March 2023), the SIF portfolio has supported 38 postgraduate students in the past year (through the industry partners' commitment, despite the risks).

The Regional Innovation Support Programme

As part of its efforts in support of the White Paper policy intent to increase the spatial footprint of innovation, the Department has continued to implement the Regional Innovation Support Programme (RISP) through a programme management unit based at the CSIR. The current RISP portfolio has eight regional innovation networking platforms aimed at bringing together RDI communities, technology SMEs, industry and government to establish an innovation-enabling ecosystem to support socio-economic development. It also has three studies under way in collaboration with various entities. Two feasibility studies are aimed at strengthening or expanding regional innovation systems by facilitating the planning and establishment of innovation-enabling mechanisms such as science and technology parks, technoparks, innovation hubs and other similar concepts in particular areas, and one innovation baseline study is aimed at assessing and analysing the status of regional innovation systems with respect to their effectiveness and readiness to promote and support innovation in the regions.

Science and technology investment

The Department has contributed to innovation in support of a capable and developmental state by producing six statistical reports and/or policy briefs. The "Gearing for R&D and Innovation in South African State-Owned Enterprises" report is based on in-depth research focusing on the South African National Energy Development Institute, Air Traffic and Navigation Services and the South African Forestry Company SOC Limited. The research aim was to assess RDI capabilities by looking at five dimensions, namely, human capacity, technological capability, networks, research infrastructure and governance. The 2020/21 National Research and Experimental Development (R&D) Survey was also produced, quantifying contributions toward the National Development Plan target of raising the level of R&D investment in South Africa to 1,5% of GDP by 2030. The 2022/23 Report on Government Funding for Scientific and Technological Activities is part of the evidence to inform policy decisions required by the Decadal Plan.

The STI public budget coordination process is a mechanism to improve the allocation of funds for STI as one of the systemic enablers of the Decadal Plan. With this process, STI priorities are now more prominent in the planning and the budgeting processes. The priorities are integrated into the 2023 Budget Prioritisation Framework (formerly known as the Mandate Paper) and the 2023 Medium Term Expenditure Committee budget process. The Department of Planning, Monitoring and Evaluation, the National Treasury and the DSI are working together in this process to tag STI across all government departments. The STI priorities coincide with the last phase of the National Development Plan (Vision 2030) and respond to the Economic Reconstruction and Recovery Plan and the Sustainable Development Goals.

The 2021/22 report to Parliament on the performance of the Research and Development (R&D) Tax Incentive Programme, with policy interventions, was produced. The R&D tax incentive online system was launched in October 2022. The main function of this automated system is to streamline the application and reporting processes, reduce the administrative burden and improve the turnaround times for responses to applications. The DSI will gradually migrate the large volume of existing data from manually submitted forms to enable companies with approved R&D projects to submit their annual progress reports online.

As a government tax policy instrument that supports “early-phase research and development”, the R&D tax incentive has been extended for a period of 10 years, until 31 December 2033. Furthermore, refinements will be made to the programme, including a six-month grace period for a project to commence before an application is submitted, and an amendment to the definition of R&D. These amendments will also allow the South African Revenue Service Commissioner to disclose certain information to the Minister of Higher Education, Science and Innovation to improve monitoring and evaluation.

Strengthening technology diffusion and technology development initiatives

The Technology Stations Programme and the Technology Localisation Implementation Unit make a significant contribution to technology diffusion. The budget for these initiatives became severely constrained when the Economic Competitiveness Support Package terminated funding in this area. To maintain these crucial initiatives, funding from other technology development areas, such as the Advanced Manufacturing Technologies Strategy and the Advanced Materials Initiative was rerouted. The Department is working to find ways of improving and optimising the impact of the abovementioned technology diffusion instruments.

In addition, the utilisation and funding approach for technology development projects (such as the Advanced Materials Initiative) is being improved by implementing

a stage gate process, whereby funding is approved in stages as pre-defined technical milestones are reached. In addition, new technology development based on the identification and participation of a lead user is encouraged. This helps to accelerate the technology development process and to create an early market segment.

The Collaborative Programme on Additive Manufacturing continues to develop and diffuse additive manufacturing technology to industry. The many students funded through the initiative are quickly employed by industry. The annual Rapid Product Development Association of South Africa Conference was hosted in November 2022, and phase III of the programme will be concluded in 2023/24.

South African Minerals Extraction, Research, Development and Innovation

The DSI’s largest public-private sector RDI programme, the South African Minerals Extraction, Research, Development and Innovation (SAMERDI) programme, continued to grow its RDI impact and its support from industry.

The five SAMERDI research centres at four higher education institutions (the Universities of Johannesburg, the Witwatersrand, the Free State and Pretoria) were formally launched on 2 November 2022. The research centres are intended to help generate postgraduate skills in the focus areas of the longevity of current mines, mechanised mining systems, real-time information management systems, the successful application of technologies centred aroundon people, and advanced orebody knowledge.

The programme showcased several people-centred solutions for industry and developed value-adding guidelines such as the Community Training Needs Assessment Tool for mining modernisation, the Digital Leadership Competencies Gap Assessment Tool, the Change Management Blueprint for the adoption of modern technologies, the SMME Communications and Engagement Tool, and the Non-Governmental Organisations Community Social Needs Assessment Tool.

In terms of advanced orebody knowledge, guidelines on ground penetrating radar and electrical resistance tomography were developed. In addition, to reduce fall-of-ground incidents and to contribute to worker safety improvements, the Mandela Mining Precinct and the Minerals Council South Africa, in collaboration with partner mines, undertook to identify novel solutions in rock hazard identification and safe rock removal. The Rock Hazard Identification Innovation Challenge winner was announced in February 2023.

4.4 FUTURE PLANS OF THE DEPARTMENT

The STI Decadal Plan has been approved by Cabinet. In the year ahead the Department will be implementing the objectives outlined in the plan.

4.5 DISCONTINUED ACTIVITIES/ ACTIVITIES TO BE DISCONTINUED

The Department will be guided by the STI Decadal Plan in this regard.

4.6 NEW OR PROPOSED ACTIVITIES

The Department will be implementing the objectives as outlined in the Decadal Plan and the 2019 White Paper on STI.

4.7 OVERVIEW OF THE FINANCIAL RESULTS OF THE DEPARTMENT

Departmental receipts

The table below highlights receipts collected by the Department in the financial year under review (2022/23) and the previous financial year (2021/22).

Table 1: Departmental receipts

| Departmental receipts | 2022/23 | | | 2021/22 | | |
|--|------------|------------------|-------------------------|------------|------------------|-------------------------|
| | Estimate | Amount collected | (Over/under collection) | Estimate | Amount collected | (Over/under collection) |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 |
| Sale of goods and services other than capital assets and sale of scrap, waste and other used current goods | 76 | 74 | 2 | 65 | 73 | (8) |
| Interest, dividends and rent on land | 30 | 63 | (32) | 32 | 37 | (5) |
| Sale of capital assets | - | - | - | 250 | 235 | (15) |
| Financial transactions in assets and liabilities | 620 | 551 | (69) | 550 | 745 | (195) |
| Total | 726 | 688 | (99) | 897 | 1 090 | (193) |

The Department does not generate revenue on a recoverable basis from the general public. The revenue collected comprises surpluses on project funds, commission from insurance on Persal transactions, interest received from a deposit account held with a commercial bank, payments of bursary debts by officials and other recoverable expenditure. The Department collected more revenue in 2022/23 than in the previous financial year.

Spending trends

The Department's appropriation for the year under review (2022/23) was R9,145 billion, which was a 1,6% increase from R9,006 billion in 2021/22.

Table 2: Programme expenditure

| Programme | 2022/23 | | | 2021/22 | | |
|---|------------------|--------------------|---------------|------------------|--------------------|---------------|
| | Final budget | Actual expenditure | Variance | Final budget | Actual expenditure | Variance |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 |
| Administration | 343 174 | 336 087 | 7 087 | 328 308 | 304 454 | 23 854 |
| Technology Innovation | 1 897 725 | 1 890 565 | 7 160 | 1 725 017 | 1 719 613 | 5 404 |
| International Cooperation and Resources | 165 687 | 161 269 | 4 418 | 136 276 | 131 808 | 4 428 |
| Research Development and Support | 4 983 051 | 4 981 225 | 1 826 | 4 995 061 | 4 991 443 | 3 618 |
| Socio-economic Innovation Partnerships | 1 755 624 | 1 751 708 | 3 916 | 1 820 977 | 1 814 725 | 6 252 |
| Total | 9 145 262 | 9 120 855 | 24 407 | 9 005 638 | 8 962 043 | 43 555 |

The Department's spending performance has been consistently above 90% since its inception. In the 2022/23 financial year, it spent 99,7% of its budget.

Table 3: Summary of budget expenditure analysis per economic classification

| Details | 2022/23 | |
|-------------------------------|------------------|-------------|
| | R'000 | R'000 |
| Amount voted | 9 145 262 | 100 |
| Actual expenditure | 9 120 856 | 99,7 |
| Unspent funds | 24 406 | 0,3 |
| Economic classification | | |
| Current payments | 559 664 | 6,1 |
| Transfer payments | 8 550 023 | 93,7 |
| Payments for capital assets | 11 162 | 0,1 |
| Payments for financial assets | 7 | 0,00008 |
| Total | 9 120 856 | 99,7 |

Virements

The Department effected virements amounting to R59,524 million after the Adjusted Estimates of National Expenditure. An amount of R714 000 was moved between major items and R20,2 was moved between Programmes.

Included in the virements is an amount of R26,610 million, which was shifted within transfers and subsidies. The funds were used for the Strategic Industrial Bio-Innovation Programme, the Innovation Bridge Portal, evidence-based innovation policy projects, the Precision Agriculture Information System, a rocket propulsion system, the Technology Stations Programme and a joint research centre.

Supply chain management

The Department continued to implement its Supply Chain Management Policy and its associated directives in 2022/23. In the year under review it also reviewed the Travel Management Policy and Preferential Procurement Strategy, which are at various stages of approval. The Department developed the Preferential Procurement Policy, which will be finalised in 2023/24 and will ensure that the Department complies with the requirements of the Preferential Procurement Regulations, 2022.

Bid management procedures in the Department are in place and working effectively. All bid committees are in place and functioning. No unsolicited bids were received in the year under review.

The Department is currently addressing capacity challenges in the Directorate: Supply Chain Management (SCM). It finalised the filling of SCM practitioner positions and the recruitment process for the Assistant Director: Asset Management position is in the final stages.

4.8 GIFTS AND DONATIONS RECEIVED IN KIND FROM NON-RELATED PARTIES

No gifts or donations in kind were received from non-related parties.

4.9 STANDING COMMITTEE ON PUBLIC ACCOUNTS (SCOPA) RESOLUTIONS

There were no SCOPA resolutions.

4.10 PRIOR MODIFICATIONS TO AUDIT REPORTS.

The Auditor-General found no matters of significance regarding the administration of the Department.

4.11 EXEMPTIONS AND DEVIATIONS RECEIVED FROM THE NATIONAL TREASURY

No exemptions or deviations were raised by National Treasury.

4.12 EVENTS AFTER THE REPORTING DATE

No significant events occurred after the reporting date.

4.13 OTHER

No other significant events need to be brought to the attention of the readers of the Annual Report.

4.14 CONCLUSION

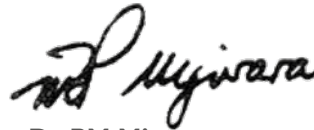
Despite its limited financial resources, the Department continues striving to achieve the objectives outlined in its five-year Strategic Plan and the STI Decadal Plan.

4.15 ACKNOWLEDGEMENTS AND APPRECIATION

I would like to express my appreciation to the DSI staff, the executive committee, Audit Committee and Enterprise Risk Management Committee for their support and dedication during the year under review. I would also like to thank Minister Nzimande and Deputy Minister Manamela for their direction and leadership, which are always appreciated.

4.16 APPROVAL AND SIGN-OFF

The Department's Annual Financial Statements and the Annual Report have been approved by the Accounting Officer.



Dr PM Mjwara
Accounting Officer

31 May 2023

5. STATEMENT OF RESPONSIBILITY AND CONFIRMATION OF ACCURACY OF THE ANNUAL REPORT

I confirm that, to the best of my knowledge and belief –

- all information and amounts disclosed throughout the Annual Report are consistent;
- the Annual Report is complete, accurate and free from any omissions;
- the Annual Report has been prepared in accordance with the Guidelines on Annual Reports issued by the National Treasury;
- the Annual Financial Statements (Part E) have been prepared in accordance with the Modified Cash Standard and the relevant frameworks and guidelines issued by the National Treasury (the Accounting Officer is responsible for the preparation of the Annual Financial Statements and for the judgements made in this regard);
- a system of internal controls that has been designed to provide reasonable assurance as to the integrity and reliability of the performance information, the human resources information and the Annual Financial Statements, has been established and is being implemented.

In my opinion, the Annual Report fairly reflects the operations, the performance information, the human resources information and the financial affairs of the Department for the year ended 31 March 2023.



Dr PM Mjwara
Director-General
31 May 2023

6. STRATEGIC OVERVIEW

6.1 VISION

Increased well-being and prosperity through science, technology and innovation.

6.2 MISSION

To provide leadership, an enabling environment and resources for science, technology and innovation in support of South Africa's development.

6.3 VALUES

- **Professionalism**

The Department is professional and delivers high quality performance to both internal and external stakeholders.

- **Innovation**

The Department is innovative in solving problems and enhancing effectiveness and efficiency.

- **Ethical behaviour**

The Department and its employees are consistent in their actions and accountable and transparent in dealing with public funds and other resources.

- **Knowledge sharing**

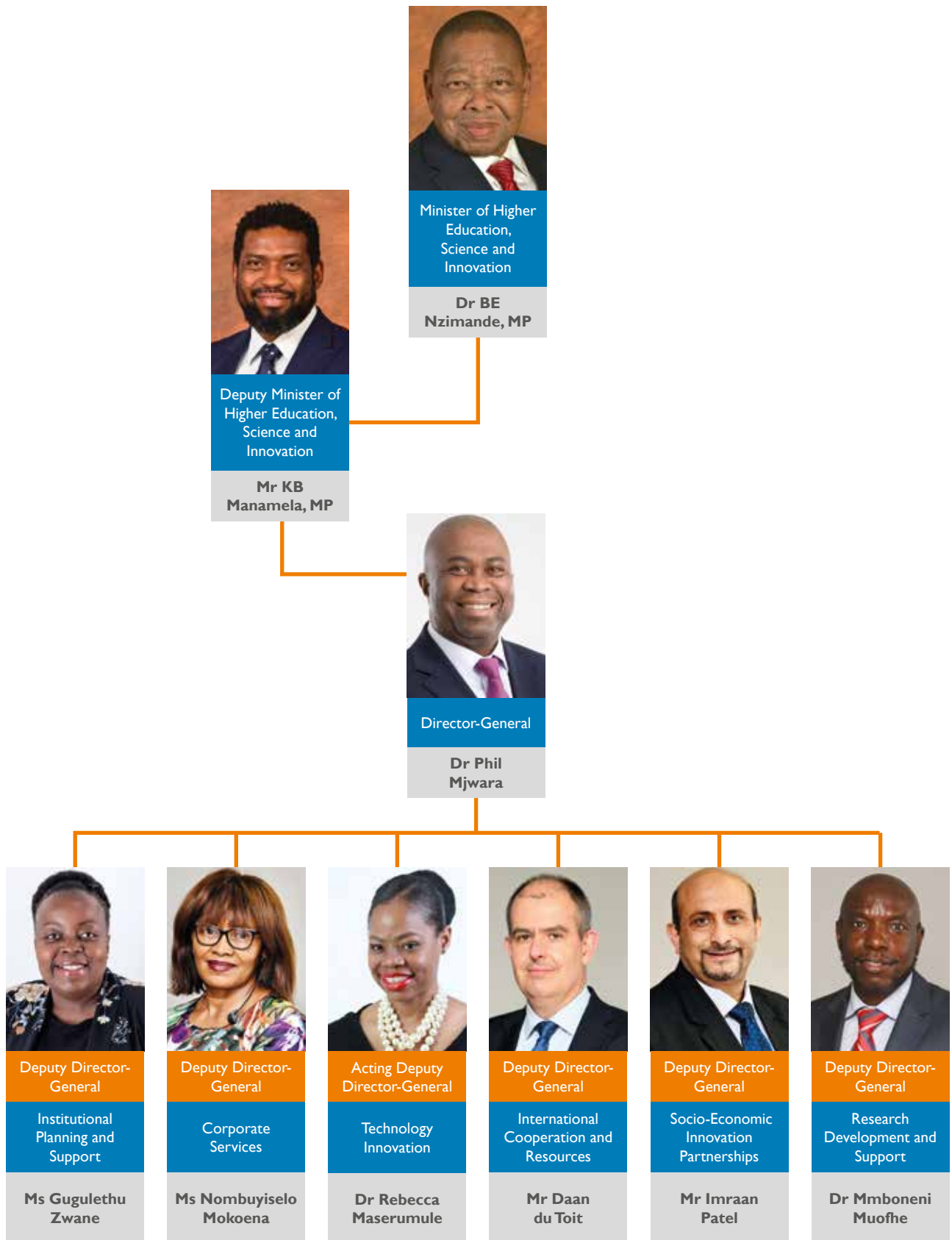
The Department and its employees share and use knowledge constructively to ensure that it contributes to the building of a robust and productive knowledge economy.

7. LEGISLATIVE AND OTHER MANDATES

The Department is directly responsible for implementing, managing or overseeing the following legislative and policy mandates.

| Legislation | Mandate |
|--|---|
| Academy of Science of South Africa Act, 2001 | The Act establishes the Academy of Science of South Africa to promote common ground in scientific thinking across all disciplines, including the physical, mathematical and life sciences, as well as human, social and economic sciences; to encourage and promote innovative and independent scientific thinking; to promote the optimum intellectual development of all people; to advise and facilitate appropriate action in relation to the country's needs, opportunities and challenges; and to link South Africa with high-level scientific communities within the Southern African Development Community, the rest of Africa and internationally. |
| Astronomy Geographic Advantage Act, 2007 | The Act provides for the preservation and protection of areas in South Africa uniquely suited to optical and radio astronomy, and for intergovernmental cooperation and public consultation on matters concerning such areas. |
| Human Sciences Research Council Act, 2008 | The Act provides for the continued existence of the Human Sciences Research Council, which carries out research that generates critical and independent knowledge relating to all aspects of human and social development. |
| Income Tax Act, 1962 | Section IID of the Income Tax Act gives the minister responsible for science and technology authority to approve scientific and/or technological research and development undertaken or funded in South Africa for a tax deduction in order to promote private sector R&D activities in the country. |
| Intellectual Property Rights from Publicly Financed Research and Development Act, 2008 | The Act provides for the more effective use of intellectual property emanating from publicly financed research and development, through the establishment of the National Intellectual Property Management Office, the Intellectual Property Fund, and offices of technology transfer at higher education institutions and science councils. |
| National Advisory Council on Innovation Act, 1997 | The Act establishes the National Advisory Council on Innovation to advise the Minister responsible for science and technology and, through the Minister, the Cabinet, on the role and contribution of science, mathematics, innovation and technology in promoting and achieving national objectives. |
| National Research Foundation Act, 1998 | The Act establishes the National Research Foundation to promote basic and applied research, as well as the extension and transfer of knowledge in the various fields of science and technology. |
| Natural Scientific Professions Act, 2003 | The Act establishes the South African Council for Natural Scientific Professions and legislates the registration of professional natural scientists, natural scientists-in-training, natural science technologists and natural science technologists-in-training. |
| Scientific Research Council Act, 1988 | The Act provides for the continued existence of the Council for Scientific and Industrial Research, which undertakes directed research and development for socio-economic growth in areas that include the built environment, defence, the environmental sciences, and biological, chemical and laser technology. |
| South African National Space Agency Act, 2008 | The Act establishes the South African National Space Agency to promote space science research, cooperation in space-related activities, and the creation of an environment conducive to the development of space technologies by industry. |
| Technology Innovation Agency Act, 2008 | The Act establishes the Technology Innovation Agency to promote the development and exploitation of discoveries, inventions, innovations and improvements in the public interest. |
| White Paper on Science, Technology and Innovation, 2019 | The White Paper sets the long-term policy direction for the South African government to ensure a growing role for science, technology and innovation (STI), using STI to accelerate inclusive economic growth, make the economy more competitive, and improve people's daily lives. It aims to help South Africa benefit from global developments such as rapid technological advancement and geopolitical and demographic shifts, as well as respond to the threats associated with some of these global trends. |

8. ORGANISATIONAL STRUCTURE



9. ENTITIES REPORTING TO THE MINISTER

The table below shows the entities that receive transfer payments from the Department of Science and Innovation, and report to the Minister of Higher Education, Science and Innovation. Their work is aligned with the DSI's strategic objectives and the goals of the National Development Plan.

| Name of entity | Legislative mandate | Financial relationship | Nature of operations |
|--|---|-------------------------------------|---|
| Academy of Science of South Africa (ASSAf) | Academy of Science of South Africa Act, 2001 | Transfer payments and contract work | ASSAf's activities encompass all fields of scientific enquiry and include the full diversity of South Africa's distinguished scientists. ASSAf has a dual role – to honour distinguished scholars through election to membership of the Academy, and to provide science advice to government and other stakeholders on critical national and global issues. |
| Council for Scientific and Industrial Research (CSIR) | Scientific Research Council Act, 1988 | Transfer payments and contract work | The CSIR is a leading scientific and technology research organisation that researches, develops, localises and diffuses technologies to accelerate socio-economic prosperity in South Africa. The organisation's work contributes to industrial development and supports a capable state. |
| Human Sciences Research Council (HSRC) | Human Sciences Research Council Act, 2008 | Transfer payments and contract work | The HSRC initiates, undertakes and fosters strategic basic and applied research in human sciences, and address developmental challenges in South Africa, elsewhere in Africa and in the rest of the world by gathering, analysing and publishing data relevant to such challenges, especially by means of projects linked to public sector-oriented collaborative programmes. |
| National Advisory Council on Innovation (NACI) | National Advisory Council on Innovation Act, 1997 | Transfer payments and contract work | NACI provides advice to the minister responsible for science and technology and, through the minister, the Cabinet, on the role and contribution of science, mathematics, innovation and technology in promoting and achieving national objectives. NACI is also broadly responsible for the ongoing monitoring and evaluation of the national system of innovation. |
| National Research Foundation (NRF) | National Research Foundation Act, 1998 | Transfer payments and contract work | The NRF supports, promotes and advances research and human capacity development, through funding and the provision of the necessary research infrastructure, in order to facilitate the creation of knowledge, innovation and development in all fields of science and technology, including the humanities, social sciences and indigenous knowledge. |
| South African Council for Natural Scientific Professions (SACNASP) | Natural Scientific Professions Act, 2003 | Transfer payments and contract work | SACNASP is the regulatory body for natural science practitioners (professional natural scientists, natural scientists in training, natural science technologists and natural science technologists in training) in South Africa. It ensures a high level of professionalism and ethics among South African scientists. |
| South African National Space Agency (SANSA) | The South African National Space Agency Act, 2008 | Transfer payments and contract work | SANSA provides a wide range of services and data products to local and international organisations, governments and the business sector, as well as the global and regional academic community. These services include Earth observation data products, international launch monitoring and space weather information provision. |

Some of the highlights for the period under review are presented below.

9.1 ACADEMY OF SCIENCE OF SOUTH AFRICA (ASSAf)



In the year under review, 29 of the country's leading scholars and scientists were inaugurated as members of ASSAf, bringing the total number of members to 657. Of the 29 successful candidates, 15 were women and 15 were black, which brings the percentage of women of the total membership to 30%, a 1% increase, and the percentage of black members to 34%, also a 1% increase.

ASSAf produced nine publications, of which five were proceedings reports, two were statements and two were other reports commissioned by the DSI.

ASSAf hosted and/or participated in close to 60 public lectures and workshops.

In 2022/23, the South African Journal of Science published 147 articles (80 peer-reviewed articles) in eight issues, including three special issues.

The SciELO SA journal database has grown to 95 titles since its inception in 2009. The collection was awarded a score of 99% following a biannual assessment by the SciELO Network and it was noted that SciELO SA is currently the national collection with the highest impact and number of views in the network.

9.2 COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR)



The CSIR developed a mobile application commissioned by the Gauteng Department of Roads and Transport (GDRT) called PotholeFixGP to streamline and digitise the reporting and maintenance of potholes in Gauteng by authorities. The app serves as a platform for the public to report potholes, while enabling the GDRT to track and monitor road maintenance progress across the province. Since its launch, the app has gained in popularity, with over 6 000 public users submitting reports, resulting in approximately 5 000 cases being assigned to specific regional road authorities.

The CSIR has made great strides in deploying its novel television white spaces technology, which makes it possible to provide affordable broadband wireless internet connectivity to underserve rural and township communities by using TV bands for broadband access. The CSIR, in collaboration with the United Nations Development Programme, has facilitated the deployment of the technology to support 13 youth and women-owned small, medium or micro enterprise network operators. These operators have implemented affordable broadband network infrastructure in underserved communities in the Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga and the Western Cape.

A multidisciplinary research team worked alongside two rural communities in the Eastern Cape and KwaZulu-Natal to co-produce a framework to guide the governance of groundwater in the two areas. Springs are the primary source of drinking water for many groundwater-dependent rural communities. The team investigated innovative solutions to address water insecurity in the Thukela and uMzimvubu river catchments in KwaZulu-Natal and the Eastern Cape, respectively. The studies focused on understanding the adaptive capacity of the

catchment communities to the impacts of climate change on spring water supply, through holistic catchment management.

CSIR researchers have held training sessions at all 16 South African coastal district municipalities on the use of layers and maps that enable them to manage the potential risks of the country’s coastal areas. The training courses were attended by officials of municipal offices that deal with spatial planning, disaster management, environmental management and waste management. The training sessions followed a National Coastal Climate Change Vulnerability Assessment that the CSIR conducted for the Department of Forestry, Fisheries and the Environment. This assessment delineated areas that are potentially at risk of coastal flooding for five storm and two sea level rise scenarios for the whole of the South African coast.

The GreenBook MetroView is another CSIR-developed planning support system to help local government to adapt to climate change by providing metropolitan municipalities with evidence related to climate change, population growth, and risk and vulnerability. The CSIR, under contract to Santam, is developing an online training course on the GreenBook for district municipalities. Absa is co-funding the development of GreenBook MetroView tools for two coastal metropolitan municipalities, eThekweni and Buffalo City.

In March 2023, the CSIR was approached by the Eastern Cape provincial government to deploy technical expertise in support of disaster response efforts following severe flooding in the Port St Johns area. Discussions about future data-driven decision-support tools continue.



9.3 HUMAN SCIENCES RESEARCH COUNCIL (HSRC)

On the research uptake and impact front, the HSRC is partnering with the National Treasury Cities Support Programme to mine, curate and analyse new sources of special economic data.

Two surveys were conducted to gain better insight into prevalent and emerging societal challenges. These were the “Batho Pele Revitalisation Strategy: Drawing on the South African Social Attitudes Survey” and the “Election Indicators Report Series” launched at the Independent Electoral Commission provincial research seminars.

In contributing to equitable and quality healthcare, a Centre for Community-Based Research Clinic launched the Ikusas’elihle Clinic Facility on 20 April 2022. The HSRC hosted a Women’s Month public lecture on “Generation equality: Realising women’s rights for an equal future” in August 2022.

With the Global Initiative against Transnational Organized Crime, the HSRC released the “Strategic Organised Crime Risk Assessment South Africa” report. The 2020/21 National Survey on Research and Experimental Development results were released.

9.4 NATIONAL ADVISORY COUNCIL ON INNOVATION (NACI)



A study was undertaken on the role of the national system of innovation (NSI) in implementing national health insurance (NHI). The NHI is intended to move the South African health system closer to universal health coverage, and the study made recommendations on how best the NSI could complement the plans of the National Department of Health.

A report on the state of commercialisation of patents and plant breeders' rights in South Africa was produced in the period under review. The report offered a synopsis of the state of patenting, the development of plant varieties and the commercialisation of intellectual property in South Africa with the emphasis on publicly financed institutions over a 20-year period. The study had two objectives: (1) to investigate how locally produced patents could remain in South Africa and the African continent and be commercialised for the socio-economic benefit of the country and the continent, and (2) to evaluate the association between research and development investment, patenting activity and total factor productivity.

A study on assessing the viability of utility-scale energy storage was conducted. The study aimed to assess the market viability of utility-scale stationary energy storage in the industrial, commercial, transport, local government and residential sectors, and provide policy recommendations for the development of different market segments in South Africa.

A study to assess the effectiveness of mathematics and science education initiatives in schools was conducted by NACI. The purpose of the study was to assess the effects of the various interventions that have been implemented across the system to improve participation and performance in mathematics and science in schools, including the impact of initial teacher education on school-level interventions and outcomes. Further, the study aimed to review a sample of evaluation reports of programmes that were implemented since the launch of the first iteration of the National Strategy for Mathematics, Science and Technology Education (2001-2020) involving system-wide government-led interventions and those that were funded and implemented by social partners.

The 2022 South African STI Indicators Report was launched virtually in July 2022. Its findings provide greater understanding of the performance of the NSI in promoting socio-economic development in South Africa. Over 200 delegates from the business sector, government, academia, civil society, science media and the broader national system of innovation stakeholder community attended the webinar.



9.5 NATIONAL RESEARCH FOUNDATION (NRF)

The South African Isotope Facility project is 97% complete, with construction on the new infrastructure now finalised, and mechanical and electrical services to the C70 cyclotron having been commissioned.

The recently completed Technology Innovation Platform building has been handed over to iThemba LABS by the building contractors. Laboratory equipment and furniture have been ordered. Discussions on specific projects with key stakeholders, both local and international, are at an advanced stage. Three iThemba LABS projects have been approved for Technology Innovation Agency co-funding with new proposals ready for the second round of calls. Some of these projects will be hosted in the recently completed building.

A diverse team of scientists from the South African Institute for Aquatic Biodiversity (SAIAB), the South African Environmental Observation Network (SAEON), the South African National Biodiversity Institute, the University of KwaZulu-Natal, the University of Cape Town, Nelson Mandela University, Rhodes University and One Ocean Hub undertook an expedition on SAIAB's Research Vessel Observer to advance the capacity, technology, and multidisciplinary knowledge for better management of South Africa's oceans. This expedition was different in that it was developed and led by emerging researchers themselves, and in the new technology and depths reached while sampling the marine environment.

A group of South African astronomers from the South African Astronomical Observatory (SAAO) and researchers from the Max Planck Institute for Extraterrestrial Physics discovered a rare white dwarf binary star system occupying the Large Magellanic Cloud. The Southern African Large Telescope discovery of a binary star system with burning helium, could explain the condition that would lead to supernovae caused by exploding white dwarfs.

The MeerKAT radio telescope array was used in the discovery of some of the largest hydrogen atoms in the universe, the Rydberg atoms, in a distant galaxy towards PKS 1830-211. The discovery could help researchers to understand the nature and evolution of interstellar gas in galaxies and how Rydberg atoms are formed in space.

Using the MeerKAT radio telescope, a team of researchers from the University of the Western Cape, the University of Cape Town, Rhodes University, the South African Radio Astronomy Observatory and the SAAO, together with colleagues from 12 other countries, have discovered a powerful megamaser – a radio-wavelength laser indicative of colliding galaxies. This is the most distant such megamaser found so far.

The NRF has partnerships with industry and public institutions at both national and international level to advance excellence in research and development for the benefit of the broader national system of innovation (NSI). The R40 million, five-year investment in clean energy research under an NRF-Sasol partnership, announced on 10 February 2023, illustrates the potential income that could be leveraged from mutually beneficial strategic partnerships. To date, nine just energy transition research chairs (five in energy and power systems modelling and four in green hydrogen) and six fellowships under the Postdoctoral Innovation Fellowship Programme have been awarded. The DSI-NRF-

Sasol tripartite partnership jointly funds four of the nine just energy transition research chairs.

Supported by the DSI and the Future Earth Regional Office of Southern Africa, the NRF's bid to host the Africa Future Earth Secretariat Hub was approved in April 2022 by the Future Earth Governing Council following an external review process. Following the approval, the first Africa Hub round table consultation took place at the NRF, and the NRF programme of establishing the Hub was endorsed. The Africa Hub will join eight global secretariat hubs, namely, Canada, China, France, Japan, South Asia, Sweden, Taipei and the United States of America. The University of Pretoria and Rhodes University have been confirmed as the hosts of the Africa Hub Leadership Centre.

The Joint Marine Laboratory programme has progressed well. The development of laboratories in three of four historically disadvantaged institutions (the University of the Western Cape, the University of Fort Hare, Walter Sisulu University and the University of Zululand) was completed in the reporting period. Historically, only a few black people were involved in marine science, and the launch of the laboratories in these universities is part of the strategy for a transformed, globally competitive marine science workforce.

A postgraduate researcher at Nelson Mandela University, Dr Nehemiah Latolla, won the FameLab® International Science Communication Competition talking about his research in phytochemistry, which focuses on evaluating the safety and efficacy of natural products in treating diabetes, the second leading cause of death due to illness in South Africa. The FameLab® competition is coordinated in South Africa by the British Council, in collaboration with the NRF-South African Agency for Science and Technology Advancement (SAASTA) and Jive Media Africa.

Dr Jennifer Veitch, a numeric modeller at the Egagasini Node of NRF-SAEON, was awarded the 2023 BRICS multilateral research grant for her proposal, "A BRICS Predicted Ocean: Roadmap and demonstration of model validation, intercomparisons and applications for sustainable management of the coastal ocean", which has partners from all five BRICS nations.

9.6 SOUTH AFRICAN COUNCIL FOR NATURAL SCIENTIFIC PROFESSIONS (SACNASP)

SACNASP has seen a significant increase in the number of applications for membership, particularly in quarter four of the 2022/23 financial year. In the period under review, 6 042 applications were received compared to 2 624 in the 2021/22 financial year. As a result of the increase in applications, SACNASP also saw an increase in the number of registrations from the previous financial year (330 or 15%).

The increase in applications and registrations was largely driven by a surge in applications from agricultural extension practitioners seeking employment through the Department of Agriculture, Land Reform, and Rural Development's National Framework for Extension. The framework seeks to professionalise extension and advisory services in South Africa by ensuring the compulsory registration of extension and advisory practitioners with SACNASP.



The proportion of women registering (or upgrading their registration) accounted for 53% of new registrations. The racial profile for new registrations was 77% African, 2,5% Asian, 9,7% white and 1,6% coloured.

At the end of the year, a total of 15 150 scientists were registered on the SACNASP database.

1 070 natural science students from various higher education institutions enrolled with SACNASP, 55% of which were women.

42 mentees participated in the Candidate Mentoring Programme.

SACNASP and the Split Second Science Education Foundation partnered to host workshops at nine under-resourced schools in the Northern Cape during National Science Week, reaching 1 580 learners across three districts.

SACNASP also organised eight webinars to promote public understanding of natural scientists' contributions to society.

The Continuing Professional Development Programme (CPD) ensures that registered scientists stay up to date with advances in their field. In the year under review, 42% of scientists on the SACNASP database participated in CPD.

The report "Pathways to the labour market and self-employment for natural science graduates" was launched. The report provides recommendations for future scientists to secure employment and remain in the science sector.

SACNASP gazetted its revised code of conduct in October 2022. Its whistleblowing hotline (to report unethical professional conduct by registered scientists) is fully operational and accessible to both scientists and the public.



9.7 SOUTH AFRICAN NATIONAL SPACE AGENCY (SANSA)

The launch of the SpaceWeather Centre in November 2022 in Hermanus was a milestone for SANSA and the DSI. It marked the conclusion of a three-year project and the years of investment in fundamental research in the development of 24/7 operational capability for space weather. SANSA received extensive support from the Overstrand Municipality and the town of Hermanus in putting together the high-level event. SANSA now employs eight space weather forecasters, seven of whom are women.

Also in November, SANSA and the National Aeronautics and Space Administration (NASA) renewed their partnership in lunar exploration with a sod-turning ceremony for a new Deep Space Network ground station in Matjiesfontein and the signing of a cooperation agreement between NASA and the DSI. The ground station will assist in the Artemis mission to return humans to the moon and give South Africa the opportunity to enter international space exploration missions.

In alignment with South Africa's internationalisation efforts, guided by the STI Decadal Plan, SANSA experienced yet another outstanding year of performance with the construction of three projects for international clients through its Space Operations programme. It

also concluded 22 mission-support initiatives for international space companies resulting in above average financial gains.

Digital Earth South Africa (DESA) platform was launched in beta form in October 2022, to facilitate user co-design and allow further optimisation of products and platform. The DESA platform is an innovative and secure platform that translates SANSA's 30 years of Earth observation satellite imagery into processed and easily accessible images, enhancing users' ability to produce information and insights. The project is being implemented in partnership with the South African Radio Astronomy Observatory (National Research Foundation) and is part of the Earth Observation Data Centre which is the core of the Earth observation infrastructure.

The SANSA Hermanus Site was declared a National Key Point on 23 December 2022. The responsibility for the protection of the site is shared by SANSA, the South African Police Services, the State Security Agency and disaster management representatives.

9.8 TECHNOLOGY INNOVATION AGENCY (TIA)

The Drug Discovery and Development Centre, a TIA-funded technology platform at the University of Cape Town, secured funding of R114 613 785 over five years from the Bill and Melinda Gates Foundation to support its tuberculosis and malaria drug development programmes. This significant agreement further cements the centre's reputation as a site of world-class research in South Africa for drug development in malaria and tuberculosis.



Mediclinic Southern Africa invested R70 million in Mediclinic Precise (formerly known as Artisan Biomed) in a share subscription transaction which will help to capitalise the company to acquire equipment, grow its skills base and develop new precision medicine solutions for the public. Previously a subsidiary of the Centre for Proteomic and Genomic Research, another technology platform supported by TIA, the company offers a suite of tests based on genomics technologies to diagnose disease, monitor treatment and screen for the probability of occurrence of certain medical conditions. Artisan Biomed received a R5 million loan from the Innovation Fund to build market traction for its tests and to attract more funding. TIA has received the full settlement of the loan plus interest, demonstrating its ability to make successful exits.

TIA, in collaboration with the DSI, invested an amount of R2,4 million towards an Aloe ferox-based products and process development initiative led by the CSIR. The project falls under the small-scale farmer technology diffusion programme which was earmarked to promote the commercialisation of six new cosmetic products using Cape Aloe (face wash, body lotion, hand cream, hand wash, hair food and hair spray) for small, medium and micro-enterprises in the rural Eastern Cape. From the three selected community-based enterprises, a total of 22 beneficiaries from Seymour, including women and young people, benefited from this agroprocessing technology package transfer initiative.

A project demonstrating a biological process for the treatment of acid mine drainage, supported jointly by Thungela, Mintek and TIA, has progressed significantly. The technology is a passive biological sulphate reduction process that is a low-tech, low-cost, low-maintenance niche

technology aimed at treating relatively low volumes of typical South Africa sulphate-rich mine water emanating from post-mine closure or decant from abandoned mines.

Geolnt is developing SpeedFox, a technology that is designed to reduce vehicle speeding, speeding-related accidents and fatalities. Efforts have been focused not only on technology development but also on market validation, and good progress has been made in the vehicle/fleet management domain, both locally and internationally.

With an increasing burden of communicable and non-communicable diseases in South Africa, the number of individuals receiving chronic therapy is on the rise. Technovera has developed Pelebox smart lockers which make it possible for patients to receive their repeat chronic medication using electronically and temperature-controlled cubicles, thereby eliminating the need to queue for hours at public clinics. In the period under review, Technovera has expanded its footprint in Namibia from 10 installed sites to a total of 19.

The MiDesk is a school bag that can be used as a desk and chair at home and at school. It is lightweight, waterproof, strong and portable, and can be wheeled or carried on the shoulder. TIA contracted with MiDesk Global (Pty) Ltd, a woman-owned entity, through the Innovation Fund, to support the commercial roll-out of the product with an amount of R6,8 million. Approximately 1 000 units have been sold to date. Through corporate social investments and donor funding, the project intends to distribute 6 000 desks valued at R10,2 million to underprivileged primary schools in the country. The first order of 500 desks has already been secured through investment from Cell C and will be distributed to underprivileged primary schools in Gauteng South.

Zlto is a youth-owned RLabs social enterprise spinout company that uses blockchain technology to increase engagement among young people, track positive behaviour via live dashboards and encourage certain behaviour through innovative reward systems. In response to the development of the DSI National Youth Strategy, TIA commissioned Zlto to develop the Youth Tracking Tool, a software-based online platform that facilitates interactions and transactions between users to track the development of young people. It is a decision-making tool intended to transform youth participation in socio-economic activities.

Patient Health is led by a black youth and supported through TIA's Seed Fund. The company has created a platform called Afrinurse.com, a data-driven marketplace for nurses that allows interested organisations, service providers and other interested parties to centralise their services onto a single platform that matches offerings with nurses across Africa. The technology was successfully piloted in the target market.

Steampunk Distilled Products (Pty) developed a method to extract food grade antioxidants from the Rosemary plant. The antioxidant extract is to be used as a stabiliser in the food and cosmetics industry, particularly in the edible oils market where significant growth is projected. The company has developed the technology further, having successfully produced various essential oils (from marula, macadamias, rose-hips and avocado), resulting in initial commercial sales of the extracts.



PART

B

**PERFORMANCE
INFORMATION**



1. AUDITOR-GENERAL'S REPORT: PREDETERMINED OBJECTIVES

The AGSA currently performs certain audit procedures on the performance information to provide reasonable assurance in the form of an audit conclusion. The audit conclusion on the performance against predetermined objectives is included in the report to management, with material findings being reported under the Predetermined Objectives heading in the Report on other legal and regulatory requirements section of the auditor's report. Refer to page 142 of the Report of the Auditor-General, published as Part F: Financial Information.

2. OVERVIEW OF DEPARTMENTAL PERFORMANCE

2.1 SERVICE DELIVERY ENVIRONMENT AND ALIGNMENT WITH BROADER GOVERNMENT POLICIES

The National Development Plan

The planned service delivery initiatives of the Department of Science and Innovation (DSI) are aligned with the broader government service delivery agenda, which is based on South Africa's National Development Plan (NDP) as articulated in the 2019-2024 Medium Term Strategic Framework (MTSF). The NDP, the blueprint for tackling South Africa's challenges of poverty, unemployment and inequality, highlights the importance of science, technology and innovation (STI) in addressing novel societal challenges. The NDP acknowledges that developments in STI fundamentally change the way people live, communicate and transact, with profound effects on economic growth and development.

Science, technology and innovation are key to equitable economic growth, and underpin not only economic advances, but improvements in health systems, education and infrastructure. The NDP maintains that countries characterised by strong STI capabilities can address poverty more effectively.

Policy and legislative milestones

The DSI and its national system of innovation (NSI) stakeholders, recognising the need for a new approach to optimise the contribution of STI to achieving the NDP's goals, developed a White Paper on STI, which was approved in 2019 and will be implemented through a series of Decadal Plans, which will be reviewed at least every five years.

The first Decadal Plan was approved by Cabinet in November 2022. During the year under review, several consultative sessions to refine the approved initiatives were held with NSI actors such as STI-intensive government departments and public research organisations. At the end of the financial year, final consultations with the National Economic Development and Labour Council (Nedlac), civil society and the private sector were planned.

The White Paper introduced new governance arrangements to improve the coherence and coordination of the NSI. One of these, the Interministerial Committee on STI (IMC), which was inaugurated in 2021, held its second meeting in 2022. At the meeting, the terms of reference for the STI Plenary, another of the governance structures, were also tabled. While the IMC serves the purpose of coordinating STI work across government, focusing on STI-intensive departments, the STI Plenary brings together government, the private sector and civil society, for the high-level prioritisation of STI issues.

Also relevant in this respect is the implementation of the recommendations of the Higher Education, Science, Technology and Innovation Institutional Landscape Review. An independent panel appointed by the Minister completed its work in 2021. The panel made far-reaching recommendations on the reconfiguration of the science councils, research institutes and funding agencies, with the intention of optimally positioning the NSI to respond to the policy intents articulated in the White Paper and the priorities articulated in the Decadal Plan.

Another significant new governance initiative is the work on budget coordination, as outlined in the 2021/22 annual report. The Department continued to engage the National Treasury in the setting up of this coordination mechanism, with a view to improving the coordination of funds allocated towards STI work across government.

Other key highlights for the financial year are outlined below under the six institutional outcomes that drive the work of the Department.

2.2 SERVICE DELIVERY IMPROVEMENT PLAN

The tables below highlight the service delivery achievements to date.

Table 1: Main services and standards

| Main services | Beneficiaries | Current/actual standard of service | Desired standard of service | Actual achievement 2022/2023 |
|--|--|--|---|--|
| Provide funding to institutions and agencies to support the development of technology solutions, products and services in the areas of space science, energy and the biosciences | Public research institutions, science councils, universities, private sector and entities | All funding transferred by the end of the financial year | All funding transferred by the end of the financial year | All funding transferred by the end of the financial year |
| Financial support for offices of technology transfer (OTTs) located at higher education institutions and science councils | Recipients include OTTs at 26 higher education institutions and 10 institutions listed in Schedule I of the Intellectual Property Rights from Publicly Financed Research and Development Act | OTTs financially supported by the end of the financial year | OTTs financially supported by the end of the financial year | OTTs financially supported by the end of the financial year |
| Support uptake of space applications by government departments and agencies | Government departments (national, provincial and local) and agencies | <ul style="list-style-type: none"> National geospatial decision-support tool Base maps for national land use and cover layers (human settlements and water bodies layers, and disaster management and national vegetation maps) Coordination of national Earth observation activities and promotion of the uptake of Earth observation applications | <ul style="list-style-type: none"> Up-to-date national geospatial decision-support tool Up-to-date base maps for national land use and cover layers (human settlements and water bodies layers, and disaster management and national vegetation maps) Better coordination and increased uptake of Earth observation applications | <ul style="list-style-type: none"> Municipal authorities were trained in the integration of Earth observation data and products during the implementation DDM planning approach and decision making. Participants were capacitated with practical lessons on the use of Earth observation and geospatial technologies to fast-track service delivery at the district level. Mercury monitoring points expanded and live data is now accessible to end users. |

| Main services | Beneficiaries | Current/actual standard of service | Desired standard of service | Actual achievement 2022/2023 |
|--|--|--|--|--|
| Placement of graduates and postgraduate students in science, engineering, technology and innovation (SETI) institutions for workplace experience | Graduates and postgraduate students | Support provided to about 15% of internship positions available for qualifying graduates between the DSI and its partners | Support provided to about 30% of internship positions available for qualifying graduates between the DSI and its partners | Support provided to about 10% of internship positions available for qualifying graduates between the DSI and its partners |
| Research grants to researchers | Researchers in universities, science councils and other national research facilities | Support provided to about three of every 10 qualifying researchers | Double the support to about six of every 10 qualifying researchers | Three of 10 qualifying researchers supported in 2022/23 |
| Financial and strategic support of research and development (R&D) initiatives that will lead to patents and prototypes | Universities, science councils, public- private partnerships | Ongoing support provided for R&D and demonstration of technology-based solutions with the intention of promoting their commercialisation and use | Ongoing support provided for R&D and demonstration of technology-based solutions with the intention of promoting their commercialisation and use | <ul style="list-style-type: none"> • 41 intellectual property rights (IPRs) filed • 76 technology demonstrations |

Table 2: Batho Pele arrangements with beneficiaries (consultation access)

| Current/actual arrangement | Desired arrangement | Actual achievement 2022/2023 |
|---|---------------------|---|
| Institutions and agencies submit R&D project proposals and business plans. These are evaluated and approved by the Department and funding is transferred once approval has been obtained. | No change required. | Institutions and agencies submitted R&D project proposals and business plans. These were evaluated by the Department and funding was transferred once approval had been obtained. |

Table 3: Service delivery information tool

| Current/actual information tool | Desired information tools | Actual achievement 2022/2023 |
|---|---|---|
| Advocacy communication strategy | Implementation plan for dissemination | Branding plans have been shared with Exco and implemented in the period under review. |
| Ministerial guidelines on awarding bursaries | A framework for reporting on the implementation of ministerial guidelines | Annual reporting in progress with implementation of ministerial guidelines |
| Communication strategy, including exhibitions and media | Implementation plan for dissemination, including exhibitions and media | Plans were implemented and disseminated as per government segmentation model. Exhibitions were coordinated through entities and some achieved through efforts rolled out by Programme 4: Science Promotion. |

Table 4: Complaints mechanism

| Current/actual complaints mechanism | Desired complaints mechanism | Actual achievement 2022/2023 |
|---|---|---|
| The National Research Foundation (NRF) has an appeal process for postgraduate students who are not awarded bursaries. | Panel of experts | Appeal framework approved |
| The NRF has an appeal process for researchers who are not awarded grants. | Framework with more efficient processes | Appeal framework implemented |
| Technology Innovation Agency | Appeals procedure | Appeals procedure being implemented, e.g. applications turned down are given an opportunity to appeal. |
| The National Intellectual Property Management Office (NIPMO) has a dispute mechanism for administrative decisions it takes that may adversely affect a recipient. | Dispute panel | During the course of 2022/2023, no administration decisions taken by NIPMO were disputed by recipients. The Dispute Panel therefore did not have to intervene or make any ruling on matters during 2022/23. |

2.3 ORGANISATIONAL ENVIRONMENT

An important development during the year under review was an organisational realignment project initiated by the Department. The purpose of the project is to enable the Department to identify (a) the “DSI of the future” in alignment with the policy shifts within the NSI, specifically the 2019 White Paper on STI and the STI Decadal Plan; and (b) the required DSI institutional capabilities.

Corporate governance issues

The Department’s internal processes and systems ensured that good corporate governance prevailed through sound administrative practices, effective operational systems, mechanisms to ensure financial oversight, appropriate information technology (IT) and the IT Steering Committee. Combined assurance involved governance structures such as Exco, the Enterprise Risk Management Committee and the Audit Committee, as well as regular reporting and face-to-face interactions. There was also collaboration with the Audit Steering Committee convened by the Auditor-General.

Employment equity

The Department has continued with the implementation of the approved Employment Equity Plan. The Department has achieved 53,19% representation of women at Senior Management Service (SMS) level. In terms of people with disabilities, the Department achieved 3,6% representation of total staff. An additional 29 candidates were nominated for the Women in Management leadership development programme. The process of appointing service providers for the development programme is under way. In terms of employee health and wellness, the Department has

provided services that include a counselling service, quarterly health screening services and an executive wellness programme. Interventions are implemented to address health and wellness risks identified through counselling and health screening services.

Financial disclosures

During the period under review, 100% of SMS members submitted their financial disclosures by the due date. There was a significant improvement in the level of compliance with the Performance Management Development System, with 100% compliance by members of the SMS and non-SMS employees.

2.4 KEY POLICY DEVELOPMENTS AND LEGISLATIVE CHANGES

The Department’s Decadal Plan was approved.

3. ACHIEVEMENT OF INSTITUTIONAL IMPACTS AND OUTCOMES

This section stipulates progress made by the DSI towards the achievement of impact statement, Strategic Plan outcome indicators and contributions toward the 2019-2024 Medium Term Strategic Framework.

Progress made towards the achievement of the impact statement

DSI's impact statement is "South Africa's sustainable and inclusive development enabled and enhanced through science, technology and innovation". As part of fulfilling the DSI's impact statement, Cabinet approved the STI Decadal Plan in the year under review.

Progress made towards the achievement of five-year targets in relation to the outcome indicators

This section details DSI outcomes as per the Strategic Plan and stipulates progress made towards the achievement of the five mid-term review of the strategic plan that was conducted by the DSI.

Outcome 1: A transformed, inclusive, responsive and coherent NSI

There are four outcome indicators in the strategic plan under Outcome 1.

The first outcome indicator is: "Number of formalised partnerships between different category actors of the NSI that advance Decadal Plan priorities", with a target of 10. The DSI is doing well on this indicator, since six partnerships had already been formalised by the end of September 2022.

The second outcome indicator is: "Number of STI missions introduced and adopted by Cabinet to crowd in resources and capabilities across the NSI", with a target of five. There is currently no progress to report on this indicator, because the indicator was dependent on the approval of the Decadal Plan, which was approved only in the third quarter of the 2022/23 financial year.

The third outcome indicator is: "Percentage of STI investment support by government, domestic business, the non-governmental sector and foreign/international sources that advance GERD towards 1,1% of GDP", with a target of 1,1%. The achievement to date is 0,62%. For the target to be achieved by the end of 2024/25 financial year, the implementation of the Decadal Plan must be fast-tracked. Furthermore, additional support needs to be directed to the business sector to encourage R&D. An investment framework will be developed, and the use of incentives such as the R&D tax incentive will continue.

The fourth outcome indicator is: "Number of approved strategies that give effect to the agreed dimensions of transformation to be effected in the NSI", with a target of three. The target is not yet due for reporting. However, the work will be done after the finalisation of the transformation framework that is currently being developed.

Outcome 2: Human capabilities and skills for the economy and for development

There are five outcome indicators in the strategic plan under Outcome 2.

The first outcome indicator is: "Number of artisans and technicians absorbed into the economy in sectors where the DSI has active programmes", with a target of 60. At the mid-term review of the strategic plan, 84 artisans had already been trained and offered employment. The target for the five-year period has been exceeded.

The second outcome indicator is: "Percentage of women and black researchers in South Africa's research workforce", with a target of 49% for women and 67% for black people. The actual achievement is 46% for both women and black people. Though this means that the DSI is on track to meet the target for women, this is not the case for black researchers. To remedy the delay in meeting the target for black researchers, there is ongoing engagement between the Department and its implementing agencies on measures required to speed up transformation. The Sibusiso Bengu Development Programme is a key initiative aimed at encouraging black researchers to remain in the system.

The third outcome indicator is: "Number of DSI-funded PhDs graduating annually as a contribution to the NDP target of 100 PhDs per million population by 2030", with a target of 4 700. To date, 3 552 DSI-funded PhDs have graduated.

The fourth outcome indicator is: "Percentage of PhD-qualified staff in higher education research and academic workforce", with a target of 60%. As at the mid-term review, 51% was achieved. The target on track to be achieved.

The last outcome indicator is: "Improved knowledge about science among the general public", with a target of 50% of the sample. Thus far, the indicator is on track, with survey report samples, technical report frameworks, and data collection instruments produced.

Outcome 3: Increased knowledge generation and innovation outputs.

There are two outcome indicators in the strategic plan under Outcome 3.

The first outcome indicator is: “Outcome Indicator 1: Percentage of South Africa’s share of global publication output”, with a target of 1% of global publication output. To date, 0,98% has been achieved, making it possible for the five-year target to be achieved.

The second outcome indicator is: “Outcome Indicator 2: Percentage of prototypes, technology demonstrators and pilot plants that advance industrialisation through innovation”, with a target of 10%. To date, 55% has been achieved.

Outcome 4: Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led industrial development

There are five outcome indicators in the strategic plan under Outcome 4.

The first outcome indicator is: “Rand value of RDI investment attracted to support RDI needs identified through the sector master plan process”, with a target of R100 million. The achievement currently stands at R39,7 million. The reason for the underperformance is that some sector master plans do not cover the whole Strategic Plan cycle as they were only formalised in the 2020/21 financial year and some (e.g. mining) are still outstanding.

The second outcome indicator is: “Percentage investment in SMMEs/co-operatives/start-ups to secure new opportunities through support provided by the DSI and its entities”, with a target of 3%. To date, 115% has been achieved. The target has therefore been exceeded for the five-year period.

The third outcome indicator is: “Number of new commercialised disclosures from publicly financed research and development”, with a target of 75. The achievement so far is 37. The DSI is on track to achieve the target.

The fourth outcome indicator is: “Number of new R&D-led industrial development opportunities initiated by the DSI”, with a target of one. The information on progress is not available due to the nature of the definitions that need refinement to allow for proper tracking and reporting.

The fifth outcome indicator is: “Turnaround time in providing preapproval decisions on projects for the R&D tax incentive”, with a target of “within 90 days from date of receipt of applications for 80% of projects for the R&D tax incentive”. The achievement is 32% (95 out of 294).

Outcome 5: Knowledge utilisation for inclusive development

There are two outcome indicators in the strategic plan under Outcome 5.

The first outcome indicator is: “Number of grassroots innovations whose commercialisation has been facilitated by the support/access of the multi-tiered support package provided by the DSI and its entities”, with a target of 180. So far, the total is 139.

The second outcome indicator is: “Number of grassroots innovators provided access to publicly financed intellectual property (innovative solutions and/or patents, rights, and designs) by the DSI”, with a target of 250. There is no achievement in this regard. Meetings will therefore be held with science councils and high-technology industries to discuss the modalities of making intellectual property available to grassroots innovators. Two workshops have also been planned to engage with grassroots innovators.

Outcome 6: Innovation in support of a capable and developmental state

There are two outcome indicators in the strategic plan under Outcome 6.

The first outcome indicator is: “Number of demonstrators that have successfully introduced a new way of delivering a service”, with target of 420. The actual achievement is 100. The underperformance is due to funding challenges, as not all the programme funding has been received.

The second outcome indicator is: “Number of district/metropolitan municipalities supported with technology-based applications as part of the District Development Model for Service Delivery Improvement”, with a target of five. The actual achievement is 10.

Contribution to the 2019-2024 Medium Term Strategic Framework

MTSF Apex Priority 1: A capable, ethical and developmental state

The adoption of the White Paper on STI marked renewed focus on the development of the NSI, and the creation of an enabling policy environment that will enhance the NSI’s contribution to addressing national priorities. The Department is focused on building constructive relations by formalising partnerships with various actors in the NSI (e.g. civil society, higher education institutions, other government departments, the private sector and business). The Department is in the process of implementing the Decadal Plan, which outlines the priorities for the 10-year period as well as defining the missions and responsibilities of different NSI players.

MTSF Apex Priority 2: Economic transformation and job creation

The DSI has led/participated in the development of master plans for national priority sectors, including aerospace and defence; the Oceans Economy; forestry, agriculture and agroprocessing; cannabis; the sugar industry; the health economy; renewable energy and gas; and ICT and the digital economy.

Furthermore, the DSI's Sector Innovation Fund and industry development centres are supported through the DSI's Industry Innovation Partnership Programme, to incentivise the private sector to increase investment in research, development and innovation, with the aim of increasing competitiveness.

The Innovation Fund, launched in 2020, is aimed at facilitating the commercialisation of locally developed intellectual property rights, especially innovation generated from publicly funded research. The aim is to use this fund to de-risk innovations so they can attract follow-on funding from other sources such as the Public Investment Corporation and the Industrial Development Corporation, private funders and venture capitalists. To date, about R500 million of the R1 billion allocation has been invested in proudly South African innovations. As intended, every R1 invested by the Innovation Fund leveraged an additional R3 from one or more of the sources mentioned above. The Department has been able to forge successful partnerships with funding instruments and institutions like the SA SME Fund and Anza Capital, and is actively collaborating and engaging to partner with more women and black-owned fund managers.

Although it is still too early to measure the full benefit of the fund, it is pleasing that some of the initiatives supported through it have developed technologies that have opened doors for increased foreign and local earnings, improved efficiencies and increased employment. For example, an industrial Internet of Things company called Stone Three can proudly report what the Innovation Fund intervention has done to enable it to increase its contribution to tax revenue. Other initiatives are about improving access to health through self-use medical devices that aim to empower children, those living with disabilities and senior citizens, who often battle with conventional devices.

MTSF Apex Priority 3: Education, skills and health

To contribute towards human resources and skills development, the Department has focused its investment on the post-school education and training (PSET) sector, funding PhD candidates as a contribution to the NDP target of 100 PhDs per million population by 2030. In order to contribute to the effective functioning of the PSET sector, the Department also tracks the percentage of PhD-qualified staff in the higher education research and academic workforce.

To support labour activation and reduce unemployment among technical and vocational education and training graduates compared to other graduates, the Department has facilitated the absorption of 84 trained artisans and technicians in sectors where the DSI has active programmes.

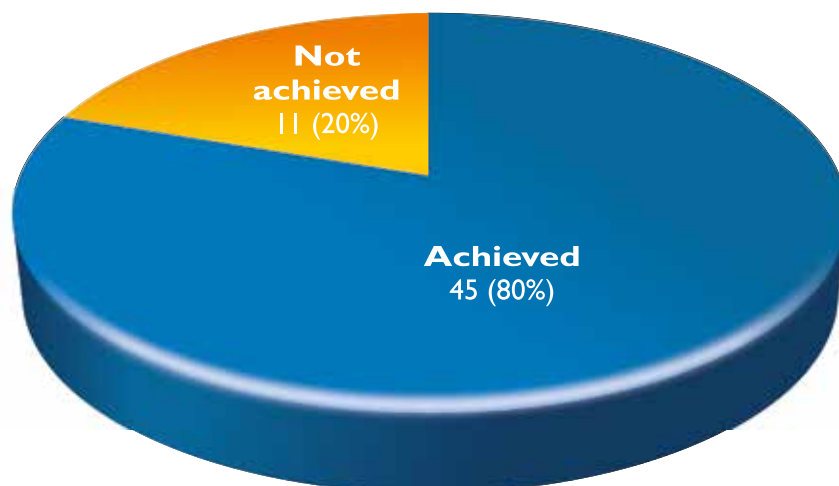
The DSI's work has contributed to the NDP and MTSF goals in many ways, some of which are set out below.

- Disbursing 1 300 grants to emerging researchers.
- Collaborating with the Department of Higher Education and Training and community education colleges to establish Living Labs in rural, small town and township community learning centres. So far, four sites have been identified for the establishment of the labs, and the number will increase each year. Living Labs are co-creation spaces that have ICT equipment, high-tech equipment and skills development programmes set up to support the development of innovative solutions to address systemic local economic challenges. The aim is to unlock productivity and performance in high potential local economic sectors and production clusters in order to expand local economic opportunities.
- Supporting research projects in strategic areas with bursary funds to facilitate skills development in these areas. In addition, partnerships have been formed with both public and private sector entities to facilitate technology deployment in support of service delivery, as well as the market uptake of the technologies.
- Achieving 2019-2024 MTSF targets through financial support for 27 411 master's students, 15 209 doctoral students and 3 682 postdoctoral fellows.
- More than 330 research infrastructure grants awarded to higher education institutions, science councils, national facilities of the National Research Foundation and museums.
- A total of 4 995 graduates and students placed in the DSI-funded work preparation programmes.
- 18 746 researchers funded through NRF-managed programmes and 41 635 research articles published by researchers awarded grants between 2017 and 2022.
- Hosting an mRNA vaccine technology transfer hub, an initiative of the World Health Organization (WHO) in partnership with the government of South Africa, the French government and the Medicines Patent Pool.
- Developing Covid-19 rapid antigen tests locally, through a DSI and Technology Innovation Agency-funded project managed by the South African Medical Research Council. This saw a rapid antigen acute infection test developed by Medical Diagnostech receive approval from the South African Health Products Regulatory Authority. The test provides results in two to 15 minutes and does not require any laboratory equipment, specially trained staff or electricity, while the results compare well with qPCR tests.
- Launching the Active Pharmaceutical Ingredients Technology Innovation Cluster, established to manufacture biologically active components used to make finished pharmaceutical products such as tablets and capsules.

4. INSTITUTIONAL PROGRAMME PERFORMANCE INFORMATION

This section details the performance of the Department of Science and Innovation for the period 1 April 2022 to 31 March 2023 based on its approved 2022/23 Annual Performance Plan.

4.1 SUMMARY OF OVERALL PERFORMANCE IN THE 2022/23 FINANCIAL YEAR



4.2 PERFORMANCE HIGHLIGHTS FOR 2022/23 FINANCIAL YEAR

Outcome 1: A transformed, inclusive, responsive, and coherent NSI

Outcome statement: Expand, transform and enhance the responsiveness of the NSI.

During the fiscal year, the Department’s Decadal Plan was approved by the Cabinet. As part of the implementation of the Decadal Plan, the second meeting of the Interministerial Committee was held in December 2022. Other important work in the implementation of the Decadal Plan pertains to the tabling of the terms of reference for the STI Plenary and the draft Skills and Innovation Compact at the IMC meeting mentioned above.

Another important development was in relation to the Open Science Policy, which is aimed at spreading/ disseminating scientific knowledge once it is available. This is being undertaken through the publishing of all publicly funded research conducted in South Africa in open access journals. Important milestones for the reporting period included the following:

- The Presidency issued the Socio-Economic Impact Assessment System (SEIAS) Report on 22 July 2022, for the draft National Open Science Policy. This report marked a significant step in evaluating the potential impacts of the policy.
- Approval of the policy by the Economic Sectors, Investment, Employment, and Infrastructure

Development (ESIEID) Government Cluster on 11 August 2022.

- Preparation and submission of a Cabinet memorandum for the Minister’s approval, setting the stage for the presentation of the draft National Open Science Policy to Cabinet for official approval.

The impending adoption of the National Open Science Policy signifies South Africa’s dedication to embracing openness and innovation on a global scale, with potential implications for enhanced collaboration, knowledge sharing, and socio-economic advancement.

Outcome 2: Human capabilities and skills for the economy and for development

Outcome statement: Improve the representivity of high-end skills and increase the development of technical and vocational skills for the economy

The NDP identified skills development to raise productivity and income to enhance the competitiveness of the economy. The DSI has invested in skills development to ensure access and equity for all, particularly marginalised communities.

The DSI places importance in ensuring that the public understands and appreciates the work the Department is undertaking. Therefore, 12 initiatives promoting public awareness of and engagement with science were conducted, as reflected in the reports of the NRF and other implementing and collaborative partners. During the reporting period, 2 359 PhD students and

4 746 pipeline students (those enrolled for honours and master's degrees) received bursaries. In the same period, 310 trainees received training in intellectual property management and technology transfer.

The reporting period also saw collaboration among the National Intellectual Property Management Office (NIPMO), the Programme 4 Directorate: Science Promotion, and the Department of Basic Education for the nationwide implementation of the IP4kids/teachers training programme. The programme is designed to enlighten educators about intellectual property and nurture innovative thinking among students.

Minister Nzimande officially launched the TVET study report on green hydrogen skills on 6 December 2022 in Cape Town. The development of the TVET study report started after the UK Partnering for Accelerated Climate Transitions launched a €60 million flagship programme under its international climate finance portfolio to support green hydrogen job creation from a just transition perspective, which was seen as a benefit for South Africa. Simultaneously, the Department sponsored 18 black master's and PhD students through the Agricultural Bioeconomy Innovation Partnership Programme. Moreover, there was also the inauguration of the on-site construction of the SKA I Mid Array telescope, significantly enhancing South Africa's global standing in science and technology.

Furthermore, the Department and the Media, Information, Communication and Technology Sector Education and Training Authority (MICT SETA) forged a three-year partnership to empower unemployed youth, budding entrepreneurs, and emerging innovators across South Africa by nurturing information and communications technology and 4th industrial revolution skills.

Outcome 3: Increased knowledge generation and innovation outputs

Outcome statement: Increase the relative contribution of South African researchers to global scientific and innovation output.

In promoting globally competitive research and innovation in South Africa, the importance of the knowledge-generating function of research, particularly in the higher education sector, needs to be recognised. Knowledge generation is crucial for STI prospects. Without investment in publications, research grants, and research and innovation infrastructure, knowledge generation is not possible. Research grants are provided through several instruments designed to strengthen research capacity at universities and research-performing institutions.

During the reporting period, through NRF-managed programmes, the DSI awarded researchers 3 321 research grants. Twenty-one annual research

infrastructure grants were also awarded. Furthermore, researchers that were supported through research grants contributed to the publication of 7 273 internationally accredited research articles.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) International Year of Basic Sciences for Sustainable Development 2022. Served as a platform for highlighting the intricate interplay between basic sciences and the Sustainable Development Goals (SDGs). A series of strategic activities under the South African Basic Sciences Platform underscored the important role of the basic sciences in driving inclusive global development.

The SKA site is hosting another successful international radio telescope called the Hydrogen Epoch of Reionization Array (HERA), which is designed to detect hydrogen molecules that were formed in the early universe. An impact study conducted on HERA revealed that there were significant benefits to Carnarvon and other surrounding local communities in the Northern Cape.

The HERA telescope involved South African researchers and engineers in its design and construction and this demonstrates the capabilities that we have in this field of astronomy.

The MeerKAT telescope team received the 2023 Group Achievement Award from the Royal Astronomical Society, for advancing radio astronomy in Africa. Policy decisions aligned with enhancing the institutional astronomy landscape, transitioning the SKA project, and implementing a strategic astro-tourism approach to position South Africa as a premier astro-tourism destination. NIPMO collaborated with the World Intellectual Property Organization (WIPO), the Companies and Intellectual Property Commission, and the University of Limpopo to host the WIPO-South Africa Summer School on Intellectual Property and Technology Transfer. This hybrid event (held both virtually and physically) drew the participation of 114 individuals from 14 countries.

NIPMO also organised the 2023 Technology and Innovation Centre (TISC) workshop in February. The theme of the workshop was "Patent, Trademark and Design Search Tools in South Africa". The TISC serves as a gateway to technological information, empowering individuals to harness data from technology databases effectively. This, in turn, amplifies intellectual property management and technology transfer capabilities. This collaborative platform with the WIPO has multiple benefits, including access to patent databases, certified training, and comprehensive information and instructional resources.

Outcome 4: Knowledge utilisation for economic development in (a) revitalising existing industries and (b) stimulating R&D-led industrial development

Outcome statement: Improve the sustainability and competitiveness of traditional sectors of the economy and initiate/continue research and development in emerging technology areas that could enable the creation of non-traditional South African economic sectors. STI initiatives have been identified as the primary drivers of economic growth, job creation and the socio-economic reform agenda in the country.

The Agriculture Bioeconomy Innovation Partnership Programme (ABIPP) has embarked on an array of projects, which are also relevant to the Department's contribution to the Economic Reconstruction and Recovery Plan (ERRP). These initiatives span a diverse spectrum, encompassing product and prototype development, value chain analysis and enhancement, digital agriculture, co-funding opportunities, and expansive sector-wide collaborations. Significantly, these endeavours are in direct alignment with both the DSI's Decadal Plan and the Agriculture and Agro-processing Master Plan (AAMP) (2022).

In 2022/23, the ABIPP allocated funding to 14 multi stakeholder programmes/platforms in the agricultural realm, of which six novel partnerships with the private sector flourished. These partnerships cover a wide spectrum of agricultural commodities, including wheat, maize, soybean, cotton, red meat, orange flesh, sweet potato, canola, indigenous vegetables, Bambara groundnut, amadumbe, cassava and potatoes.

A standout collaboration with the grains industry bore fruit with the establishment of the National Grains Research Programme (NGRP), fostering collaboration across South Africa's grains sector and linking industry, government and researchers. A private sector co-funding totalling R68 754 127 was secured in 2022/23, with contributions stemming from the grains and oilseeds, red meat, the CSIR and the Technology Innovation Agency. Other partners made significant in-kind contributions through their active involvement in project-related activities.

The scope of DSI's support extends to interventions addressing plant and animal health diagnostics, surveillance, monitoring, and early warning systems. An illustration of this is the joint launch of the National Biosecurity Hub in collaboration with DALRRD, addressing phytosanitary measures and international trade demands. ABIPP's financial backing materialised in a digital platform at Innovation Africa, designed for piloting digital decision-support systems tailored for biosecurity.

In the domain of agro processing, the Cape aloë project burgeoned with the development of six Aloë ferox-based cosmetic product prototypes, poised for commercialisation in the Eastern Cape. The CSIR's contribution encompassed the provision of production manuals and samples to SMME agribusinesses in Seymour. Simultaneously, ABIPP executed a pilot study for digital agriculture, effectively supporting the National Biosecurity Hub's information hub.

The programme's influence extended to crop varieties, with the registration of four varieties on the varietal list and two plant breeders' rights applications for wheat. An impactful technology demonstration emerged in the cotton industry through a collaboration with CottonSA, specifically in the creation of cotton balers for smallholders. This initiative significantly benefited over 1 000 farmers, 60% of them women. The ripple effect of ABIPP's support extended to rural communities and farmer development through nine projects, contributing technological innovation assistance, agronomy training, and pest/disease surveys. The tangible outcomes are exemplified by the empowerment of 507 emerging black farmers who benefited from these initiatives.

Among ABIPP's achievements, the Wheat Breeding Platform has emerged as a prominent endeavour with a distinct focus on enhancing the sustainability of the local wheat industry. By providing enriched genetics and locally adapted wheat germplasm boasting higher yields, this initiative endeavours to amplify production while reducing dependence on wheat imports. Around 200 genotypes (220 in 2022/23) are identified annually for distribution in partnership with private enterprises such as Syngenta, Corteva, and the Agricultural Research Council (ARC) Small Grain Institute. This germplasm significantly bolsters ongoing breeding efforts across institutions, manifesting its value.

Through ABIPP, four new wheat varieties were registered on the wheat varietal list and the applications for two plant breeders' rights for wheat were submitted in terms of the Plant Breeder's Rights Act.

The R&D tax incentive has been extended to 31 December 2033. This extension underscores the government's commitment to stimulating early-phase research and development through strategic tax policy. Concomitantly, enhancements are slated for the R&D tax incentive to maximise its impact, including a proposed six-month grace period allowing projects to commence before submitting the application, a move particularly beneficial to new and smaller applicants. Furthermore, the definition of R&D is poised for simplification, streamlining the application process by pivoting from an "end-result" approach to integrating principles from the OECD Frascati Manual. This pragmatic shift acknowledges the intrinsic uncertainty in R&D, and the evolving nature of activities during the

application phase. The proposed changes also empower the Commissioner of the South African Revenue Service (SARS) to share specific information with the Minister of Higher Education, Science and Innovation, strengthening the monitoring and evaluation mechanisms for a more robust oversight framework.

Outcome 5: Knowledge utilisation for inclusive development

Outcome statement: Expand the use of scientific knowledge (as evidence) in support of innovation for societal benefit and public good.

The use of knowledge for the inclusive development agenda is aimed at supporting experimentation with STI-based innovations for tackling poverty, including the creation of sustainable job and wealth opportunities, building sustainable human settlements and enhancing the delivery of basic services. The DSI investments in this area hold potential for future sources of economic growth, creating new types of jobs, and providing new solutions to problems in healthcare, agriculture and water-related services.

Advancing inclusive development through innovation, the Spatial Monitoring project was initiated under the guidance of the Council for Scientific and Industrial Research. This undertaking sought to demonstrate cutting-edge unmanned aircraft technology, harmonising seamlessly within the context of the 4th industrial revolution. The project's entailed the procurement of a resilient commercial-grade remotely piloted aircraft system, forging partnerships with small enterprises, formulating a business case, and the comprehensive training and licensing of remote pilots, including unemployed graduates. There are plans to empower more unemployed graduates for entrepreneurial prospects within the growing drone market.

Under the Waste RDI Roadmap two technology packages were created to constitute the South Africa Waste Picker Registration System. These packages, in the form of a web application and a desktop application, emerged through a collaborative effort spearheaded by the CSIR, in partnership with the University of the Witwatersrand. The latter's participation extended to amalgamating stakeholder feedback into system design and developing the pilot phase, aimed at refining the system. The aim is to develop a comprehensive master list, encapsulating all registered and verified waste pickers/reclaimers, encompassing both South African and non-South African entities, irrespective of their documentation status.

South Africa's commitment to the preservation and promotion of indigenous knowledge found expression through various channels. One such channel was the creation of the Indigenous Knowledge Registration System (IKRS), a secure repository dedicated to

documenting indigenous knowledge across provinces, serving as a testament to the nation's reverence for its cultural heritage.

To safeguard and uplift indigenous wisdom, strides were made in establishing the Indigenous Astronomy Steering Committee and endorsing recognition of prior learning for indigenous knowledge practitioners, solidifying the commitment to nurture and amplify invaluable indigenous insights.

Outcome 6: Innovation in support of a capable and developmental state

On 17 May 2022 a collaborative effort between the Department of Science and Innovation, the World Bank Group and the Department of Small Business Development culminated in the launch of the Innovation Bridge Portal and Start-up Community. The CSIR was also part of this process, which aims to cultivate an environment where entrepreneurs and innovators can flourish, ultimately driving economic growth and facilitating job creation across Africa.

Another important development was the launch of the 3D Construction Printing Technology for Human Settlements Project a collaborative venture with the National Department of Human Settlements. This innovation accelerates the distribution of government-subsidised housing, revolutionising the process and setting new benchmarks for sustainability, with potential for contribution to economic growth.

International Cooperation and Resources

During the United Nations Commission on the Status of Women, a Grade 12 learner from KwaZulu-Natal, supported by the DSI, participated in a side event to share experiences and highlight the impact of Nka'Thuto EduPropeller, an NGO backed by DSI, addressing gender-based violence through STI solutions. ESASTAP organized an informative session to enhance South African involvement in EU-funded initiatives like the Africa II initiative of the Horizon Europe Framework Programme. Collaborative partnerships were fostered with renowned multinational companies, including ABB South Africa, Schneider Electric, Bosch, and Pfizer, to leverage resources.

In March 2023, the South Africa-Russia Joint Inter-governmental Committee on Trade and Economic Cooperation meeting convened to discuss space, high-performance computing, basic research, Russia's Joint Institute for Nuclear Research, and inter-academy collaboration.

A collaborative action plan emerged, driving initiatives before the next meeting. The visit to South Africa of the German Federal Minister of Education and Research, Ms Stark-Watzinger, solidified South African-German

cooperation, and a bilateral research chair for the just energy transition was established. German-funded Research Networks for Health Innovation in Sub-Saharan Africa were inaugurated and the First South Africa-Finland Circular Economy Consultations were held.

To enhance human capital, DSI appointed emerging researchers and HDI representatives as assistant national contact points for Horizon Europe. This facilitated 21 students' participation in global programmes, bolstered by seed and co-investment funding. Africa-Europe Science Collaboration and Innovation Platform policy dialogues strengthened collaborations, aiding smallholder farmers to farm and process essential oils through innovation systems and postgraduate qualifications for disadvantaged students.

In January 2023, potential collaborations were explored at a SA-Iran nanotechnology workshop.

A memo-randum of understanding between the Uganda Industrial Research Institute and the CSIR strengthened industrial cooperation, as did by similar agreements involving the South African Industrial Development Corporation and the Uganda Industrial Development Corporation. A Globalstars call was launched with Kenya through the Eureka Network.

A significant MoU between Madagascar's Institute of Applied Research and the CSIR fostered joint research on indigenous species, while funded equipment funded by Japan's Science and Technology Research Partnership for Sustainable Development funded by Japan's Science and Technology Research Partnership for Sustainable Development advanced ammonia synthesis at the HySA Infrastructure Centre of Competence at North-West University. The Water and Energy for Food Innovation Hub empowered women innovators and disadvantaged institutions, emphasising knowledge-sharing.

4.3 PROGRAMME I: ADMINISTRATION

Purpose

The purpose of the Programme is to provide strategic policy and planning alignment, ensure effective governance, risk management, and monitoring and evaluation within the Department and among entities. Furthermore, the Programme provides strategic science communication and branding of DSI activities, its entities and the national system of innovation (NSI).

Components

The Programme consists of the following components:

The Ministry and Office of the Director-General supports the Minister, Deputy Minister and Director-General by providing professional and executive support.

This component is responsible for the systems and mechanisms for handling Parliamentary questions and replies, Cabinet matters, correspondence, submissions and memoranda. It also coordinates activities within the Department to assist in steering the NSI towards the development of a knowledge-intensive economy with higher productivity levels.

Enterprise Risk Management provides and drives an enabling environment in support of the identification, management and oversight of risks across strategic, tactical and operational levels in the Department. This role includes ensuring that countering fraud and/or corruption is made an integral part of strategy, operations and administration in the Department.

Policy, Planning, Governance, Monitoring and Evaluation supports the DSI leadership in steering the NSI by facilitating the coordination of selected cross-cutting issues in the Department, strategic and operational planning, monitoring and evaluation for the Department and its public entities, and governance of the public entities, in order to assist the Department and its entities to contribute to the realisation of departmental and national priorities.

Internal Audit serves as the primary assurance tool for improving the Department's governance, risk management and management controls by providing insight and recommendations based on the analysis and assessment of data and business processes.

Human Resources ensures that the Department is able to (a) provide a professional service through accurate, consistent and best employment practices in all its activities; (b) attract, retain and motivate employees who share the organisational vision; (c) champion organisational transition, with a view to ensuring that change is embraced; (d) set performance standards and manage performance against them; (e) promote an environment that supports the personal and career development of all employees so that they can reach their full potential and contribute better to the achievement of the Department's strategic objectives; (f) instil a culture of service excellence; and (g) provide an environment that promotes health, wellness and safety, and embraces the value of diversity.

Finance: Ensures the effective, efficient and economical use of financial resources in line with financial prescripts, through the development and implementation of financial systems, policies, frameworks and procedures. This includes budget planning and expenditure monitoring, and the management of procurement, acquisition, logistics, assets and financial transactions.

Information Systems and Knowledge Management: Responsible for the delivery of services that support the Department's strategic plan and individual

units' objectives through the effective use of information technology, the institutionalisation of knowledge management, and the preservation of the Department's institutional memory. Aligns the Information Systems and Knowledge Management Strategy with the business strategy to ensure that the Department achieves optimum use of its resources. In addition, the chief directorate is tasked with the responsibility of providing cutting-edge technologies that will optimise the use of information in a reliable and secure manner. This includes the implementation of effective and efficient business systems that meet users' needs, the provision of reliable IT infrastructure, and the creation of capacity for proper information management and business intelligence.

Science Communication: Provides strategic communication support to raise local and international awareness of the objectives and activities of the Department, its entities and the NSI, as well as to ensure effective communication among DSI, entity and NSI stakeholders. It seeks to provide the public with timely, accurate and clear information that is widely accessible to all South Africans about government policies, programmes, plans, services and initiatives in a non-partisan way, thus making it accountable to the public it serves. Its overall focus is to create public awareness and brand the Department as a custodian of developments, benefits and opportunities in publicly funded STI initiatives across the country's science system. Through the branding of the Department and its entities, it will demonstrate how the Department is "Making sure it's possible", and how, through the DSI's various initiatives, STI can transform and empower society. It promotes dialogue between citizens and government, including on policy, and establishes partnerships with a range of stakeholders, including the private sector, higher and post-school education institutions, and research institutions.

Legal Services: Responsible for ensuring that the interests of the Department are protected against any legal risk. The component ensures that the Department complies with all relevant legislation and takes a proactive approach to deal with matters that have the potential to give rise to conflict or legal challenges.

Institutional outcomes to which the Programme contributes

- A transformed, inclusive, responsive and coherent NSI.
- Innovation in support of a capable and developmental state.



Table 1: Programme 1 – Administration

| Not Achieved | | | | | | | | | | |
|--------------|---|--|--|--|--|---|--|---|--------------|---|
| Achieved | | | | | | | | | | |
| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
| 1. | A transformed, inclusive, responsive and coherent NSI | DSI public entities' annual performance plans (or, in the case of the CSIR, shareholder compact) | DSI public entities' annual performance plans (or, in the case of the CSIR, shareholder compact) approved by the Minister and chairpersons of the boards | DSI public entities' 2021/22 annual performance plans (NRF, HSRC, TIA, SANSA, NACI, SAC-NASP, ASSAf) and CSIR shareholder compact signed by the Minister and chairpersons of the boards by 31 March 2021 | DSI public entities' 2021/22 annual performance plans (NRF, HSRC, TIA, SANSA, NACI, SAC-NASP, ASSAf) and CSIR shareholder compact signed by the Minister and chairpersons of the boards by 31 March 2022 | DSI public entities' 2023/24 annual performance plans (or, in the case of the CSIR, shareholder compact) signed by the Minister and chairpersons of the boards by 31 March 2023 | DSI public entities' 2023/24 annual performance plans (or, in the case of the CSIR, shareholder compact) were signed by the Minister and chairpersons of the boards by 31 March 2023 | None | Achieved | n/a |
| 2. | | Reduce vacancy rate | Percentage of approved funded positions filled annually | 92% of all approved funded positions filled by 31 March 2021 | 85% of all approved funded positions filled by 31 March 2022 | 94% of all approved funded positions filled by 31 March 2023 | 59% (50/85) of approved funded positions filled by 31 March 2023 | -35% | Not achieved | The recruitment and selection processes were delayed due to various reasons such as positions that were put on hold, re-advertised positions, and postponement of interviews. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|---|---|--|--|--|---|----------|------------------------|
| 3. | A transformed, inclusive, responsive and coherent NSI | Good financial governance | Unqualified audit opinion with no financial matters in the audit report from the Auditor-General | Unqualified audit opinion with no financial matters in the audit report from the Auditor-General by 30 September 2020 | Unqualified audit opinion with no financial matters in the audit report from the Auditor-General by 30 September 2021 | Unqualified audit opinion with no financial matters in the audit report from the Auditor-General by 30 September 2022 | Unqualified audit opinion with no financial matters in the audit report from the Auditor-General by 30 September 2022 | None | Achieved | n/a |
| 4. | Media and marketing initiatives to profile the DSI and its entities | Number of media platforms used to promote the DSI and its entities | Unqualified audit opinion with no financial matters in the audit report from the Auditor-General by 30 September 2021 | Six platforms (print, broadcast, online, media liaison, stakeholder engagement and social media) to profile the DSI and its entities by 31 March 2021 | Six platforms (print, broadcast, online, media liaison, stakeholder engagement and social media) to profile the DSI and its entities by 31 March 2022 | Six platforms (print, broadcast, online, media liaison, stakeholder engagement and social media) to profile the DSI and its entities by 31 March 2023 | Six platforms (print, broadcast, online, media liaison, stakeholder engagement and social media) to profile the DSI and its entities by 31 March 2023 | None | Achieved | n/a |
| 5. | Branding initiatives and coordinated messaging on billboards, broadcast platforms and branding collateral) developed and implemented | Two national thematic campaign reports on the branding roll-out initiatives by 31 March 2021 | Two national thematic campaign reports on the branding roll-out initiatives by 31 March 2022 | Two national thematic campaign reports on the branding roll-out initiatives by 31 March 2022 | Roll-out branding initiative (thematic and coordinated messaging on billboards, broadcast platforms and branding collateral) across provinces and metropolitan municipalities by 31 March 2023 | Roll-out branding initiative (thematic and coordinated messaging on billboards, broadcast platforms and branding collateral) across provinces and metropolitan municipalities by 31 March 2023 | Rolled-out branding initiative (thematic and coordinated messaging on billboards, broadcast platforms and branding collateral) across provinces and metropolitan municipalities by 31 March 2023 | None | Achieved | n/a |

Sub programme expenditure

| Detail per component for Programme I Administration for the year ended 31 March 2023 | | | | | | | | | | |
|--|---------------------------------|----------------------------|-------------------|------------------------------|-----------------------------|-------------------|--|------------------------------|-----------------------------|--|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation R'000 | Shifting of funds R'000 | Virement R'000 | Final appropriation R'000 | Actual expenditure R'000 | Variance R'000 | Expenditure as % of final appropriation % | Final appropriation R'000 | Actual expenditure R'000 | |
| I.1 Ministry | 5,828 | - | (1,500) | 4,328 | 2,796 | 1,532 | 64.6% | 5,597 | 2,581 | |
| I.2 Institutional Planning and Support | 162,724 | - | 6,900 | 169,624 | 165,905 | 3,720 | 97.8% | 155,647 | 145,262 | |
| I.3 Corporate Services | 177,819 | (2,380) | (14,300) | 161,139 | 159,311 | 1,828 | 98.9% | 156,306 | 145,922 | |
| I.4 Office accommodation | 5,703 | 2,380 | - | 8,083 | 8,075 | 8 | 99.9% | 10,758 | 10,689 | |
| Total | 352,074 | - | (8,900) | 343,174 | 336,087 | 7,087 | 97.9% | 328,308 | 304,454 | |

Strategy to overcome areas of underperformance

The Programme's one area of underperformance relates to the filling of approved funded prioritised positions. Only 50 of 85 (59%) positions were filled, against a target of 94%. To address this, the Chief Directorate: Human Resources developed project plans with time frames for recruitment and selection processes and holds managers accountable where delays are identified.

Performance in relation to standardised outputs and output indicators for sectors with concurrent functions

Not applicable

4.4 PROGRAMME 2: TECHNOLOGY INNOVATION

Purpose

The purpose of the Programme is to promote technology development and the protection and utilisation of publicly funded intellectual property for innovation with socio-economic impact.

Components

The Programme consists of the following components:

Bioinnovation leads the implementation of the national Bio-economy Strategy, which was approved by Cabinet in 2013 and is intended to ensure that the bioeconomy makes a significant contribution to the South African economy. The strategy focuses on the following:

- Strengthening the research and innovation competencies that form the strategic foundation for the bio-based NSI.
- Developing and/or supporting strategic RDI programmes that provide for new knowledge and innovation outcomes related to the government's priority requirements.
- Coordinating role players across the NSI to ensure that appropriate skills, knowledge and competencies are made available to maximise socio-economic impact.
- Mainstreaming applied indigenous knowledge-based research and development (R&D), inclusive innovation and local manufacturing to support commercialisation models for sustainable livelihoods and improved quality of life.

The chief directorate has four directorates managing thematic priorities aligned to its focus areas, namely, Agriculture, Indigenous Knowledge-Based Technology Innovation, Industry and Environment, and Health Innovation.

Hydrogen and Energy supports the reduction of greenhouse gas emissions and air pollution, contributing to a more diverse and sustainable energy mix by enabling the widespread commercialisation of battery, fuel cell, renewable and net-zero technologies based on publicly funded intellectual property rights. It supports the penetration of clean and alternative energy technologies through research, development, and validation efforts. This is to allow these technologies to be competitive with current technologies in terms of cost and performance while fostering strategic partnerships with the public and private sectors to reduce the institutional and market barriers to their commercialisation.

The chief directorate has three directorates managing thematic priorities aligned to its focus areas, namely,

Hydrogen and Energy, Transport Fuels and Renewable Energy, and Power.

Space Science and Technology supports the creation of an environment conducive to the implementation of the National Space Strategy and the South African Earth Observation Strategy, as well as addressing the development of space technologies, innovative solutions and human capital to respond to national priorities and boost socio-economic growth. The chief directorate also plays a critical oversight function over SANSA.

The chief directorate has two directorates managing thematic priorities aligned to its focus areas, namely, Earth Observation and Space Systems

Innovation Priorities and Instruments supports and strengthens the innovation policy package (and related interventions) with the aim of creating and sustaining an enabling environment for innovation, technology development, and the utilisation, including commercialisation, of publicly funded R&D initiatives. It does this by identifying, developing, creating and supporting policy and institutional structures that facilitate technology development and its progression into national and international markets. The chief directorate also supports the development and implementation of emerging technologies, in areas such as synthetic biology, structural biology, systems biology and functional genomics (collectively comprising the South African BioDesign Initiative), nanotechnology, photonics and robotics, and converging technologies that have the potential to influence and affect social and economic development positively. These emerging technologies are being brought together under the Converging Technologies Platform, which seeks to emphasise their role in providing solutions to complex social and economic challenges in their integrated form. The chief directorate supports the building of innovation and entrepreneurship culture through industry internships in partnership with the Technology Top 100 companies. It has oversight of TIA and augments seed, technology development and commercialisation funding. The chief directorate implements the Innovation Fund, which seeks to promote the commercialisation of publicly funded R&D.

The chief directorate has two directorates managing thematic priorities aligned to its focus areas, namely, Emerging Research Areas and Innovation Instruments.

The **National Intellectual Property Management Office (NIPMO)**, established as the implementing office for the Intellectual Property Rights from Publicly Financed Research and Development Act, is currently located in the Department as a specialised service delivery unit. NIPMO's mandate is to ensure that intellectual property from publicly financed research and development is identified, protected, utilised and commercialised for



the benefit (social, economic, military or any other) of the people of South Africa. NIPMO provides a mix of enabling and compliance services, which contribute to increasing the rate of knowledge utilisation from publicly funded R&D, thereby contributing to economic development in South Africa.

Institutional outcomes to which the Programme contributes

- Human capabilities and skills for the economy and for development.
- Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led development.
- Innovation in support of a capable and developmental state.

Table 2: Programme 2 – Technology Innovation

| Not Achieved | | | | | | | | | | |
|--------------|--|--|---|--|---|--|---|---|----------|------------------------|
| Achieved | | | | | | | | | | |
| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
| 1. | Innovation in support of a capable and developmental state | Decision-support tools | Number of decision-support tools developed and/or maintained | 3 decision-support tools developed by 31 March 2021 | 2 decision-support tools developed and/or maintained by 31 March 2022 | 2 decision-support tools developed and/or maintained by 31 March 2023 | 2 decision-support tools were developed and/or maintained by 31 March 2023 | None | Achieved | n/a |
| 2. | | SANSA and TIA oversight to ensure alignment with government priorities | Number of strategic and technical engagements with SANSA and TIA to ensure alignment with national priorities | 8 strategic and technical engagements with SANSA and TIA to ensure alignment with national priorities by 31 March 2021 | 8 strategic and technical engagements with SANSA and TIA to ensure alignment with national priorities by 31 March 2022 | 8 strategic and technical engagements with SANSA and TIA to ensure alignment with national priorities by 31 March 2023 | 8 strategic and technical engagements with SANSA and TIA to ensure alignment with national priorities by 31 March 2023 | None | Achieved | n/a |
| 3. | | SANSA Regional Space Weather Centre upgrades completed | Provision of space weather information for the aviation industry in South Africa and the African continent | SANSA Regional Space Weather Centre upgrades initiated by 31 March 2021 | 4 new products and/or services developed (linked to high frequency propagation and/or Global Navigation Satellite System applications) by 31 March 2022 | Space Weather Centre issuing bulletins and warnings for aviation industry in South Africa and the African continent by 31 March 2023 | Space Weather Centre issued bulletins and warnings for aviation industry in South Africa and the African continent by 31 March 2023 | None | Achieved | n/a |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|--|---|---|--|---|--|---|--------------|--|
| 4. | Innovation in support of a capable and development-tal state | CubeSat launched | Number of maritime domain awareness (MDA) missions completed in support of the Oceans Economy Phakisa | Flight model delivered but not launched by 31 December 2020 | 3 CubeSats launched in January 2022 | Manufacturing of 3 or more CubeSats for MDA constellation initiated by 31 March 2023 | Manufacturing of 0 CubeSats for MDA constellation initiated by 31 March 2023 | -3 | Not achieved | Delays were caused by several factors such as the sudden resignation of staff at the implementing agent, resulting in delays in the development of on-board flight software, as well as the need for additional funding. |
| 5. | Human capabilities and skills for the economy and for development | Support provided to master's and doctoral students | Number of postgraduate students (master's and doctoral) supported in designated energy, space, Innovation Priorities and Instruments and bioeconomy areas | 236 of postgraduate students (master's and doctoral) supported in designated energy, space, Innovation Priorities and Instruments and bioeconomy areas by 31 March 2021 | 247 postgraduate students (master's and doctoral) supported in designated energy, space, Innovation Priorities and Instruments and bioeconomy areas by 31 March 2022 | 180 postgraduate students (master's and doctoral) supported in designated energy, space, Innovation Priorities and Instruments, and bioeconomy areas by 31 March 2023 | 226 postgraduate students (master's and doctoral) were supported in designated energy, space, Innovation Priorities and Instruments, and bioeconomy areas by 31 March 2023 | +46 | Achieved | The planning was formulated considering baselines and budget cuts. However, the demand for studentships often deviates from the intended or predicted trajectory, as it encompasses factors beyond financial support. |
| 6. | | Artisans and/or technicians trained for the space, energy, and bioeconomy sectors of the economy | Number of artisans and/or technicians trained in the space, energy and agriculture sectors of the economy by 31 March 2021 | 50 artisans and/or technicians trained in the energy and agriculture sectors of the economy by 31 March 2021 | 34 artisans and/or technicians trained in space, energy and bioeconomy by 31 March 2022 | 50 artisans and/or technicians trained in the space, energy and bioeconomy sectors of the economy by 31 March 2023 | 53 artisans and/or technicians were trained in the space, energy and bioeconomy sectors of the economy by 31 March 2023 | +3 | Achieved | The target was slightly exceeded due to the indicator being relatively new. This is the third year of implementing the indicator, and its target has been adjusted based on the performance of the past two financial years. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|--|---|------------------------------------|------------------------------------|---|--|---|--------------|--|
| 7. | Human capabilities and skills for the economy and development | University of technology (UoT) and technical and vocational education and training (TVET) college graduates offered experiential learning opportunities in the energy sector | Number of UoT and TVET graduates offered experiential learning opportunities in the energy sector | New indicator | New indicator | 15 UoT and TVET graduates offered experiential learning opportunities in the energy sector by 31 March 2023 | 12 UoT and TVET graduates were offered experiential learning opportunities in the energy sector by 31 March 2023 | -3 | Not achieved | Since this is a completely new indicator, there was no existing baseline available to inform the target setting process. |
| 8. | | experiential learning opportunities in the energy sector | Number of unemployed youth supported under the TT100 Learnership/ Internship Programme | New indicator | New indicator | 40 unemployed youth supported under the TT100 Learnership/ Internship Programme by 31 March 2023 | 41 unemployed youth were supported under the TT100 Learnership/ Internship Programme by 31 March 2023 | +1 | Achieved | The target for the new indicator was set without the availability of a baseline due to its novelty. |
| 9. | | Strengthened skills base of the economy through TT100 Learnership/ Internship Programme outreach, awareness and training programmes in space science | Number of youth engaged through outreach, awareness and training programmes in space science | New indicator | New indicator | 1 000 youth engaged in space science by 31 March 2023 | 1 126 youth engaged in space science by 31 March 2023 | +126 | Achieved | The World Space Week celebrations organised by SANSA, UKZN and ArceIorMittal Science Centre attracted more learners than expected. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|--|--|--|---|---|---|--------------|--|
| 10. | Human capabilities and skills for the economy and development | People trained in intellectual property management and technology transfer | Number of trainees up-skilled in intellectual property management and technology transfer | 346 trainees up-skilled in intellectual property management and technology transfer skills by 31 March 2021 | 312 trainees up-skilled in intellectual property management and technology transfer skills by 31 March 2022 | 275 trainees up-skilled in intellectual property management and technology transfer skills by 31 March 2023 | 302 trainees up-skilled in intellectual property management and technology transfer skills by 31 March 2023 | +27 | Achieved | The target was surpassed due to the utilization of online training sessions, which facilitated greater participation from individuals. Moreover, the absence of participant costs contributed to enhanced accessibility of the sessions. |
| 11. | Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led development | New disclosures from publicly financed R&D | Number of new disclosures received from publicly financed research and development institutions by NIPMO | 226 disclosures, received from publicly financed research and development institutions as reported to NIPMO by 31 March 2021 | 241 disclosures, received from publicly financed research and development institutions by NIPMO by 31 March 2022 | 235 new disclosures received from publicly financed research and development institutions by NIPMO by 31 March 2023 | 217 new disclosures received from publicly financed research and development institutions by NIPMO by 31 March 2023 | -18 | Not achieved | The target was established by considering the accomplishments in previous years. However, it is important to note that the number of new disclosures is not directly within the control of NIPMO (National Intellectual Property Management Office). |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|--|---|---|---|---|---|----------|---|
| 12. | Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led development | Disclosures licensed for the first time annually | Number of disclosures licensed for the first time received from publicly financed research and development institutions by NIPMO | New indicator | 20 disclosures licensed for the first time received from publicly financed research and development institutions and recipients as reported to NIPMO by 31 March 2022 | 15 disclosures licensed for the first time, received from publicly financed research and development institutions by NIPMO by 31 March 2023 | 17 disclosures licensed for the first time, received from publicly financed research and development institutions by NIPMO by 31 March 2023 | +2 | Achieved | Since this indicator has only been tracked for the second year, establishing a target has proven challenging due to limited historical data and experience. |
| 13. | Improve the filing of publicly funded intellectual property rights | Improve the filing of publicly funded intellectual property rights | Number of intellectual property rights filed based on RDI conducted in designated areas | 10 intellectual property rights filed based on RDI conducted in designated areas by 31 March 2021 | 16 intellectual property rights filed based on RDI conducted in designated areas by 31 March 2022 | 4 intellectual property rights filed based on RDI conducted in designated areas by 31 March 2023 | 35 intellectual property rights were filed based on RDI conducted in designated areas | +31 | Achieved | The inclusion of the Seed Fund was not initially accounted for in the planning process, but it was introduced during the implementation phase. This unexpected addition contributed to the over-performance observed. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|---|---|--|---|--|---|----------|---|
| 14. | Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led development | Technology demonstrations, prototypes, products and services developed | Number of technology demonstrations, prototypes, products and services developed | 18 technology demonstrations, prototypes, products and services developed in designated energy, space, Innovation Priorities and Instruments, and bioeconomy areas by 31 March 2021 | 100 technology demonstrations, prototypes, products and services developed in designated energy, space, Innovation Priorities and Instruments, and bioeconomy areas by 31 March 2022 | 15 technology demonstrations, prototypes, products and services developed in designated energy, space, Innovation Priorities and Instruments, and bioeconomy areas by 31 March 2023 | 76 technology demonstrations, prototypes, products and services were developed in designated energy, space, Innovation Priorities and Instruments, and bioeconomy areas by 31 March 2023 | +61 | Achieved | The challenge lies in predicting when or if research will result in a prototype, pilot, demonstrator, or similar outcomes. Consequently, targets were established based on research projects that appeared to be nearing application. However, in some cases, knowledge application products were developed more swiftly than anticipated, leading to the variance. |
| 15. | | Deployed stationary fuel cells and/or other clean energy technologies | Number of stationary fuel cell systems/clean energy technologies deployed in partnership with local and district municipalities in rural and informal settlements | 2 stationary fuel cell systems/clean energy technologies deployed in partnership with local and district municipalities in rural and informal settlements by 31 March 2021 | 2 stationary fuel cell systems/clean energy technologies deployed in partnership with local and district municipalities in rural and informal settlements by 31 March 2022 | 2 stationary fuel cell systems/clean energy technologies deployed in partnership with local and district municipalities in rural and informal settlements by 31 March 2023 | 2 stationary fuel cell systems/clean energy technologies were deployed in partnership with local and district municipalities in rural and informal settlements by 31 March 2023 | None | Achieved | n/a |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|--|--|---|---|---|---|----------|---|
| 16. | Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led development | SMMes assisted/ supported with business development and commercialisation | Number of SMMes contacted and/ or assisted with business development and commercialisation | 22 SMMes assisted with business development and commercialisation by 31 March 2021 | 10 SMMes assisted with business development and commercialisation by 31 March 2022 | 25 SMMes assisted with business development and commercialisation by 31 March 2023 | 68 SMMes were assisted with business development and commercialisation by 31 March 2023 | +43 | Achieved | The initial target did not encompass the SMMes supported by the Innovation Fund. Nevertheless, the Innovation Fund provided support to SMMes at an earlier stage than originally planned or expected, leading to the observed variance. |
| 17. | | Commercial outputs in designated areas | Number of commercial outputs in designated areas | 15 commercial outputs in designated areas by 31 March 2021 | 12 commercial outputs in designated areas by 31 March 2022 | 6 commercial outputs in designated areas by 31 March 2023 | 10 commercial outputs in designated areas by 31 March 2023 | +4 | Achieved | The variance occurred because the uptake of the product or service in the market exceeded initial expectations. |
| 18. | | Black emerging farmers benefiting from technology/ innovation support programmes | Number of black emerging farmers (subsistence, small-scale and potential commercial farmers) benefiting from technology/ innovation support programmes | 71 black emerging farmers (subsistence, small-scale and potential commercial farmers) benefiting from technology/ innovation support programmes by 31 March 2021 | 845 black emerging farmers benefiting from technology/ innovation support programmes by 31 March 2022 | 500 black emerging farmers (subsistence, small-scale and potential commercial farmers) benefiting from technology/ innovation support programmes by 31 March 2023 | 507 black emerging farmers (subsistence, small-scale and potential commercial farmers) benefiting from technology/ innovation support programmes by 31 March 2023 | +7 | Achieved | This financial year represents the third year of implementing this indicator, which has involved a process of trial and error. The target was determined by considering the performance of the previous year, but due to the experimentation and learning process, adjustments may be necessary to improve accuracy in future target setting. |

Sub-programme expenditure

| Detail per component for Programme 2 – Technology Innovation for the year ended 31 March 2023 | | | | | | | | | | |
|---|---------------------------------|----------------------------|-------------------|------------------------------|-----------------------------|-------------------|--|------------------------------|-----------------------------|--|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation R'000 | Shifting of funds R'000 | Virement R'000 | Final appropriation R'000 | Actual expenditure R'000 | Variance R'000 | Expenditure as % of final appropriation % | Final appropriation R'000 | Actual expenditure R'000 | |
| 2.1 Space Science | 285,985 | (1,300) | 5,366 | 290,051 | 289,258 | 792 | 99.7% | 289,056 | 286,289 | |
| 2.2 Hydrogen and Energy | 253,428 | 824 | - | 254,252 | 253,842 | 410 | 99.8% | 184,867 | 184,782 | |
| 2.3 Bio-economy | 248,852 | 1,000 | (366) | 249,486 | 245,904 | 3,582 | 98.6% | 237,879 | 237,106 | |
| 2.4 Innovation Priorities and Instruments | 1,058,588 | 50 | (12,630) | 1,046,008 | 1,045,835 | 173 | 100.0% | 954,618 | 953,934 | |
| 2.5 National Intellectual Property Management Office | 56,270 | (524) | (640) | 55,106 | 53,994 | 1,112 | 98.0% | 54,390 | 53,316 | |
| 2.6 Office of the DDG: Technology Innovation | 3,902 | (50) | (1,030) | 2,822 | 1,731 | 1,091 | 61.4% | 4,207 | 4,186 | |
| Total | 1,907,025 | - | (9,300) | 1,897,725 | 1,890,565 | 7,160 | 99.6% | 1,725,017 | 1,719,613 | |

Strategy to overcome areas of underperformance

Programme 2's three areas of underperformance will be addressed as follows:

- The DSI did not initiate the manufacturing of three or more CubeSats for the MDASat constellation for maritime domain awareness as planned. To remedy this, the funding requirements for the MDASat were included in the request made to the National Treasury for funding for the space infrastructure hub.
- The DSI planned to offer 15 university of technology and/or technical and vocational education and training college graduates with experiential learning opportunities in the energy sector; but only 12 graduates received opportunities. To prevent a recurrence of the underperformance, a memorandum of understanding was signed with the Energy and Water Sector Education Training Authority, which will assist the DSI to source candidates so that the recruitment process can be completed in time, and which has also committed to co-funding the internship programme.
- The DSI planned to receive 235 new disclosures of intellectual property arising from publicly financed research and development (R&D) institutions; but only 217 disclosures were received. To address the underperformance, the National Intellectual Property Management Office (NIPMO) will continue to raise awareness and remind universities and science councils to disclose intellectual property, although the number of disclosures made is not under NIPMO's control.

Performance in relation to standardised outputs and output indicators for sectors with concurrent functions

Not applicable

4.5 PROGRAMME 3: INTERNATIONAL COOPERATION AND RESOURCES

Purpose

To develop, promote and manage international partnerships that strengthen the NSI and enable the exchange of knowledge, capacity, innovation and resources between South Africa and its international partners, particularly in Africa, in support of South African foreign policy through science, knowledge and innovation diplomacy.

Components

International Resources works to increase the flow of international funding into South African STI initiatives, as well as African regional and continental programmes, through foreign investment promotion efforts, and fostering strategic partnerships with partners such as the European Union, as well as foundations and philanthropic organisations and the multinational private sector.

Multilateral Cooperation and Africa advances and facilitates South Africa's participation in bilateral STI cooperation initiatives with other African partners, in African multilateral programmes, especially Southern

African Development Community and African Union programmes, and broader multilateral STI partnerships, with a strategic focus on South-South cooperation.

Overseas Bilateral Cooperation promotes and facilitates South Africa's bilateral STI cooperation with partners in Europe, the Americas, Asia and Australasia, especially for STI human capacity development, for collaborative research and innovation, and to secure partners' support for joint cooperation with other African partners.

Institutional outcomes to which the Programme contributes

- A transformed, inclusive, responsive and coherent NSI.
- Human capabilities and skills for the economy and for development.
- Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led development.
- Innovation in support of a capable and developmental state.

Table 3: Programme 3 – International Cooperation and Resources

| Not Achieved | | | | | | | | | | |
|--------------|---|--|--|--|--|--|--|---|--------------|---|
| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
| 1. | A transformed, inclusive, responsive and coherent NSI | International resource-leveraging engagements undertaken by the Department | Number of international resource-leveraging engagements undertaken by the Department | 46 international resource-leveraging engagements undertaken by the Department by 31 March 2021 | 48 dedicated international resource-leveraging engagements undertaken by the Department by 31 March 2022 | 43 dedicated international resource-leveraging engagements undertaken by 31 March 2023 | 49 international resource-leveraging engagements undertaken by 31 March 2023 | +6 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |
| 2. | Human capabilities and skills for the economy and for development | South African students participating in international training programmes as part of cooperation initiatives facilitated by DSI | Number of South African students participating in international training programmes | 342 new South African students participating in international training programmes as part of cooperation initiatives facilitated by DSI by 31 March 2021 | 706 new South African students participating in international training programmes as part of cooperation initiatives facilitated by DSI by 31 March 2022 | 326 new South African students participating in international training programmes as part of cooperation initiatives facilitated by DSI by 31 March 2023 | 382 new South African students participating in international training programmes as part of cooperation initiatives facilitated by DSI by 31 March 2023 | +56 | Achieved | The target was exceeded owing to strengthened cooperation and coordination between the DSI, DHET and the NRF on international human capital development opportunities for South Africans. |
| 3. | Human capabilities and skills for the economy and for development | Capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals | Number of capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals | 17 capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals by 31 March 2021 | 24 capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals by 31 March 2022 | 32 capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals by 31 March 2023 | 28 capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals by 31 March 2023 | -4 | Not achieved | The limited understanding of HDI research capability among international partners limits the participation of HDIs in initiatives. However, HDIs are being actively promoted by the DSI. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|---|--|--|--|--|---|---|----------|--|
| 4. | Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led industrial development | International policy dialogues and technical exchanges to support the policy intents of the White Paper on STI | Number of international policy dialogues and technical exchanges to support the policy intents of the White Paper on STI | 56 international policy dialogues and technical exchanges to support the policy intents of the White Paper on STI by 31 March 2021 | 76 international policy dialogues and technical exchanges to support the policy intents of the White Paper on STI by 31 March 2022 | 34 international policy dialogues and technical exchanges to support the policy intents of the White Paper on STI by 31 March 2023 | 116 international policy dialogues and technical exchanges to support the policy intents of the White Paper on STI by 31 March 2023 | +82 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |
| 5. | Stimulating R&D-led industrial development | STI initiatives targeting objectives of Agenda 2063 supported | Number of STI initiatives targeting objectives of Agenda 2063 supported | 18 new STI initiatives targeting objectives of Agenda 2063 supported by 31 March 2021 | 15 new STI initiatives targeting objectives of Agenda 2063 supported by 31 March 2022 | 15 new STI initiatives supporting Agenda 2063 by 31 March 2023 | 20 new STI initiatives supporting Agenda 2063 by 31 March 2023 | +5 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |
| 6. | Supporting the objectives of the SADC Regional Indicative Strategic Development Plan (RISDP) | STI initiatives targeting the objectives of the SADC Regional Indicative Strategic Development Plan (RISDP) supported | Number of STI initiatives supporting the objectives of the SADC RISDP | 17 new STI initiatives targeting the objectives of the SADC RISDP supported by 31 March 2021 | 20 new STI initiatives targeting the objectives of the SADC RISDP supported by 31 March 2022 | 17 new STI initiatives supporting the objectives of the SADC RISDP by 31 March 2023 | 22 new STI initiatives supporting the objectives of the SADC RISDP by 31 March 2023 | +5 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|---|---|---|---|---|---|---|----------|--|
| 7. | Innovation in support of a capable and developmental | Bilateral STI plans of action implemented with African partners | Number of STI plans of action implemented with bilateral African partners | 11 new bilateral STI plans of action implemented with African partners by 31 March 2021 | 17 STI plans of action implemented with bilateral African partners by 31 March 2022 | 6 STI plans of action implemented with bilateral African partners by 31 March 2023 | 27 STI plans of action were implemented with bilateral African partners by 31 March 2023 | +21 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |
| 8. | | Engagements with global science leaders to advance national priorities in multilateral forums | Number of engagements with global science leaders to advance national priorities in multilateral forums | 12 engagements with global science leaders to advance national priorities in multilateral forums by 31 March 2021 | 15 engagements with global science leaders to advance national priorities in multilateral forums by 31 March 2022 | 12 engagements with global science leaders to advance national priorities in multilateral forums by 31 March 2023 | 29 engagements with global science leaders to advance national priorities in multilateral forums by 31 March 2023 | +17 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |
| 9. | | International STI initiatives focused on SDGs supported by South Africa | Number of international STI initiatives focused on SDGs supported by South Africa | 8 new international STI initiatives focused on SDGs supported by South Africa by 31 March 2021 | 8 new international STI initiatives focused on SDGs supported by South Africa by 31 March 2022 | 8 new international STI initiatives focused on SDGs supported by South Africa by 31 March 2023 | 13 new international STI initiatives focused on SDGs supported by South Africa by 31 March 2023 | +5 | Achieved | The adoption of a hybrid model (including virtual platforms) for engagement with international partners resulted in more opportunities for engagement. |

Sub-programme expenditure

| Detail per component for Programme 3 – International Cooperation and Resources for the year ended 31 March 2023 | | | | | | | | | | | |
|---|------------------------|-------------------|---------------|---------------------|--------------------|--------------|---|---------------------|--------------------|-------|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | |
| 3.1 Multilateral Cooperation and Africa | 33,362 | 3,458 | 16,300 | 53,120 | 52,833 | 287 | 99.5% | 28,972 | 28,477 | | |
| 3.2 International Resources | 68,970 | 1,875 | - | 70,845 | 69,414 | 1,432 | 98.0% | 67,082 | 65,008 | | |
| 3.3 Overseas Bilateral Cooperation | 44,263 | (9,958) | - | 34,305 | 32,011 | 2,294 | 93.3% | 34,176 | 32,376 | | |
| 3.4 Office of the DDG: International Cooperation and Resources | 2,792 | 4,625 | - | 7,417 | 7,011 | 406 | 94.5% | 6,046 | 5,948 | | |
| Total | 149,387 | - | 16,300 | 165,687 | 161,269 | 4,418 | 97.3% | 136,276 | 131,808 | | |

Strategy to overcome areas of underperformance

The one area of underperformance under the Programme relates to the target of 32 capacity-building initiatives for international cooperation specifically targeting historically disadvantaged institutions and individuals (HDIs). Only 28 capacity-building initiatives were achieved. To do better in the future, the DSI will proactively promote the research capability of HDIs in the country among its international partners.

Performance in relation to standardised outputs and output indicators for sectors with concurrent functions

Not applicable

4.6 PROGRAMME 4: RESEARCH DEVELOPMENT AND SUPPORT

Purpose

The purpose of the Programme is to provide an enabling environment for research and knowledge production that promotes the strategic development of basic sciences and priority science areas, through science promotion, human capital development, the provision of research infrastructure and relevant research support, in pursuit of South Africa's transition to a knowledge economy.

Components

Human Capital and Science Promotion focuses on developing and renewing science, engineering and technology human capital to promote knowledge generation, protection and exploitation, and to develop science platforms that exploit South Africa's geographical advantages. The chief directorate also promotes science, technology, engineering, mathematics and innovation literacy and awareness. Funding is provided to the National Research Foundation (NRF) for programmes to develop research and human capital.

Basic Sciences and Infrastructure facilitates the strategic implementation of research and innovation equipment and infrastructure to promote knowledge production in areas of national priority and to sustain R&D-led innovation. The chief directorate also promotes the development and strengthening of basic or foundational sciences, such as physics, chemistry, biological and life sciences, geographic and geological sciences, and the human and social sciences.

Science Missions promotes the development of research, the production of scientific knowledge, and human capital development in science areas in which South Africa enjoys a geographic advantage. These areas include the dynamics of climate change and its impact on Earth systems, Antarctic and marine research, the palaeosciences and indigenous knowledge systems.

Astronomy supports the development of astronomical sciences around the National Strategy for Multiwavelength Astronomy. The strategy highlights the current status of astronomy in South Africa, its importance to the South African socio-economic landscape, the astronomy heritage in South Africa and how this could be further strengthened, and a strategic approach for continued investments in astronomy in South Africa. The strategy sets out strategic objectives and a strategic agenda defined by the key priority areas for astronomy, also outlining relevant cross-cutting support programmes needed to give effect to the shared vision.

Institutional outcomes to which the Programme contributes

- A transformed, inclusive, responsive and coherent NSI.
- Human capabilities and skills for the economy and for development.
- Increased knowledge generation and innovation output.

Table 4: Programme 4 – Research Development and Support

| Not Achieved | | | | | | | | | | |
|--------------|---|---|--|---|---|---|--|---|----------|--|
| Achieved | | | | | | | | | | |
| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
| 1. | Human capabilities and skills for the economy and for development | PhD students awarded bursaries annually | Number of PhD students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities | 303 PhD students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities by 31 March 2021 | 2 527 PhD students awarded an annual bursary as reflected in the reports from the NRF and other entities by 31 March 2022 | 2 200 PhD students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities by 31 March 2023 | 2 359 PhD students were awarded bursaries annually as reflected in the reports from the NRF and other relevant entities by 31 March 2023 | + 159 | Achieved | The target was exceeded by 7,2% because a higher number of PhD bursary awards were granted during the first and second quarters, as these were the periods in which the initial intake of students into various postgraduate programmes occurred. It should be noted that the quarterly performance of these programmes cannot be predicted or closely managed, as it depends on the size and quality of the applicant pool. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|---|--|---|---|---|---|---|----------|---|
| 2. | Human capabilities and skills for the economy and for development | Pipeline postgraduate students awarded bursaries annually | Number of pipeline postgraduate students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities | 326 pipeline postgraduate students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities by 31 March 2021 | 5 643 (2 572 honours + 3 071 master's) pipeline postgraduate students awarded an annual bursary as reflected in the reports from the NRF and other relevant entities by 31 March 2022 | 4 200 pipeline postgraduate students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities by 31 March 2023 | 4 754 pipeline postgraduate students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities by 31 March 2023 | +554 | Achieved | The target was exceeded by 13,1% because a higher number of PhD bursary awards were granted during the first and second quarters, as these were the periods in which the initial intake of students into various postgraduate programmes occurred. It should be noted that the quarterly performance of these programmes cannot be predicted or closely managed, as it depends on the size and quality of the applicant pool. |
| 3. | | Emerging researchers awarded research grants | Number of emerging researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports | New indicator | New indicator | 300 emerging researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports by 31 March 2023 | 1 652 emerging researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports by 31 March 2023 | + 1 352 | Achieved | The target was exceeded by 450,7%. Since this is a new indicator, it was difficult to accurately determine the baseline in setting the targets. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|---|---|---|---|--|--|---|----------|---|
| 4. | Human capabilities and skills for the economy and for development | Transformation of the emerging researcher cohort | Number of black and female emerging researchers awarded research grants as reflected in the NRF project reports | New indicator | New indicator | 200 black and female emerging researchers awarded research grants as reflected in the NRF project reports by 31 March 2023 | 614 black and female emerging researchers awarded research grants as reflected in the NRF project reports by 31 March 2023 | +414 | Achieved | The target was exceeded by 207%. Since this is a new indicator, it was difficult to accurately determine the baseline in setting the targets. |
| 5. | | Graduates and students placed in DSI-funded work preparation programmes | Number of graduates and students placed in DSI-funded work preparation programmes in SETI institutions | 1 085 graduates and students placed in DSI-funded work preparation programmes in SETI institutions by 31 March 2021 | 1 194 graduates and students placed in DSI-funded work preparation programmes in SETI institutions by 31 March 2022 | 750 graduates and students placed in DSI-funded work preparation programmes in SETI institutions by 31 March 2023 | 1 057 graduates and students were placed in DSI-funded work preparation programmes in SETI institutions by 31 March 2023 | +307 | Achieved | The target was exceeded by 40,9%. The Department could not organise the National Science Week launch due to Covid restrictions, so funds allocated for the launch were reprioritised to place more National Youth Service volunteers. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|--------------------------------|---|---|--|---|--|---|--------------|---|
| 6. | A transformed, inclusive, responsive and coherent NSI | Research infrastructure grants | Number of research infrastructure grants awarded | 30 research infrastructure grants awarded by 31 March 2021 | 36 research infrastructure grants awarded by 31 March 2022 | 25 research infrastructure grants awarded by 31 March 2023 | 21 annual research infrastructure grants were awarded by 31 March 2023 | -4 | Not achieved | The variance occurred due to the forfeiture of funding for RDI projects as a result of non-expenditure. Additionally, two projects that were initially planned to receive funding from the high-end were deferred to the 2023/24 financial year, contributing to the observed deviation from the original plan. |
| 7. | | Broadband capacity | Total available broadband capacity provided by the South African National Research Network (SANReN) per annum | 5 474 Gbps total available broadband capacity provided by SANReN by 31 March 2021 | 5 872,39 Gbps total available broadband capacity provided by SANReN by 31 March 2022 | 6 200 Gbps total available broadband capacity provided by SANReN by 31 March 2023 | 8 122,35 Gbps total available broadband capacity provided by SANReN by 31 March 2023 | +1 922,35 | Achieved | The target was surpassed due to the successful completion of the backbone meshing project and the rollout and commissioning of the Juniper routing equipment as part of the SANReN backbone upgrade. However, there was a delay in the delivery of the equipment, resulting, |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|-------------------------------------|--|---|---|---|--|---|----------|---|
| 8. | Increased knowledge generation and innovation output | Researchers awarded research grants | Number of researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports | 3 000 researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports by 31 March 2021 | 3 201 researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports by 31 March 2022 | 3 000 researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports by 31 March 2023 | 3 321 researchers were awarded research grants through NRF-managed programmes as reflected in the NRF project reports by 31 March 2023 | +321 | Achieved | <p>in a 16-month installation period at the various SANReN points-of-presence sites across the country. These two projects notably contributed 21 x 100 Gbps links to enhance the SANReN network.</p> <p>The target was exceeded by 10,7% because it is not possible to forecast the number of applications or the size of grants that will be requested and awarded.</p> |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|---|--|--|--|---|---|----------|--|
| 9. | Increased knowledge generation and innovation output | Internationally accredited research articles from researchers awarded research grants through NRF-managed programmes | Number of research articles published by NRF-funded researchers and cited in Web of Science Citation Database as reflected in the NRF project reports | 8 150 internationally accredited research articles from researchers awarded research grants by 31 March 2021 | 9 116 internationally accredited research articles from researchers awarded research grants by 31 March 2022 | 7 200 internationally accredited research articles from researchers awarded research grants by 31 March 2023 | 7 273 internationally accredited research articles from researchers awarded research grants by 31 March 2023 | +73 | Achieved | The annual target was exceeded by 1%. The number of research articles published per researcher may vary slightly from year to year. Additionally, it should be noted that the annual performance of research publications cannot be precisely predicted or managed within closer margins due to the inherent unpredictability of the publishing processes. |
| 10. | | L-Band science mode receivers installed | Number of L-band science mode receivers produced to enhance the performance of the MeerKAT Extension telescope | 64 S-Band science mode receivers installed on MeerKAT by 31 March 2021 | Production plan for the L-band receivers for the additional 20 MeerKAT antennas approved by SKA SA Project Director by 31 March 2022 | 20 L-band science mode receivers produced for the additional MeerKAT Extension telescope by 31 March 2023 | All 20 L-band science mode receivers were manufactured and delivered to SARAO for the additional MeerKAT Extension telescope by 31 March 2023 | None | Achieved | n/a |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|---|------------------------------------|--|---|--|---|--------------|--|
| 11. | Increased knowledge generation and innovation output | Additional antennas installed on the MeerKAT telescope | Number of additional MeerKAT telescope antennas installed | New indicator | New indicator | 4 MeerKAT Extension antennas installed and commissioned by 31 March 2023 | 0 MeerKAT Extension antennas installed and commissioned by 31 March 2023 | -4 | Not achieved | The production of the MeerKAT extension dishes is the responsibility of the Max Planck Institute. The institute reported major delays in the dish production process due to financial and logistical challenges that it experienced. |
| 12. | | Public awareness of and engagement initiatives | Number of initiatives conducted promoting public awareness of and engagement with science conducted throughout the country as reflected in the reports of the NRF and other implementing and collaborative partners | New indicator | 9 initiatives promoting public awareness of and engagement with science conducted, as reflected in the reports of the NRF and other implementing and collaborative partners by 31 March 2022 | 12 initiatives promoting public awareness of and engagement with science conducted, as reflected in the reports of the NRF and other implementing and collaborative partners by 31 March 2023 | 12 initiatives promoting public awareness of and engagement with science were conducted, as reflected in the reports of the NRF and other implementing and collaborative partners by 31 March 2023 | None | Achieved | n/a |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|---|--|---|--|--|--|---|----------|--|
| 13. | Increased knowledge generation and innovation output | South African science survey report | First report on the South African relationship with science published | Sample and technical report frameworks for the First South African public relationship with science survey were approved by 31 March 2021 | Data collection instruments for the first South African Public Relationship With Science Survey produced by 31 March 2022 | South African public relationship with science survey conducted by 31 March 2023 | South African public relationship with science survey was conducted by 31 March 2023 | None | Achieved | n/a |
| 14. | | Oversight over NRF and ASSAf to ensure that they respond to government priorities | Number of strategic and technical engagements with the NRF, SACNASP and ASSAf to ensure alignment with national priorities | 9 strategic and technical engagements with the NRF, SACNASP and ASSAf to ensure alignment with national priorities by 31 March 2021 | 12 strategic and technical engagements with the NRF, SACNASP and ASSAf to ensure alignment with national priorities by 31 March 2022 | 12 strategic and technical engagements with the NRF, SACNASP and ASSAf to ensure alignment with national priorities by 31 March 2023 | 13 bilateral engagement reports/minutes with the NRF, SACNASP and ASSAf to alignment with national priorities by 31 March 2023 | +1 | Achieved | The variance occurred because there were additional meetings conducted for planning and strategic discussions between the DSI and the entities involved. These extra meetings contributed to the observed difference in performance. |

Sub-programme expenditure

| Detail per component for Programme 4 – Research Development and Support for the year ended 31 March 2023 | | | | | | | | | | | |
|--|------------------------|-------------------|--------------|---------------------|--------------------|--------------|---|---------------------|--------------------|-------|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | |
| 4.1 Human Capital and Science Promotion | 2,756,200 | - | (1,425) | 2,754,775 | 2,754,322 | 453 | 100.0% | 2,711,737 | 2,710,695 | | |
| 4.2 Science Missions | 112,581 | 4,150 | 1,700 | 118,431 | 117,798 | 632 | 99.5% | 187,522 | 186,692 | | |
| 4.3 Basic Sciences and Infrastructure | 958,813 | (1,190) | 1,925 | 959,548 | 959,334 | 214 | 100.0% | 1,042,175 | 1,041,969 | | |
| 4.4 Astronomy | 1,147,433 | (2,400) | - | 1,145,033 | 1,144,810 | 223 | 100.0% | 1,050,709 | 1,049,952 | | |
| 4.5 Office of the DDG: Research Development and Support | 4,125 | (560) | 1,700 | 5,265 | 4,961 | 303 | 94.2% | 2,918 | 2,135 | | |
| Total | 4,979,151 | - | 3,900 | 4,983,051 | 4,981,225 | 1,826 | 100.0% | 4,995,061 | 4,991,443 | | |

Strategy to overcome areas of underperformance

The Programme's two areas of underperformance will be addressed as follows:

- Only 21 of the planned 25 research infrastructure grants were awarded. Expenditure depends on satisfactory performance and the spending of at least 90% of the allocation. To address this, the full portfolio of approved high-end infrastructure projects will start being funded in the 2023/24 financial year, as will the two research, development and infrastructure projects that were not funded.
- The four MeerKAT Extension antennas that were supposed to be installed and commissioned were not installed. To improve performance, cooperation with the implementing agent, the Max Planck institute, has been strengthened with the recent confirmation of Germany as a full member of the Square Kilometre Array Organisation. Max Planck has also renewed and confirmed its commitment to completing the project in time.

Performance in relation to standardised outputs and output indicators for sectors with concurrent functions

Not applicable

4.7 PROGRAMME 5: SOCIO-ECONOMIC INNOVATION PARTNERSHIPS

Purpose

The purpose of this Programme is to enhance the growth and development priorities of government through targeted S&T-based innovation interventions and the development of strategic partnerships with other government departments, industry, research institutions and communities and the provision of statistics and analysis for purposes of system-level monitoring and evaluation.

Components

The Programme has four chief directorates.

Technology Localisation, Beneficiation and Advanced Manufacturing advances strategic medium and long-term sustainable economic growth and sector development priorities as well as government service delivery.

Sector Innovation and Green Economy provides policy, strategy and direction-setting support for the R&D-led growth of strategic sectors of the economy and to enhance science and technology capacity to support the transition to a green economy.

Innovation for Inclusive Development supports the experimentation of science and technology-based innovations for tackling poverty, including the creation of sustainable job and wealth opportunities, building sustainable human settlements, and enhancing the delivery of basic services.

Science and Technology Investment leads and

supports the development of indicators and instruments for measuring and monitoring investments in science and technology and the performance of the NSI, as well as ways of strengthening the NSI and innovation policy.

Institutional outcomes to which the Programme contributes

- A transformed, inclusive, responsive and coherent NSI.
- Human capabilities and skills for the economy and for development.
- Increased knowledge generation and innovation outputs.
- Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led industrial development.
- Knowledge utilisation for inclusive development.
- Innovation in support of a capable and developmental state.

Table 5: Programme 5 – Socio-economic Innovation Partnerships

| Not Achieved | | | | | | | | | | |
|--------------|--|--|--|--|---|---|--|---|----------|---|
| Achieved | | | | | | | | | | |
| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
| 1. | Innovation in support of a capable and developmental state | Knowledge products | Number of knowledge products on innovation for inclusive development published | At least 4 knowledge products on innovation for inclusive development published between 1 April 2020 and 31 March 2021 | 4 knowledge products on innovation for inclusive development published by 31 March 2022 | 4 knowledge products on innovation for inclusive development published by 31 March 2023 | 4 knowledge products on innovation for inclusive development were published by 31 March 2023 | None | Achieved | n/a |
| 2. | Knowledge utilisation for inclusive development | Decision-support interventions | Number of decision support systems introduced, maintained and improved | At least 10 decision-support systems maintained and improved by 31 March 2021 | 7 decision-support systems maintained and improved by 31 March 2022 | 6 decision-support systems maintained and improved by 31 March 2023 | 6 decision-support systems maintained and improved by 31 March 2023 | None | Achieved | n/a |
| 3. | | Learning interventions (seminars, policy round tables) | Number of learning interventions (seminars/ policy round tables) hosted | At least 4 learning interventions (seminars/ policy round tables) hosted by 31 March 2021 | 4 learning interventions (seminars/ policy round tables) hosted by 31 March 2022 | 3 learning interventions (seminars/ policy round tables) hosted by 31 March 2023 | 4 learning interventions (seminars/ policy round tables) hosted by 31 March 2023 | +1 | Achieved | An opportunity was presented to host an important workshop with the Media, Information and Communication Technologies Sector Education and Training Authority, which is a strategic partner of the DSI, resulting in an additional learning intervention. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|---|--|--|---|--|---|---|--------------|--|
| 4. | Human capabilities and skills for the economy and for development | High-level HCD built for competitiveness and new industry development | Number of high-level research students (honours, master's and doctoral students) fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs, the Industry Innovation Programme (incl. SIFs and green economy) by 31 March 2021) and the green economy (STI for the circular economy) | At least 330 honours, master's and doctoral students fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs, the Industry Innovation Programme (incl. SIFs and green economy) by 31 March 2021 | 287 high-level research students (of which 57 at PhD level) fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs, the Industry Innovation Programme (incl. SIFs and green economy) by 31 March 2022 | 332 high-level research students (of which 40 at PhD level) fully funded or co-funded in designated niche areas by 31 March 2023 | 238 high-level research students (of which 92 at PhD level) were fully funded or co-funded in designated niche areas by 31 March 2023 | -94 | Not achieved | In the verification of the evidence provided for the green economy HCD component, some of the students mentioned in the letter did not comply with the technical indicator descriptions. The students that were counted in are highlighted green in Register 4, which also gives the reasons why certain individuals were not counted. As a substantial amount of the industrial funding had been routed to technology diffusion and not technology development, there was less funding for students. The target in the 2023/24 APP has therefore been reduced to 200. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|---|---|--|---|--|--|---|--------------|--|
| 5. | Increased knowledge generation and innovation output | Knowledge and innovation products added to the industrial development and green economy IP portfolios | Number of knowledge and innovation products added to the industrial development and green economy IP portfolios through fully funded or co-funded research initiatives | An annual total of at least 70 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development and green economy IP portfolio by 31 March 2021 | 116 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development and green economy IP portfolio by 31 March 2022 (cumulative target) | 50 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development and green economy IP portfolio by 31 March 2023 | 83 industrially relevant knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the industrial development and green economy IP portfolio by 31 March 2023 | +33 | Achieved | There was increased emphasis on logging and reporting outputs. |
| 6. | | Funding instruments to increase localisation, competitiveness and R&D-led industry development | Number of instruments funded in support of increased localisation, competitiveness and R&D-led industry development in aerospace, advanced manufacturing, chemicals, mining, advanced metals, and ICTs, Industry Innovation Programme and | At least 6 instruments funded in support of increased localisation, competitiveness and R&D-led industry development by 31 March 2021 | 6 instruments funded in support of increased localisation, competitiveness and R&D-led industry development in aerospace, advanced manufacturing, chemicals, mining, advanced metals, and ICTs, Industry Innovation Programme and | 3 instruments funded in support of increased localisation, competitiveness and R&D-led industry development by 31 March 2023 | 1 instrument was funded in support of increased localisation, competitiveness and R&D-led industry development by 31 March 2023 | -2 | Not Achieved | The deviation resulted from the fact that the completed work under “focused interventions” did not meet the TID criteria for the definition of a “funding instrument”. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|---|---|--|--|--|--|---|--------------|---|
| 7. | Knowledge utilisation for inclusive development | Innovation-support interventions funded or co-funded that strengthened provincial or rural innovation systems | Number of innovation-support interventions funded or co-funded that strengthened provincial or rural innovation systems | At least 23 innovation-support interventions funded or co-funded that strengthened provincial or rural innovation systems between April 2020 and 31 March 2021 | the sector innovation fund by 31 March 2022 26 innovation-support interventions funded or co-funded that strengthened provincial or rural innovation systems between April 2020 and 31 March 2022 (cumulative target) | 27 innovation-support interventions funded or co-funded that strengthened provincial or rural innovation systems by 31 March 2023 | 25 innovation-support interventions funded or co-funded that strengthened provincial or rural innovation systems by 31 March 2023 | -2 | Not achieved | Due diligence investigations had to be carried out into non-performing Regional Innovation Support Programme (RISP) interventions in North West and Gauteng that were terminated. Furthermore, the RISP is run through a call for proposals process and there were no calls after the two due diligence interventions had been completed. |
| 8. | Innovation in support of a capable and developmental state | Statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet and/or disseminated to policy audience | Number of statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet and/or disseminated to policy audience | 6 statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet and/or disseminated to policy audience by 31 March 2021 | 6 statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet and/or disseminated to policy audience by 31 March 2022 (cumulative target) | 6 statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet and/or disseminated to policy audience by 31 March 2023 | 6 statistical reports and policy briefs approved by Exco for publication and/or submitted to Cabinet and/or disseminated to policy audience by 31 March 2023 | None | Achieved | n/a |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|---|---|---|---|---|--|--|---|--------------|--|
| 9. | Knowledge utilisation for economic development in (a) revitalising existing (traditional) industries and (b) stimulating R&D-led industrial development | Companies accessing the R&D tax incentive | Turnaround time for providing preapproval decisions on projects for the R&D tax incentive | Preapproval decisions provided within 90 days from date of receipt for 20,2% (or 23) of the 114 applications for the R&D tax incentive received between 1 January 2020 and 31 December 2020 | Preapproval decisions provided within 90 days from date of receipt for 54% (or 67) of 124 applications for the R&D tax incentive received between 1 January 2021 and 31 December 2021 | Preapproval decisions provided within 90 days from date of receipt for 80% of projects for the R&D tax incentive received between 24 February 2022 and November 2022 | Preapproval decisions provided within 90 days from date of receipt for 9% (5) of 56 projects for the R&D tax incentive received between 24 February 2022 and November 2022 | -71% deviation from 80% target | Not achieved | The achievement of this target was impacted by the effect of IT failure on various aspects of the R&D tax incentive, and issues surrounding the availability of the online system when the backup generator for loadshedding failed. The December holidays and problems getting a quorum in January resulted in almost two months without a committee meeting. There were also some delays due to first applications being processed using the online system, as well as delays with the final processing. |

| No. | Outcomes | Outputs | Output indicators | Audited actual performance 2020/21 | Audited actual performance 2021/22 | Planned annual target 2022/23 | Actual achievement 2022/23 | Deviation from planned target for 2022/23 | Status | Reasons for deviations |
|-----|--|--|---|--|---|--|--|---|----------|------------------------|
| 10. | Innovation in support of a capable and developmental state | Oversight over the CSIR and HSRC to ensure they respond to government priorities | Number of strategic and technical engagements with CSIR and HSRC to ensure alignment with national priorities | 8 strategic and technical engagements with CSIR and HSRC to ensure alignment to national priorities by 31 March 2021 | 10 strategic and technical engagements with CSIR and HSRC to ensure alignment with national priorities by 31 March 2022 (cumulative target) | 8 strategic and/or technical engagements with CSIR and/or HSRC to ensure alignment with national priorities by 31 March 2023 | 8 strategic and/or technical engagements with CSIR and/or HSRC to ensure alignment with national priorities by 31 March 2023 | None | Achieved | n/a |

Sub-programme expenditure

| Detail per component for Programme 5 – Socio-Economic Innovation Partnerships for the year ended 31 March 2023 | | | | | | | | | | |
|--|------------------------------|-------------------------|----------------|---------------------------|--------------------------|----------------|---|---------------------------|--------------------------|--|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation R'000 | Shifting of funds R'000 | Virement R'000 | Final appropriation R'000 | Actual expenditure R'000 | Variance R'000 | Expenditure as % of final appropriation % | Final appropriation R'000 | Actual expenditure R'000 | |
| 5.1 Sector Innovation and Green Economy | 1,093,355 | (768) | (2,000) | 1,090,587 | 1,089,837 | 750 | 99.9% | 1,120,160 | 1,117,731 | |
| 5.2 Innovation for Inclusive Development | 380,624 | (1,838) | - | 378,786 | 377,382 | 1,404 | 99.6% | 399,889 | 399,215 | |
| 5.3 Science and Technology Investment | 25,356 | 4,982 | (3,415) | 26,923 | 26,553 | 370 | 98.6% | 39,139 | 39,007 | |
| 5.4 Technology Localisation, Beneficiation and Advanced Manufacturing | 256,087 | (6,930) | 3,415 | 252,572 | 251,556 | 1,016 | 99.6% | 254,728 | 251,799 | |

| Subprogramme | 2022/23 | | | | | | 2021/22 | | |
|---|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| 5.5 Office of the DDG: Socio-economic Innovation Partnerships | 2,202 | 4,554 | - | 6,756 | 6,381 | 375 | 94.5% | 7,060 | 6,973 |
| Total | 1,757,624 | - | (2,000) | 1,755,624 | 1,751,708 | 3,916 | 99.8% | 1,820,977 | 1,814,725 |

Strategy to overcome areas of underperformance

Programme 5's four areas of underperformance will be addressed as follows:

- The target was to fund or co-fund 332 high-level research students (40 at PhD level) in designated niche areas, but only 238 students were funded or co-funded. The target was found not to be aligned with the level of funding for technology development, and the target for the next financial year has been reduced.
- The DSI planned to fund three instruments in support of increased localisation, competitiveness and R&D-led industry development, but only one instrument was supported. To overcome the underperformance, the technical indicator description will be updated in order to be represent all the funding instruments.
- The DSI planned to fund or co-fund 27 innovation-support interventions that strengthen provincial or rural innovation systems, but only 25 were funded or co-funded. To overcome the underperformance, Regional Innovation Support Plan interventions will be selected through annual call for proposals process. A call for proposals currently open will contribute to the achievement of a new indicator in 2023/24 (this indicator will not be used again).
- The DSI aimed to provide preapproval decisions within 90 days of receiving applications for the R&D tax incentive for 80% of projects. However, only 9% (five of 56 project applications) received preapproval decisions within the turnaround time. To address the underperformance, there will be (a) better use of the online system as there is now better understanding of the system, (b) increased reporting to executive management on the availability of DSI committee members to form a quorum, and progress with the ministerial committee appointment, and (c) increased reporting to executive management on the processing turnaround times.

Performance in relation to standardised outputs and output indicators for sectors with concurrent functions

Not applicable

5. TRANSFER PAYMENTS

The Department transfers funds to various entities in pursuit of its mandate. These entities assisted the Department in achieving its objectives. The table below indicates the entities and the reasons transfers were made. The detailed information regarding the entities to which the transfers were made is disclosed fully in the Annexures to the Annual Financial Statements in Part E.5.

Programme 1: Administration

| Organisation/Theme | Budget R'000 | Actual expenditure R'000 | Reason for transfer payment |
|-------------------------------------|--------------|--------------------------|------------------------------------|
| Institutional and programme support | 15 665 | 14 158 | Assistance for research activities |

Programme 2: Technology Innovation

| Organisation/Theme | Budget R'000 | Actual expenditure R'000 | Reason for transfer payment |
|--|------------------|--------------------------|---|
| Bio-economy Strategy | 39 969 | 39 969 | Implementation of the bio-economy strategy |
| Biofuels | 9 365 | 9 365 | Biofuels research |
| Emerging Research Areas | 106 250 | 106 250 | R&D into emerging research areas |
| Energy Grand Challenge | 54 451 | 54 451 | Support for R&D in the renewable energy sector |
| Health Innovation | 94 986 | 91 165 | R&D for new health products and services |
| HIV and Aids Prevention and Treatment Technologies | 31 019 | 31 019 | Research into technologies to prevent and combat HIV/Aids |
| Hydrogen Strategy - Current | 93,630 | 93 630 | Support for R&D in the renewable energy sector |
| Hydrogen Strategy - Capital | 84 103 | 84 103 | Support for R&D in the renewable energy sector |
| Indigenous Knowledge Systems | 13 765 | 14 372 | Implementation of indigenous knowledge initiatives |
| Innovation Projects | 474 194 | 474 175 | To promote IP management, regulation and commercialisation |
| International Centre for Genetic Engineering and Biotechnology | 17 973 | 17 972 | R&D of new health products |
| Social Impact Bond | 35 125 | 35 125 | To address the health and social challenges facing adolescent girls and young women in South Africa |
| South African National Space Agency | 162 439 | 162 439 | To support the creation of an environment conducive to industrial development and space technology |
| Space Science | 118 087 | 118 087 | R&D to support space science initiatives |
| Technology Innovation Agency | 458 370 | 458 370 | To stimulate and intensify technology innovation and commercialisation output |
| Technology Transfer Offices Support | 44 073 | 44 073 | Intellectual Property Fund and capacitating |
| Total | 1 837 799 | 1 834 565 | |

Programme 3: International Cooperation and Resources

| Organisation/Theme | Budget R'000 | Actual expenditure R'000 | Reason for transfer payment |
|--|---------------|--------------------------|---|
| Global Science: Bilateral Cooperation | 17 077 | 17 077 | Growing international partnerships with the aim of leveraging resources for R&D and human capital development |
| Global Science: International Resources | 48 581 | 48 581 | Growing international partnerships with the aim of leveraging resources for R&D and human capital development |
| Global Science: Africa Multilateral Agreements | 10 769 | 10 769 | Growing international partnerships with the aim of leveraging resources for R&D and human capital development |
| Total | 76 427 | 76 427 | |

Programme 4: Research Development and Support

| Organisation/Theme | Budget R'000 | Actual expenditure R'000 | Reason for transfer payment |
|--|------------------|--------------------------|---|
| Academy of Science of South Africa | 33,839 | 33 839 | To promote innovative and independent scientific thinking |
| Astronomy | 41 715 | 41 715 | Support to radio and optical astronomy |
| Basic Science Development and Support | 37 944 | 37 944 | Policy and institution building (10-year plan and centres of excellence) |
| Cyberinfrastructure | 211 439 | 211 439 | Operation and management of Centre for High Performance Computing initiatives and connectivity of research institutions |
| Human Resource Development | 1 023 037 | 1 023 037 | Implementation of human capital development initiatives |
| National Research Foundation | 997 408 | 997 409 | Supporting and promoting research through funding human resource development |
| Research and Development Infrastructure | 699 695 | 699 695 | Infrastructure development |
| Science Awareness | 82 491 | 82 491 | Research and initiatives towards youth involvement in the science arena |
| South African Research Chairs Initiative | 602 902 | 602 902 | To fund research chairs in higher education institutions |
| Square Kilometre Array | 1 095 216 | 1 095 216 | Infrastructure for the SKA project |
| Strategic Science Platforms | 97 332 | 97 150 | Strategic science platforms for research and development |
| Total | 4 923 018 | 4 922 837 | |

Programme 5: Socio-economic Innovation Partnerships

| Organisation/Theme | Budget R'000 | Actual expenditure R'000 | Reason for transfer payment |
|---|------------------|--------------------------|---|
| Advanced Manufacturing Technology Strategy | 30 396 | 30 396 | Implementation of the advanced manufacturing technology strategy |
| Council for Science and Industrial Scientific | 1 002 269 | 1 002 269 | To provide science and technology services and solutions, and identify opportunities for new technologies to be further developed and exploited in the private and public sectors for commercial and social benefit |
| Environmental Innovation | 34 213 | 33 978 | Identifying and initiating S&T programmes that support the growth of the environmental technologies and services sector in South Africa |
| Human Sciences Research Council | 321 098 | 321 098 | Conducting large-scale policy-relevant social science research |
| Information Communication Technology | 42 929 | 42 929 | Implementation of the South African ICT Research, Development and Innovation Roadmap. Facilitating policy and strategy development on R&D interventions that support the growth of the ICT sector (excluding the ICT retail sector) |
| Innovation for Inclusive Development | 46 777 | 46 777 | Development of indicators and instruments for measuring and monitoring investments in S&T and the performance of the national system of innovation. Support for experimentation with S&T-based innovations for tackling unemployment poverty and inequality through the creation of sustainable job and wealth opportunities and enhancing the delivery of basic services |
| Local Manufacturing Capacity | 97 326 | 97 326 | Support for technology localisation Assistance to local companies for them to develop their technology capabilities to enable them to leverage procurement opportunities under the infrastructure build programmes of the state-owned enterprises Funding for technology stations to render technology support to small and medium enterprises |
| Local Systems of Innovation | 13 090 | 13 090 | Support for local innovation interventions and science parks. Support for industry innovation partnerships |
| Mining Research and Development | 65 073 | 65 073 | Promotion of mining research and development |
| Resource-based Industries | 35 880 | 35 880 | S&T policy, strategy and direction-setting support to harness value from South Africa's natural resources |
| Science and Technology Indicators | 12 142 | 12 142 | Develop and monitor science and technology indicators |
| Total | 1 701 193 | 1 700 956 | |

6. CONDITIONAL GRANTS

The Department did not receive any conditional grants.

7. DONOR FUNDS

7.1. DONOR FUNDS RECEIVED

The DST received official development assistance (ODA) from the European Union for the year under review. Below is a brief summary of the activities supported by these ODA partners in science and technology.

| Name of donor | European Union |
|---|---|
| Full amount of the funding (R'000) | R100 000 |
| Period of the commitment | 4 years |
| Purpose of the funding | General Budget Support – Green Economy for Development |
| Expected outputs | <ul style="list-style-type: none"> • Develop technologies to maximise the use of valuable natural resources by minimising the generation of waste. • Develop technologies for the beneficiation of waste biomass (production of high value materials and products from the waste) to avoid landfilling. • Demonstrate the validity of technologies and the potential to create jobs in the biomanufacturing sector. • Demonstrate the ability of technologies to increase revenue in the sector. • Enable demonstrable technology transfer to SMMEs and/or large industry to build sustainable businesses; • Increase industry competitiveness through local technology development and localisation of product development. • Human capital development: Impart skills relevant to the industry through training and technology transfer. |
| Actual outputs achieved | New programme and work in still in progress. |
| Amount received in current period (R'000) | 19 542 |
| Amount spent by the Department (R'000) | 19 542 |
| Reasons for the funds unspent | No unspent funds |
| Monitoring mechanism by the donor | These funds are audited by Auditor-General or external auditors at the request of the donor. |

| Name of donor | European Union |
|---|---|
| Full amount of the funding (R'000) | 48 827 |
| Period of the commitment | 7 years |
| Purpose of the funding | General Budget Support – Strengthening the Smallholder Essential Oils Value-Chain |
| Expected outputs | <ul style="list-style-type: none"> • Two, private land, 5 ha essential oil demonstration fields are equipped with green energy agricultural equipment systems. • Two intermediate distillation units continue to operate and 2 x commercial scale, fuel efficient distillation units are manufactured and commissioned in terms of Good Manufacturing Practice (GMP), including training. • Essential oil is harvested and produced at / from start-up and step-up trial field production. • A fully-equipped, Good Laboratory Practice (GLP) certified, essential oil testing laboratory is available to industry participants. • Start-up and step-up trial essential oil is tested and certified to have achieved GAP, GMP and ideally organic standards. • New (craft and industrial) essential oil products are produced for possible (franchise) uptake and improved producer prices. • Systems to produce quality, disease indexed, biological stock are increased in scale and sustainability. • Maps of cluster area potential for locally and imported essential oil varieties are refined to support decision making about possible expansion within two geographic clusters. • Quality training and mentoring is provided to small-holder farmers, industrial, laboratory and retail sector entrepreneurs. • A feasibility study and business plan for providing industrial loan finance to small-holder EO producers is published for financier decision making. |
| Actual outputs achieved | <ul style="list-style-type: none"> • One intermediate distillation unit at ARC Addo and another at ARC Mbombela continue to operate and 2 x commercial scale distillation units were commissioned. • More than 15 kg of essential oil (from 4 varieties) was produced at ARC 1 ha start-up scale trials. • SEOBI's laboratory was fully equipped and HCD in-placement employees received training from the South African National Accreditation System. • Thyme, rosemary, marjoram and rose geranium oil was sent for buyer evaluation and price discovery. • SEOBI supported another 10 beauty and personal care SMMEs to develop and market 2 cosmetic products each. The CSIR produced fractions from rose geranium and thyme oil. • The ARC reported maintaining 135 varieties in its new essential oil accession. • The DSI assembled a GIS system for smallholder farmer techno-economic and socio-economic site-suitability (mobile support service delivery / clustering). • SEOBI supported another cohort of Earn While You Learn smallholder producers and the project registered a total of 46 HCD beneficiaries. • The DSI began assembling project findings into a database suited to business planning. |
| Amount received in current period (R'000) | 11 249 |
| Amount spent by the Department (R'000) | 11 249 |
| Reasons for the funds unspent | The project is still in progress and approval has been received from National Treasury to extend the deadline for completion to 31 March 2026. |

| | |
|---|--|
| Monitoring mechanism by the donor | These funds are audited by Auditor-General or external auditors at the request of the donor. |
| Name of donor | European Union |
| Full amount of the funding (R'000) | 264 000 |
| Period of the commitment | 4 years |
| Purpose of the funding | Sector Budget Support – Support for National System of Innovation |
| Expected outputs | <ul style="list-style-type: none"> • Percentage increase in the rand value of research, development, and innovation partnership between the DSI and industry. • Additions to the DSI portfolio of science and technology-based methodologies, models, or tools available for use by municipal governments for planning, programming, or service delivery. • Use cases by municipalities of science and technology-based methodologies, models or tools developed to support planning, programming, or service delivery from 1 April 2021. • Increase in the number of innovations, commercial or knowledge applications introduced to South Africa as a direct result of international cooperation through FP7. • International technical exchanges to build or reinforce South Africa's capacities in key STI domains specifically referenced in the DSI Strategic Plan, undertaken with the support of international partners facilitated by the DSI. |
| Actual outputs achieved | <ul style="list-style-type: none"> • Call for proposal was conducted, and seven proposals were approved, and contracts signed. Department continued to implement the Sector Innovation Fund (SIF) Programme, through ongoing support for the portfolio of seven industries, namely, horticulture, post- harvest innovation, viticulture, forestry, mineral processing, paper manufacturing and agroprocessing. • Identified 24 appropriate innovative technology solutions. • Several demonstration initiatives have gained traction towards introducing new ways of delivering services in municipalities. • Identified 10 new decision support tools to be demonstrated in consultation with affected or potential user departments / municipalities. • The Municipal Innovation Maturity Index (MIMI) a platform for enhancing the innovation capabilities of municipalities to stimulate and support innovation for improved service delivery was successfully launched in July 2021, with strong support for the 149 municipal stakeholders in attendance. • The international innovations component has published call for expression of interest targeting projects with South African partners that benefited from the EU Framework Programmes for Research and Technological Development. • Preparations are under way for a policy dialogue on circular economy, high level dialogue on air centre, and dialogue on gender-based violence in the first quarter of 2023. |
| Amount received in current period (R'000) | 64 693 |
| Amount spent by the Department (R'000) | 46 689 |
| Reasons for the funds unspent | A key challenge for the implementation was that the Department received funds later than anticipated. |
| Monitoring mechanism by the donor | These funds are audited by Auditor-General or external auditors at the request of the donor. |

8. CAPITAL INVESTMENT

8.1 CAPITAL INVESTMENT, MAINTENANCE AND ASSET MANAGEMENT PLAN

The Department has implemented measures to ensure effective and efficient asset management, such as an asset management policy and strategy. The policy documents help the Department ensure structure asset management, especially in terms of verifications, maintenance, and asset renewal. During the year, the Department conducted two asset verifications to confirm that its assets were still in good working order. The verifications aided in the identification of redundant and outmoded assets, which were disposed of. To maintain continuity, the Department purchased new computer assets to replace those that were damaged or obsolete, as well as to allow more officials to work from home.

In addition, the Department disposed off five vehicles that were old and no longer cost effective to maintain. Seven vehicles were purchased in the year under review and only one vehicle will be purchased in the 2023/24 financial year.



PART

GOVERNANCE

I. INTRODUCTION

The Department is committed to maintaining the highest standards of corporate governance in its management of public finances and resources. The main pillars of the Department's corporate governance arrangements are set out below.

2. RISK MANAGEMENT

The Department acknowledges that there will always be uncertainty and risk attached to its activities, and that not having mechanisms in place to identify and manage risks could result in the unavailability of services, a lack of information, financial loss, increased costs, loss of reputation and failure to meet strategic objectives.

The Department views enterprise risk management (ERM) as imperative for successful delivery on its mandate and its obligation to deliver value to stakeholders. It further recognises that identifying, understanding and managing risk in an enterprise-wide context will ensure accountability and sustainability, and compel it to address adverse events in a proactive and timely manner, while exploiting the possible opportunities offered by future uncertainties.

Various processes have been instituted to ensure the commitment of the entire Department to ERM. These include the definition of clear risk-management roles and responsibilities, the provision of awareness sessions, the publication of articles in the Department's newsletter, and regular risk assessments with subsequent follow-ups.

The Department has an ERM directorate and an effective management system (policy, framework, strategy, guidebooks and annual implementation plan) for ERM.

To ensure the quality, integrity and reliability of the Department's ERM processes and responses, the Department has an Enterprise Risk Management Committee (ERMC) comprising four independent members and one ex officio member.

In the period under review, two assessments of the ERMC's adequacy and effectiveness were carried out. One was an evaluation by management (introduced in the 2021/22 financial year) and one a self-assessment performed by the four independent members and one ex officio member, focusing on (a) the composition and quality of the committee, (b) its understanding of the Department, including risks, (c) its oversight role and (d) its processes and procedures. The outcome of both evaluations was positive.

The chairpersons for the Audit Committee (AC) and Information Technology Steering Committee (ITSC) are standing invitees to the ERMC. In the period under review, the ERMC continued to play an integral part in ensuring that the Department maintained and enhanced its ERM maturity level. The following table indicates the members of the ERMC, the chairpersons of the AC and ITSC, and the meetings they attended in the period under review:

| Name | Member status | Meetings attended | Notes |
|--------------|----------------------------------|-------------------|---|
| S Badat | Independent member (Chairperson) | 5 of 5 | Appointed for a three-year term, with effect from 1 February 2021 |
| M Lubega | Independent member | 4 of 5 | Appointed for a three-year term, with effect from 1 February 2021 |
| C Marais | Independent member | 5 of 5 | Reappointed for a second three-year term, with effect from 1 February 2021 |
| M Ramataboe | Independent member | 5 of 5 | Reappointed for a second three-year term, with effect from 1 February 2021 |
| GSM Zwane | Ex officio member | 4 of 5 | Appointed as DDG: Institutional Planning and Support with effect from 1 June 2021 |
| Z Monnagotla | AC Chairperson | 2 of 5 | Standing invitee |
| Z Kabini | ITSC Chairperson | 4 of 5 | Standing invitee |

The Department's Internal Audit Activity and the AC provide independent assurance on the Department's ERM processes and advise on the effectiveness of risk management controls and risk mitigation initiatives.

In the period under review, as part of ensuring that the Department has a relevant and up-to-date business continuity management (BCM) system in place, all crisis management team plans, the crisis communications plan, the BCM Policy, the BCM Strategy, and the business continuity plan were revised and approved.

The ERMCM monitored risk mitigation quarterly using the strategic, operational, and functional risk profiles approved prior to the start of period under review. In addition, risk assessments were conducted for key projects, including some projects managed on behalf of the Department by its entities.

The strategic, operational and functional risk profiles and the annual implementation plans for ERM and BCM for the 2023/24 financial year were finalised and approved in the last quarter of the period under review.

The ERMCM Chairperson briefed the Director-General quarterly, and the Minister annually, on the effectiveness and adequacy of ERM across the Department.

3. FRAUD AND CORRUPTION

The Department has an effective system for fraud risk management, including a policy, framework and strategy, a whistle-blowing policy, and an annual fraud prevention and detection plan.

The annual fraud prevention and detection plan, which was based on the fraud risk profile finalised and approved in the last quarter of the previous financial year, was driven by the Directorate: ERM. The ERMCM and AC monitored progress quarterly.

The Department marks International Anti-Corruption Day on the last Friday of November of each year. In the period under review, the theme was human trafficking and corruption.

The veracity of allegations of fraud and corruption reported is thoroughly investigated using internal and/or external resources. The outcome of an investigation guides the Accounting Officer on the steps to be taken to finalise the matter (disciplinary action, recovery of state resources or criminal investigation). If this is warranted, the Department will report a matter to the appropriate law enforcement authority (e.g., the South African Police Service, the Special Investigating Unit or the Office of the Public Protector) for further investigation. However, this was not necessary in the period under review. The progress of investigations is reported on in the Ethics Committee, and in closed sessions at all ERMCM meetings.

No new matters were referred to the Department for investigation by the Public Service Commission in the period under review.

For the 2023/24 financial year, the fraud risk profile and the annual fraud prevention and detection plan were finalised and approved in the last quarter of period under review.

4. MINIMISING CONFLICTS OF INTEREST

Following the disclosure of financial interests by designated employees, the ethics office examines the disclosed financial interests and identifies perceived and actual conflicts of interest. Consultations are held with employees to sensitise them to perceived and actual conflicts of interest identified in line with the Public Service Regulations, 2016, and those doing business with the state or doing remunerated work outside the public service without approval are instructed to terminate such business or work. If required, a thorough investigation is instituted to determine appropriate interventions and corrective action, including disciplinary action, to be taken.

The Department has appointed a service provider to conduct a lifestyle audit on members of the Senior Management Service as required by the Department of Public Service and Administration. The audits will establish whether declared assets are consistent with the income of the employee, identify employees who might pose a risk to the DSI's business, establish mechanisms detecting conflicts of interest where employees or related entities are potentially operating businesses in conflict with the DSI's business, and detect employees who fail to declare business interests with DSI service providers. The audit will be extended to all employees of the Department in the 2023/24 financial year.

5. CODE OF CONDUCT

The Public Service Regulations, 2016, requires employees of the Department to adhere to the Constitution and Code of Conduct for Public Servants. In the year under review, the Department held awareness sessions on the Code of Conduct for new and existing employees. Through the work of the Ethics Committee, the Department has interventions that help promote a culture of ethical conduct in the Department, including the appointment of ethics ambassadors to support the ethics function, assist in identifying and reporting unethical behaviour in their Programmes, provide ethics advice to their colleagues and initiate dialogue on ethics in the organisation.

6. HEALTH SAFETY AND ENVIRONMENTAL ISSUES

Section 8 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), requires every employer to “provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of his employees”. Furthermore, Occupational Health and Safety Assessment Series (OHSAS) 18001:2007, which is the accepted international standard for occupational health and safety (OHS) management systems, requires the employer to identify all possible workplace hazards, assess the risks associated with these hazards, and as far as is reasonably practicable, mitigate or eliminate these risks.

To ensure that the Department meets all legislative requirements, the Department has an approved OHS Strategy which focuses on improving the DSI working environment by regularly conducting occupational hygiene surveys and monitoring the implementation of green working environment standards; reviewing the OHS management system to address OHS challenges within the Department; enhancing compliance with OHS legislation and other requirements; and promoting OHS awareness among employees.

The OHS Act and policy statements are prominently displayed throughout the Department. There are information boards on the evacuation procedure and the management of injury on duty cases in all employee workstations. Various aspects on OHS were shared with staff through Departmental communication platforms. The Department has a functional Health and Safety Committee, whose members have been educated about legal obligations in respect of OHS so that they are equipped to execute their responsibilities. In-house training was provided to the Emergency Response Team and the Health and Safety Committee so that they could respond effectively in case of emergency. Emergency evacuation drills were conducted as required.

Inspections were held and control measures were put in place to address OHS risks. The hazard identification and risk assessment was conducted, and an implementation plan still needs to be developed to address findings. The illumination and ventilation assessments were also conducted and identified a potential discomfort associated with illumination and indoor air quality. These findings are being addressed through short and long-terms plans. OHS incidents such as injuries and narrowly avoided injuries were analysed and addressed quarterly.

7. PORTFOLIO COMMITTEES

During the year under review, briefings were presented to the Portfolio Committee on Higher Education, Science and Technology as follows:

| Date | Subject | Matters raised by the Portfolio Committee | How the matters were addressed |
|--------------------------------|---|---|--|
| 22 April 2022 | Briefing by the Department of Science and Innovation (DSI) on its 2022/23 annual performance plan | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 22 April 2022 | Briefing by the National Advisory Council on Innovation on its 2022/23 annual performance plan | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 22 April 2022 | Briefing by the Technology Innovation Agency on its 2022/23 annual performance plan | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 6 May 2022 | Briefing by the South African National Space Agency on its 2022/23 annual performance plan | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 6 May 2022 | Briefing by the Academy of Science of South Africa on its 2022/23 annual performance plan | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 6 May 2022 | Briefing by the South African Council for Natural Science Professions on its 2022/23 annual performance plan | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 27 May 2022 | Briefing by the DSI on the mRNA Vaccine Technology Transfer Hub | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 27 May 2022 (Select Committee) | Briefing by the DSI on its 2021/22 annual performance plan and budget vote | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 3 June 2022 | Briefing on by the DSI on the following: <ol style="list-style-type: none"> 1. STI White Paper and Decadal Plan 2. Financial resources for science and innovation 3. The STI budget coordination mechanism | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 8 June 2022 (Select Committee) | Briefing by the DSI on its 2022/23 annual performance plan and budget | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |

| Date | Subject | Matters raised by the Portfolio Committee | How the matters were addressed |
|--------------------------------------|--|---|--|
| 31 August 2022 (Select Committee) | Briefing by the DSI on the White Paper on Science, Technology and Innovation | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 2 Sept. 2022 | Briefing by the DSI on its initiatives in support of the District Development Model | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 9 Sept. 2022 | Briefing by the DSI on climate change initiatives and a delegation of the Alliance for Collaboration on Climate and Earth Systems Science research programme | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 30 Sept. 2022 | Briefing by the DSI on the Higher Education, Science, Technology and Innovation Institutional Landscape Review Report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 21 Oct. 2022 | Briefing by the Technology Innovation Agency on its 2021/22 annual report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 21 Oct. 2022 | Briefing by the National Research Foundation on its 2021/22 annual report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 21 Oct. 2022 | Briefing by the Council for Scientific and Industrial Research on its 2021/22 annual report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 11 Nov. 2022 | Briefing by the DSI on progress with the indigenous knowledge regulations, the BioProducts Advancement Network South Africa (BioPANZA), including the African Medicines Platform, and the IK registration system | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 18 Nov. 2022 | Briefing by the National Advisory Council on Innovation on its 2021/22 annual report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 18 Nov. 2022 | Briefing by the Academy of Science of South Africa on its 2021/22 annual report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |

| Date | Subject | Matters raised by the Portfolio Committee | How the matters were addressed |
|---------------|--|---|--|
| 18 Nov. 2022 | Briefing by the South African Council for the Natural Scientific Professions on its 2021/22 annual report | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 2 Dec. 2022 | Briefing by the DSI on its expenditure and performance reports for the 1st and 2nd quarters of 2022/23 | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 17 Feb. 2023 | Briefing by the National Advisory Council on Innovation on women's participation in science, technology and innovation | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 17 Feb. 2023 | Briefing by the Academy of Science of South Africa on women in STEM | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 3 March 2023 | Briefing by the DSI and the South African Agency for Science and Technology Advancement on the programme of support to the Department of Basic Education | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 10 March 2023 | Briefing by the DSI and the National Intellectual Property Management Office on the Intellectual Property Rights from Publicly Financed Research and Development Act | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |
| 31 March 2023 | Briefing by the DSI on its expenditure and performance reports for quarter 3 of the 2022/23 financial year | All questions were answered and no follow-up questions were raised. | All questions were addressed satisfactorily and recorded on the Parliamentary Monitoring Group website (www.pmg.org.za/minutes). |

8. SCOPA RESOLUTIONS

There were no Standing Committee on Public Accounts resolutions.

9. PRIOR MODIFICATIONS TO AUDIT REPORTS

There were no prior modifications to the audit reports of the Department.

10. INTERNAL CONTROL UNIT

There is no internal control unit in the Department. All internal control functions are performed by the Internal Audit Activity.

11. INTERNAL AUDIT AND AUDIT COMMITTEES

Key activities and objectives of the Internal Audit Activity

The primary role of the Internal Audit Activity (IAA) is that of an in-house assurance function, which provides an independent and objective opinion on the adequacy and effectiveness of the Department's internal controls. Internal audit work is designed to add value to the organisation's operations by assessing and improving risk management, controls and governance processes. In addition to the provision of assurance, the IAA undertakes non-assurance work, including work related to consulting/advisory services. While the IAA contributes to the internal control environment by examining, evaluating and reporting on it to management, senior management is responsible for ensuring that adequate and effective internal control systems, both financial and non-financial, are in place to obtain optimum performance.

The flexible three-year risk-based rolling internal audit plan (or three-year strategic plan) sets out how the IAA will provide an adequate level of assurance while taking account of resource limitations. It describes a programme of internal audit projects that typically lend themselves to independent review and assessment, and where the IAA can provide value to its key stakeholders. More specifically, it is designed to position the IAA to address the requirements of the Public Finance Management Act and Treasury Regulations, and ensure compliance with the International Professional Practices Framework (IPPF) of the Institute of Internal Auditors (IIA). The IPPF comprises the IIA Core Principles for the Professional Practice of Internal Auditing, the Definition of Internal Auditing, the Code of Ethics for Internal Auditors, and the International Standards for the Professional Practice of Internal Audit. In conformance with the IPPF, the IAA maintains a quality assurance and improvement programme.

Summary of audit work done

The audit plan is responsive to changing risks and so some audits were either added to the plan during the financial year or deferred. The changes were reported to the Audit Committee. The audit plan for 2022/23 comprised 34 audit engagements (a combination of assurance and consulting engagements). Among other activities, assurance was provided on performance information, IT, procurement, the compliance management system, and strategy, planning, monitoring and reporting. Audit work is closely integrated with the risk management process and its associated risk registers and action plans. Certain high risks identified in the risk profiles were therefore selected for further assurance activities. Projects are key strategic initiatives, so their implementation was included in the 2022/23 audit plan. Consulting work included a review of the technical indicator descriptions for performance, to ensure the alignment of indicators, targets and sources of evidence.

Key activities and objectives of the Audit Committee

The Audit Committee is constituted to fulfil the Department's statutory obligations in terms of section 77 of the Public Finance Management Act and the Treasury Regulations issued in terms of the Act. The Audit Committee is an oversight body, providing independent oversight over the Department's governance, risk management and control processes. The Committee's mandate and responsibilities are clearly defined in the Audit Committee Charter, in accordance with which four Audit Committee meetings were convened in the year under review.

Attendance of Audit Committee meetings by Audit Committee members

| Name | Qualifications | Internal or external | Date appointed | Date contract ended | Number of meetings attended |
|---------------------|---|----------------------|----------------|---------------------|-----------------------------|
| Len Konar | DCom, CA(SA), CRMA | External | 1 Oct 2016 | 30 Sept. 2022 | 2 of 2 |
| Nicolette Middleton | MBA, CIA, BCom Hons (Informatics) | External | 1 Mar. 2018 | n/a | 4 of 4 |
| Zanele Monnakgotla | BCom, Master of Finance, LLB and LLM (tax) | External | 1 Oct. 2021 | n/a | 4 of 4 |
| Trevor Boltman | CIA, CGAP, CCSA, Postgraduate Diploma in Internal Audit | External | 1 Oct. 2021 | n/a | 4 of 4 |
| Zack LeGuma | MBA, CA(SA), BCom Hons (Accounting and Finance) | External | 1 Oct. 2022 | n/a | 2 of 2 |

12. AUDIT COMMITTEE REPORT

We are pleased to present our report for the financial year ended 31 March 2023.

1. AUDIT COMMITTEE RESPONSIBILITY

The Audit Committee has fulfilled its responsibilities in accordance with the provisions of section 77 of the Public Finance Management Act and Treasury Regulation 3.1. The Committee has adopted formal terms of reference as its Charter and has conducted its affairs and discharged its responsibilities in compliance with this Charter.

2. THE EFFECTIVENESS OF THE INTERNAL AUDIT ACTIVITY

The Chief Audit Executive (CAE) reports functionally to the Audit Committee to maintain the independence of the Internal Audit Activity (IAA), and the Committee monitors and evaluates the activities of the IAA. The Internal Audit Charter defines the role, organisational status, objectives, authority, responsibility and scope of activities of the IAA.

The annual internal audit plan is developed collaboratively in phases, with input from key stakeholders in the Department, and after available departmental risk information, including the risk profile, and other relevant documents/sources has been considered.

The IAA completed its approved internal audit plan except for one audit that was deferred to the 2023/24 financial after consultation with management and approval by the Audit Committee.

The capacity of the internal audit function was enhanced through the employment of the CAE, who joined the Department in December 2022.

The Committee is satisfied that IAA maintains an effective internal quality assurance and programme that covers all aspects of the internal audit activity.

The internal assessment of the IAA indicates that internal audit work still generally “conforms to the International Standards for the Professional Practice of Internal Auditing”.

3. THE EFFECTIVENESS OF INTERNAL CONTROLS

The Committee acknowledges management’s efforts to maintain a strong environment of internal controls within the Department. This has been confirmed through the internal audit reports submitted to the Committee during the year and the annual written assessment submitted by the CAE, which provides assurance that the system of internal controls was effective, with some opportunity for improvement.

The Department has adopted anti-corruption measures to manage the frequency and magnitude of fraud and corruption.

The review of significant audit findings, which was informed by the risk assessments conducted in the Department, revealed certain weaknesses, which were then raised with the Department. Where weaknesses were identified through an internal audit review, IAA worked with management to agree on appropriate corrective actions and implementation dates for improvements. Although there were few significant findings, the status of corrective actions was monitored on a regular basis until the matter had been resolved. External audit findings are also incorporated into the internal audit plan for follow up until resolved.

The Committee is satisfied that an adequate system of internal controls is in place to mitigate risks and keep them at an acceptable level.

4. IN-YEAR MANAGEMENT AND MONTHLY/QUARTERLY REPORTING

The Department submits monthly reports on departmental expenditure and quarterly reports on its interim financial statements to the Treasury, as required by the Public Finance Management Act. It also reports quarterly to the Department of Planning, Monitoring and Evaluation on performance against predetermined objectives. During the year under review, the Audit Committee monitored these reports, which were prepared and issued by the Accounting Officer and management.

The Committee is satisfied with the content and quality of management and quarterly reports prepared and issued during the year under review in compliance with the statutory framework.

5. EVALUATION OF ANNUAL FINANCIAL STATEMENTS

The Committee has reviewed the annual financial statements, with a focus on the following:

- Significant financial reporting judgements and estimates contained in the annual financial statements.
- Clarity and completeness of disclosures and whether disclosures made have been set properly in context.
- Quality and acceptability of, and any changes in, accounting policies and practices.
- Significant adjustments and/or unadjusted differences resulting from the audit.
- Reasons for major year-on-year fluctuations.
- The audited annual financial statements to be included in the annual report (with the Auditor-General South Africa (AGSA) and the Accounting Officer).
- The Department's compliance with legal and regulatory provisions.
- The AGSA's management letter and management's response to it.
- Information on predetermined objectives to be included in the annual report.

Overall, the Audit Committee is satisfied with the submission and quality of both the interim and annual financial statements prepared by the Department.

6. ENTERPRISE RISK MANAGEMENT

Enterprise risk management is a structured process that focuses on the identification, assessment, management and monitoring of risk. A fully functional Enterprise Risk Management Committee supports the Executive Authority and Accounting Officer by providing oversight, reviewing information presented by management, and reporting on the adequacy and effectiveness of the Department's risk management system. The Committee monitored significant risks and is satisfied that they are receiving the required attention. Comprehensive strategies for enterprise risk management and fraud risk management were developed and implemented. The fraud risk management strategy included a fraud prevention and detection plan. For the purposes of coordination and fostering relationships, the Chairperson of the Audit Committee and the CAE are standing invitees to the Enterprise Risk Management Committee, and the Chairperson of the Enterprise Risk Management Committee and the Chief Risk Officer are standing invitees to the Audit Committee.

7. EVALUATION OF THE CHIEF FINANCIAL OFFICER AND THE FINANCE FUNCTION

Considering the quality of the interim and annual financial reporting and the overall constructive responses during discussions, the audit committee is satisfied with the skills and competencies of the Department's CFO and its finance function during the year under review.

8. EVALUATION OF ANNUAL PERFORMANCE INFORMATION

The Committee has reviewed the Department's performance information, with a focus on the following:

- Compliance with statutory requirements and performance management best practices and standards.
- The alignment of the annual performance plan, budget, strategic plan, organisational plans and performance agreements.
- The relevance of indicators, the extent to which they are measurable and how they relate to services performed by the public entities that fall under the Department.
- Compliance with in-year reporting requirements.
- Internal audit reports on quarterly performance reports submitted by the internal audit function.

The Committee is satisfied that the performance report has been prepared in terms of the Public Finance Management Act, the Treasury Regulations and any other related regulatory requirements for reporting performance.

9. AUDITOR-GENERAL'S REPORT

The Audit Committee reviewed the audit outcomes in the AGSA management report. It is satisfied that there are no significant control deficiencies and that the Department has maintained its clean audit status.

The Audit Committee concurs with and accepts the conclusions of the AGSA on the annual financial statements and is of the opinion that the audited annual financial statements should be accepted and read together with the report of the AGSA.

A handwritten signature in black ink, appearing to be 'Z Monnakgotla', enclosed within a large, loopy circular scribble.

Ms Z Monnakgotla

*Chairperson of the Audit Committee
Department of Science and Innovation*

31 July 2023

13. B-BBEE COMPLIANCE PERFORMANCE INFORMATION

The following table has been completed in accordance with the compliance to the BBEE requirements of the BBEE Act of 2013 and as determined by the Department of Trade, Industry and Competition.

| Has the Department applied any relevant Code of Good Practice (B-BBEE Certificate Levels 1 – 8) with regard to the following: | | |
|--|-------------------|--|
| Criteria | Response Yes / No | Discussion (include a discussion on your response and indicate what measures have been taken to comply) |
| Determining qualification criteria for the issuing of licences, concessions or other authorisations in respect of economic activity in terms of any law? | No | The DSI does not issue licences or concessions. It grants approval for tax incentives in terms of section 11D of the Income Tax Act, but it does not apply BBEE criteria in this regard. |
| Developing and implementing a preferential procurement policy? | Yes | The DSI has an approved Preferential Procurement Strategy that considers BBEE imperatives in the procurement of goods and services. |
| Determining qualification criteria for the sale of state-owned enterprises? | No | The DSI does not have any state-owned enterprise that could be considered for sold. |
| Developing criteria for entering into partnerships with the private sector? | Yes | The DSI complies with the PFMA, Treasury Regulations, PPPFA, procurement policy and related instructions notes in the procurement of goods and services from the private sector. |
| Determining criteria for the awarding of incentives, grants and investment schemes in support of Broad-based Black Economic Empowerment? | No | he DSI does not award incentives, grants and investment schemes in support of BBEE. |



PART

**HUMAN RESOURCE
MANAGEMENT**



I. INTRODUCTION

The information contained in this part of the annual report is prescribed by the Minister for the Public Service and Administration for all departments in the public service.

2. OVERVIEW OF HUMAN RESOURCES

As at 31 March 2023, the Department's structure comprised 495 positions, of which 393 were filled. The Department has frozen some of its vacant positions pending the finalisation of an organisational structure review currently under way and until funds are available. However, it continues to fill prioritised positions, and in the year under review the Department maintained a reduced vacancy rate. The Department has continued with the implementation of the approved Employment Equity Plan, and in 2022/23 achieved 53,19% representation of women at Senior Management Service (SMS) level. The representation of people with disabilities was 3,6% of total staff. Twenty-nine additional candidates were nominated for the Women in Management Leadership Development Programme. The process of appointing service providers for the programme is under way.

Health and wellness services, which include a counselling service, quarterly health screening services and an executive wellness programme have been provided to the Department's employees. There are several interventions to address health and wellness risks identified from both counselling and health screening services.

Public Service Regulation 25(2) provides that, based on the strategic plan of the department, an executive authority shall determine the department's organisational structure in terms of core mandated and support functions after consultation with the Minister for the Public Service and Administration and the National Treasury. Following the approval of the 2019 DSI White Paper on Science, Technology and Innovation (STI), the approval of the 2022-2032 STI Decadal Plan and the DSI Strategic Plan 2020-2025, the Minister approved a business case for the review of the DSI organisational structure in 2022, to ensure the effective implementation of the new mandate set out in these documents. The DSI organisational structure review project will be implemented within the available MTEF budget allocations and will ensure that all current human resources are matched and placed within the structure.

The Department continued to comply with the Performance Management and Development System. All SMS members submitted their performance agreements and assessments within set timeframes and all performance rewards for both SMS and non-SMS were processed by 31 December 2022. The Department continued to prioritise the continuous training and development of its workforce. The Workplace Skills Plan was approved and implemented in line with the approved implementation plan.

3. HUMAN RESOURCES OVERSIGHT STATISTICS

3.1 PERSONNEL RELATED EXPENDITURE

Table 3.1.1 Personnel expenditure by Programme for the period 1 April 2022 to 31 March 2023

| Programme | Total expenditure (R'000) | Personnel expenditure (R'000) | Training expenditure (R'000) | Professional and special services expenditure (R'000) | Personnel expenditure as a % of total expenditure | Average personnel cost per employee (R'000) |
|---|---------------------------|-------------------------------|------------------------------|---|---|---|
| Administration | 336 087 | 158 877 | 2 643 | - | 47,3 | 742 |
| Technology Innovation | 1 890 565 | 43 775 | 0,00 | - | 2,32 | 952 |
| International Cooperation and Resources | 161 269 | 49 436 | 0,00 | - | 30,7 | 1 052 |
| Research Development and Support | 4 981 225 | 46 389 | 0,00 | - | 0,93 | 1 221 |
| Socio-economic Innovation Partnerships | 1 751 708 | 42 001 | 0,00 | - | 2,4 | 894 |
| Total | 9 120 855 | 340 478 | 2 643 | - | 3,7 | 2 915 |

Table 3.1.2 Personnel costs by salary band for the period 1 April 2022 to 31 March 2023

| Salary band | Personnel expenditure (R'000) | % of total personnel cost | Number of employees | Average personnel cost per employee (R'000) |
|--|-------------------------------|---------------------------|---------------------|---|
| Lower skilled (levels 1-2) | 0 | 0 | 0 | 0 |
| Skilled (levels 3-5) | 2 810 | 0,8 | 14 | 201 |
| Highly skilled production (levels 6-8) | 45 093 | 13,2 | 97 | 465 |
| Highly skilled supervision (levels 9-12) | 155 236 | 45,6 | 183 | 848 |
| Senior and top management (levels 13-16) | 137 339 | 40,3 | 98 | 1 401 |
| Total | 340 478 | 100 | 392 | 2 915 |

Table 3.1.3 Salaries, overtime, home owner's allowance and medical aid by Programme for the period 1 April 2022 to 31 March 2023

| Programme | Salaries | | Overtime | | Home owner's allowance (HOA) | | Medical aid | |
|---|----------------|------------------------------------|----------------|------------------------------------|------------------------------|-------------------------------|----------------|---------------------------------------|
| | Amount (R'000) | Salaries as a % of personnel costs | Amount (R'000) | Overtime as a % of personnel costs | Amount (R'000) | HOA as a % of personnel costs | Amount (R'000) | Medical aid as a % of personnel costs |
| Administration | 141 441 | 89,0 | 790 | 0,5 | 2 170 | 1,30 | 4 158 | 2,6 |
| Technology Innovation | 39 394 | 92,1 | 2 | 0,005 | 595 | 1,20 | 555 | 1,3 |
| International Cooperation and Resources | 44 559 | 90,1 | 134 | 0,3 | 585 | 1,50 | 1 171 | 2,4 |
| Research Development and Support | 41 613 | 89,7 | 86 | 0,2 | 677 | 1,40 | 851 | 1,8 |
| Socio-economic Innovation Partnerships | 37 534 | 89,4 | - | - | 306 | 0,80 | 798 | 1,9 |
| Total | 304 541 | 89,4 | 1 012 | 0,3 | 4 333 | 1,30 | 7 533 | 2,2 |

Table 3.1.4 Salaries, overtime, home owner's allowance and medical aid by salary band for the period 1 April 2022 to 31 March 2023

| Salary band | Salaries | | Overtime | | Home owner's allowance | | Medical aid | |
|--|----------------|------------------------------------|----------------|------------------------------------|------------------------|-------------------------------|----------------|---------------------------------------|
| | Amount (R'000) | Salaries as a % of personnel costs | Amount (R'000) | Overtime as a % of personnel costs | Amount (R'000) | HOA as a % of personnel costs | Amount (R'000) | Medical aid as a % of personnel costs |
| Lower skilled (levels 1-2) | - | - | - | - | - | - | - | - |
| Skilled (levels 3-5) | 2 514 | 89,5 | 49 | 1,7 | 75 | 2,7 | 206 | 7,3 |
| Highly skilled production (levels 6-8) | 40 333 | 89,4 | 589 | 1,4 | 1 651 | 3,7 | 3 103 | 6,9 |
| Highly skilled supervision (levels 9-12) | 138 851 | 89,4 | 374 | 0,2 | 1 483 | 1,0 | 2 929 | 1,9 |
| Senior management (levels 13-16) | 122 843 | 89,4 | - | - | 1 124 | 0,8 | 1 295 | 0,9 |
| Total | 304 541 | 89,4 | 1 012 | 4,7 | 4 333 | 12,7 | 7 533 | 2,2 |

3.2 EMPLOYMENT AND VACANCIES

Table 3.2.1 Employment and vacancies by Programme as at 31 March 2023

| Programme | Number of posts on approved establishment | Number of posts filled | Vacancy rate | Number of employees additional to the establishment |
|----------------|---|------------------------|---------------|---|
| Administration | 247 | 214 | 13,36% | 2 |
| Programme 2 | 62 | 46 | 25,81% | 0 |
| Programme 3 | 69 | 47 | 31,88% | 3 |
| Programme 4 | 55 | 38 | 30,91% | 1 |
| Programme 5 | 62 | 48 | 22,58% | 0 |
| Total | 495 | 393 | 20,61% | 6 |

Table 3.2.2 Employment and vacancies by salary band as at 31 March 2023

| Salary band | Number of posts on approved establishment | Number of posts filled | Vacancy rate | Number of employees additional to the establishment |
|-----------------------------------|---|------------------------|---------------|---|
| Lower skilled (1-2) | 0 | 0 | 0 | 0 |
| Skilled (3-5) | 26 | 14 | 46,15% | 0 |
| Highly skilled production (6-8) | 115 | 97 | 15,70% | 1 |
| Highly skilled supervision (9-12) | 228 | 184 | 19,30% | 5 |
| Senior management (13-16) | 126 | 98 | 22,20% | 0 |
| Total | 495 | 393 | 20,60% | 6 |

Table 3.2.3 Employment and vacancies by critical occupations as at 31 March 2023

| Critical occupation | Number of posts on approved establishment | Number of posts filled | Vacancy rate | Number of employees additional to the establishment |
|---------------------|---|------------------------|---------------|---|
| None | 495 | 393 | 20.60% | 6 |
| Total | 495 | 393 | 20.60% | 6 |

3.3 FILLING OF SMS POSTS

Table 3.3.1 SMS post information as at 31 March 2023

| SMS level | Total number of funded SMS posts | Total number of SMS posts filled | % of SMS posts filled | Total number of SMS posts vacant | % of SMS posts vacant |
|--------------------------------------|----------------------------------|----------------------------------|-----------------------|----------------------------------|-----------------------|
| Director-General/ Head of Department | 1 | 1 | 100,00% | 0 | 0 |
| Salary level I6 | 0 | 0 | 0 | 0 | |
| Salary level I5 | 9 | 7 | 77,78% | 2 | 22,22% |
| Salary level I4 | 28 | 19 | 67,86% | 9 | 32,14% |
| Salary level I3 | 88 | 71 | 80,68% | 17 | 19,31% |
| Total | 126 | 98 | 77,78% | 28 | 22,22% |

Table 3.3.2 SMS post information as at 30 September 2022

| SMS level | Total number of funded SMS posts | Total number of SMS posts filled | % of SMS posts filled | Total number of SMS posts vacant | % of SMS posts vacant |
|--------------------------------------|----------------------------------|----------------------------------|-----------------------|----------------------------------|-----------------------|
| Director-General/ Head of Department | 1 | 1 | 100% | 0 | 0% |
| Salary level I6 | 0 | 0 | 0 | 0 | 0 |
| Salary level I5 | 9 | 7 | 77,78% | 2 | 22,22% |
| Salary level I4 | 28 | 16 | 57,14% | 12 | 42,86% |
| Salary level I3 | 88 | 69 | 78,40% | 19 | 21,59% |
| Total | 126 | 93 | 73,80% | 33 | 26,19% |

Table 3.3.3 Advertising and filling of SMS posts for the period 1 April 2022 to 31 March 2023

| SMS level | Advertising | Filling of posts | |
|--------------------------------------|---|---|--|
| | Number of vacancies per level advertised within 6 months of becoming vacant | Number of vacancies per level filled within 6 months of becoming vacant | Number of vacancies per level not filled within 6 months but filled within 12 months |
| Director-General/ Head of Department | 0 | 0 | 0 |
| Salary level I6 | 0 | 0 | 0 |
| Salary level I5 | 1 | 0 | 0 |
| Salary level I4 | 0 | 0 | 0 |
| Salary level I3 | 1 | 0 | 0 |
| Total | 2 | 0 | 0 |

Table 3.3.4 Reasons for not having complied with time frames for the filling of funded vacant SMS posts – advertised within 6 months and filled within 12 months after becoming vacant – for the period 1 April 2022 to 31 March 2023.

| Reasons for vacancies not filled within 12 months |
|--|
| There were insufficient funds available. The Department was also going through a realignment process. |

Table 3.3.5 Disciplinary steps taken for not complying with the prescribed time frames for filling SMS posts within 12 months for the period 1 April 2022 to 31 March 2023

| Reasons for vacancies not advertised within 6 months |
|--|
| None |

| Reasons for vacancies not filled within 6 months |
|--|
| None |

3.4 JOB EVALUATION

Table 3.4.1 Job evaluation by salary band for the period 1 April 2022 to 31 March 2023

| Salary band | Number of posts on approved establishment | Number of jobs evaluated | % of posts evaluated by salary bands | Posts upgraded | | Posts downgraded | |
|--|---|--------------------------|--------------------------------------|----------------|----------------------|------------------|----------------------|
| | | | | Number | % of posts evaluated | Number | % of posts evaluated |
| Lower skilled (levels 1-2) | 6 | 5 | 83,33% | - | - | 5 | 83,33% |
| Skilled (levels 3-5) | 65 | 57 | 87,69% | - | - | 57 | 87,69% |
| Highly skilled production (levels 6-8) | 80 | 41 | 51,25% | - | - | 41 | 51,25% |
| Highly skilled supervision (levels 9-12) | 219 | 6 | 2,73% | - | - | - | - |
| Senior Management Service Band A | 89 | 3 | 3,37% | - | - | - | - |
| Senior Management Service Band B | 27 | 4 | 14,81% | - | - | - | - |
| Senior Management Service Band C | 9 | - | - | - | - | - | - |
| Senior Management Service Band D | 10 | - | - | - | - | - | - |
| Total | 496 | 116 | 23,38% | - | - | - | - |

Table 3.4.2 Profile of employees whose positions were upgraded due to their posts being upgraded for the period 1 April 2022 to 31 March 2023

| Gender | African | Asian | Coloured | White | Total |
|--------------|----------|----------|----------|----------|----------|
| Female | 0 | 0 | 0 | 0 | 0 |
| Male | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |

| | |
|------------------------------------|----------|
| Employees with a disability | 0 |
|------------------------------------|----------|

Table 3.4.3 Employees with salary levels higher than those determined by job evaluation by occupation for the period 1 April 2022 to 31 March 2023

| | |
|---|------|
| Total number of employees whose salaries exceeded the grades determine by job evaluation | None |
|---|------|

3.5 EMPLOYMENT CHANGES

Table 3.5.1 Annual turnover rates by salary band for the period 1 April 2022 to 31 March 2023

| Salary band | Number of employees at beginning of period-1 April 2022 | Appointments and transfers into the Department | Terminations and transfers out of the Department | Turnover rate |
|--|---|--|--|---------------|
| Lower skilled (Levels 1-2) | 0 | 0 | 0 | |
| Skilled (Levels3-5) | 10 | 2 | 0 | 0,00% |
| Highly skilled production (Levels 6-8) | 99 | 5 | 3 | 3,03% |
| Highly skilled supervision (Levels 9-12) | 174 | 25 | 5 | 2,87% |
| Senior Management Service Bands A | 73 | 5 | 4 | 5,48% |
| Senior Management Service Bands B | 16 | 4 | 2 | 12,50% |
| Senior Management Service Bands C | 6 | 0 | 0 | 0,00% |
| Senior Management Service Bands D | 1 | 0 | 0 | 0,00% |
| Contracts | 0 | 2 | 1 | 0,00% |
| Total | 381 | 43 | 15 | 3,93% |

Table 3.5.2 Annual turnover rates by critical occupation for the period 1 April 2022 to 31 March 2023

| Critical occupation | Number of employees at beginning of period (April 2022) | Appointments and transfers into the Department | Terminations and transfers out of the Department | Turnover rate |
|---------------------|---|--|--|---------------|
| None | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 |

Table 3.5.3 Reasons why staff left the Department in the period 1 April 2022 to 31 March 2023

| Termination type | Number | % of total resignations |
|--|-----------|-------------------------|
| Death | 1 | 6,66% |
| Resignation | 6 | 40% |
| Expiry of contract | 1 | 6,66% |
| Dismissal – operational changes | 0 | 0,00% |
| Dismissal – misconduct | 0 | 0,00% |
| Dismissal – inefficiency | 0 | 0,00% |
| Discharged due to ill-health | 0 | 0,00% |
| Retirement | 5 | 33,33% |
| Transfer to other public service departments | 2 | 13,33% |
| Other | 0 | 0,00% |
| Total | 15 | 100% |
| Total number of employees who left as a % of total employment | | 3,93% |

Table 3.5.4 Promotions by critical occupation for the period 1 April 2022 to 31 March 2023

| Occupation | Employees 1 April 2022 | Promotions to another salary level | Salary level promotions as a % of employees by occupation | Progressions to another notch within a salary level | Notch progression as a % of employees by occupation |
|------------|------------------------|------------------------------------|---|---|---|
| None | 0 | 0 | 0 | 0 | 0 |

Table 3.5.5 Promotions by salary band for the period 1 April 2022 to 31 March 2023

| Salary Band | Employees 1 April 2022 | Promotions to another salary level | Salary bands promotions as a % of employees by salary level | Progressions to another notch within a salary level | Notch progression as a % of employees by salary bands |
|--|------------------------|------------------------------------|---|---|---|
| Lower skilled (levels 1-2) | 0 | 0 | 0,00% | 0 | 0% |
| Skilled (levels 3-5) | 10 | 0 | 0,00% | 5 | 50% |
| Highly skilled production (levels 6-8) | 99 | 2 | 2,02% | 66 | 66,7% |
| Highly skilled supervision (levels 9-12) | 174 | 5 | 2,87% | 103 | 59,2% |
| Senior Management (level 13-16) | 98 | 1 | 1,02% | 64 | 65,3% |
| Total | 381 | 8 | 2,09% | 238 | 62,5% |

3.6 EMPLOYMENT EQUITY

Table 3.6.1 Total number of employees (including employees with disabilities) in each of the following occupational categories as at 31 March 2023

| Occupational category | Male | | | | Female | | | | Total |
|--|------------|----------|----------|----------|------------|-----------|----------|-----------|------------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| Legislators, senior officials and managers | 37 | 3 | 4 | 4 | 36 | 1 | 5 | 8 | 98 |
| Professionals | 74 | 1 | 2 | 3 | 92 | 3 | 2 | 6 | 183 |
| Technicians and associate professionals | 25 | 2 | 0 | 0 | 62 | 5 | 0 | 3 | 97 |
| Clerks | 4 | 1 | 0 | 0 | 9 | 1 | 0 | 0 | 15 |
| Service and sales workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Skilled agriculture and fishery workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Craft and related trades workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plant and machine operators and assemblers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elementary occupations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 140 | 7 | 6 | 7 | 199 | 10 | 7 | 17 | 393 |
| Employees with disabilities | 2 | 0 | 1 | 1 | 8 | 1 | 0 | 2 | 15 |

Table 3.6.2 Total number of employees (including employees with disabilities) in each of the following occupational bands as at 31 March 2023

| Occupational band | Male | | | | Female | | | | Total |
|---|------------|----------|----------|----------|------------|-----------|----------|-----------|------------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| Top management | 2 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 6 |
| Senior management | 35 | 3 | 3 | 3 | 34 | 1 | 5 | 8 | 92 |
| Professionally qualified and experienced specialists and mid-management | 74 | 1 | 2 | 3 | 92 | 3 | 2 | 6 | 183 |
| Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents | 25 | 2 | 0 | 0 | 62 | 5 | 0 | 3 | 97 |
| Semi-skilled and discretionary decision making | 4 | 1 | 0 | 0 | 9 | 1 | 0 | 0 | 15 |
| Unskilled and defined decision making | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 140 | 7 | 6 | 7 | 199 | 10 | 7 | 17 | 393 |

Table 3.6.3 Recruitment for the period 1 April 2022 to 31 March 2023

| Occupational band | Male | | | | Female | | | | Total |
|---|-----------|----------|----------|----------|-----------|----------|----------|----------|-----------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| Top management | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Senior management | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 9 |
| Professionally qualified and experienced specialists and mid-management | 14 | 0 | 1 | 0 | 10 | 0 | 0 | 0 | 25 |
| Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| Semi-skilled and discretionary decision making | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 |
| Unskilled and defined decision making | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 25 | 0 | 1 | 0 | 17 | 0 | 0 | 0 | 43 |
| Employees with disabilities | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |

Table 3.6.4 Promotions for the period 1 April 2022 to 31 March 2023

| Occupational band | Male | | | | Female | | | | Total |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| Top management | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Senior management | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5 |
| Professionally qualified and experienced specialists and mid-management | 1 | 0 | 0 | | 1 | 0 | 0 | 0 | 2 |
| Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Semi-skilled and discretionary decision making | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unskilled and defined decision making | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 8 |
| Employees with disabilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 3.6.5 Terminations for the period 1 April 2022 to 31 March 2023

| Occupational band | Male | | | | Female | | | | Total |
|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| Top management | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Senior management | 5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 7 |
| Professionally qualified and experienced specialists and mid-management | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 5 |
| Skilled technical and academically qualified workers, junior management, supervisors, foreman and superintendents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Semi-skilled and discretionary decision making | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| Unskilled and defined decision making | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 15 |
| Employees with disabilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 3.6.6 Disciplinary action for the period 1 April 2022 to 31 March 2023

| Disciplinary action | Male | | | | Female | | | | Total |
|---------------------|---------|----------|--------|-------|---------|----------|--------|-------|-------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| None | | | | | | | | | 0 |

Table 3.6.7 Skills development for the period 1 April 2022 to 31 March 2023

| Occupational category | Male | | | | Female | | | | Total |
|---|-----------|----------|----------|----------|-----------|----------|----------|----------|------------|
| | African | Coloured | Indian | White | African | Coloured | Indian | White | |
| Legislators, senior officials, and managers | 12 | 1 | 2 | 2 | 7 | 0 | 4 | 4 | 32 |
| Professionals | 35 | 2 | 1 | 2 | 50 | 2 | 0 | 2 | 94 |
| Technicians and associate professionals | 18 | 1 | 0 | 0 | 36 | 2 | 0 | 2 | 59 |
| Clerks | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Service and sales workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Skilled agriculture and fishery workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Craft and related trades workers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plant and machine operators and assemblers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elementary occupations | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 66 | 4 | 3 | 4 | 93 | 4 | 4 | 8 | 186 |
| Employees with disabilities | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |

3.7 SIGNING OF PERFORMANCE AGREEMENTS BY SMS MEMBERS

Table 3.7.1 Signing of performance agreements by SMS members as at 31 May 2023

| SMS Level | Total number of funded SMS posts | Total number of SMS members | Total number of signed performance agreements | Signed performance agreements as % of total number of SMS members |
|--------------------------------------|----------------------------------|-----------------------------|---|---|
| Director-General/ Head of Department | 1 | 1 | 1 | 100% |
| Salary level 16 | 0 | 0 | 0 | 0% |
| Salary level 15 | 9 | 6 | 6 | 100% |
| Salary level 14 | 28 | 14 | 14 | 100% |
| Salary level 13 | 88 | 74 | 73 | 99% |
| Total | 126 | 94 | 93 | 99% |

Table 3.7.2 Reasons for not having concluded performance agreements for all SMS members as at 31 March 2023

| Reasons |
|---|
| There was a dispute about the content of the performance agreement. |

Table 3.7.3 Disciplinary steps taken against SMS members for not having concluded performance agreements as at 31 March 2023

| Reasons |
|---------|
| None |

3.8 PERFORMANCE REWARDS

No cash performance rewards were granted for the 2021/22 assessment year.

Table 3.8.1 Performance rewards by race, gender and disability for the period 1 April 2022 to 31 March 2023

| Race and Gender | Beneficiary profile | | | Cost | |
|-----------------|-------------------------|---------------------|-------------------------|--------------|---------------------------|
| | Number of beneficiaries | Number of employees | % of total within group | Cost (R'000) | Average cost per employee |
| African | | | | | |
| Male | 0 | 126 | 0 | 0 | 0 |
| Female | 0 | 186 | 0 | 0 | 0 |
| Asian | | | | | |
| Male | 0 | 9 | 0 | 0 | 0 |
| Female | 0 | 15 | 0 | 0 | 0 |
| Coloured | | | | | |
| Male | 0 | 5 | 0 | 0 | 0 |
| Female | 0 | 11 | 0 | 0 | 0 |
| White | | | | | |
| Male | 0 | 5 | 0 | 0 | 0 |
| Female | 0 | 9 | 0 | 0 | 0 |
| Total | 0 | 366 | 0 | 0 | 0 |

Table 3.8.2 Performance rewards by salary band for personnel below Senior Management Service for the period 1 April 2022 to 31 March 2023

| Salary band | Beneficiary profile | | | Cost | | Total cost as a % of the total personnel expenditure |
|---|-------------------------|---------------------|--------------------------------|--------------------|---------------------------|--|
| | Number of beneficiaries | Number of employees | % of total within salary bands | Total cost (R'000) | Average cost per employee | |
| Lower skilled (Levels 1-2) | 0 | 0 | 0 | 0 | 0 | 0 |
| Skilled (level 3-5) | 0 | 6 | 0 | 0 | 0 | 0 |
| Highly skilled production (level 6-8) | 0 | 98 | 0 | 0 | 0 | 0 |
| Highly skilled supervision (level 9-12) | 0 | 169 | 0 | 0 | 0 | 0 |
| Total | 0 | 273 | 0 | 0 | 0 | 0 |

Table 3.8.3 Performance rewards by critical occupation for the period 1 April 2022 to 31 March 2023

| Critical occupation | Beneficiary profile | | | Cost | |
|---------------------|-------------------------|---------------------|------------------------------|--------------------|---------------------------|
| | Number of beneficiaries | Number of employees | % of total within occupation | Total cost (R'000) | Average cost per employee |
| N/A | | | | | |
| Total | | | | | |

Table 3.8.4 Performance related rewards (cash bonus), by salary band for Senior Management Service for the period 1 April 2022 to 31 March 2023

| Salary band | Beneficiary profile | | | Cost | | Total cost as a % of the total personnel expenditure |
|--------------|-------------------------|---------------------|--------------------------------|--------------------|---------------------------|--|
| | Number of beneficiaries | Number of employees | % of total within salary bands | Total cost (R'000) | Average cost per employee | |
| Band A | 0 | 1 | 0 | 0 | 0 | 0 |
| Band B | 0 | 4 | 0 | 0 | 0 | 0 |
| Band C | 0 | 16 | 0 | 0 | 0 | 0 |
| Band D | 0 | 72 | 0 | 0 | 0 | 0 |
| Total | 0 | 93 | 0 | 0 | 0 | 0 |

3.9 FOREIGN WORKERS

Table 3.9.1 Foreign workers by salary band for the period 1 April 2022 and 31 March 2023

| Salary band | 1 April 2022 | | 31 March 2023 | | Change | |
|--|--------------|------------|---------------|------------|------------|------------|
| | Number | % of total | Number | % of total | Number | % change |
| Lower skilled | n/a | n/a | n/a | n/a | n/a | n/a |
| Highly skilled production (Lev. 6-8) | n/a | n/a | n/a | n/a | n/a | n/a |
| Highly skilled supervision (Lev. 9-12) | n/a | n/a | n/a | n/a | n/a | n/a |
| Contract (level 9-12) | n/a | n/a | n/a | n/a | n/a | n/a |
| Contract (level 13-16) | n/a | n/a | n/a | n/a | n/a | n/a |
| Total | n/a | n/a | n/a | n/a | n/a | n/a |

Table 3.9.2 Foreign workers by major occupation for the period 1 April 2022 to 31 March 2023

| Major occupation | 1 April 2022 | | 31 March 2023 | | Change | |
|------------------|--------------|------------|---------------|------------|--------|----------|
| | Number | % of total | Number | % of total | Number | % Change |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a |

No foreign workers were employed in the 2022/23 assessment year.

3.10 LEAVE UTILISATION

Table 3.10.1 Sick leave for the period 1 January 2022 to 31 December 2022

| Salary band | Total days | % days with medical certification | Number of employees using sick leave | % of total employees using sick leave | Average days per employee | Estimated cost (R'000) |
|--|------------|-----------------------------------|--------------------------------------|---------------------------------------|---------------------------|------------------------|
| Lower skilled (levels 1-2) | 0 | 0 | 0 | 0 | 0 | 0 |
| Skilled (levels 3-5) | 31 | 94% | 4 | 40% | 8 | 29 |
| Highly skilled production (levels 6-8) | 288 | 76.74% | 49 | 48% | 6 | 465 |
| Highly skilled supervision (levels 9-12) | 377 | 83,82% | 62 | 33% | 6 | 1 244 |
| Top and senior management (levels 13-16) | 201 | 83,08% | 43 | 41% | 5 | 979 |
| Total | 897 | 81,72% | 158 | 40% | 6 | 2 717 |

Table 3.10.2 Disability leave (temporary and permanent) for the period 1 January 2022 to 31 December 2022

| Salary band | Total days | % days with medical certification | Number of employees using sick leave | % of total employees using disability leave | Average days per employee | Estimated cost (R'000) |
|--|------------|-----------------------------------|--------------------------------------|---|---------------------------|------------------------|
| Lower skilled (levels 1-2) | 0 | 0 | 0 | 0 | 0 | 0 |
| Skilled (levels 3-5) | 0 | 0 | 0 | 0 | 0 | 0 |
| Highly skilled production (levels 6-8) | 0 | 0 | 0 | 0 | 0 | 0 |
| Highly skilled supervision (levels 9-12) | 128 | 100% | 1 | 0,78% | 128 | 525 |
| Senior management (levels 13-16) | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 128 | 100% | 1 | 0,78% | 128 | 525 |

Table 3.10.3 Annual leave for the period 1 January 2022 to 31 December 2022

| Salary band | Total days taken | Number of employees using annual leave | Average per employee |
|--|------------------|--|----------------------|
| Lower skilled (levels 1-2) | 0 | 0 | 0 |
| Skilled (levels 3-5) | 111 | 10 | 11 |
| Highly skilled production (levels 6-8) | 2 294 | 102 | 22 |
| Highly skilled supervision (levels 9-12) | 3 548 | 185 | 19 |
| Senior management (levels 13-16) | 2 162 | 106 | 20 |
| Total | 8 115 | 408 | 20 |

Table 3.10.4 Capped leave for the period 1 January 2022 to 31 December 2022

| Salary band | Total days of capped leave taken | Number of employees using capped leave | Average number of days taken per employee | Average capped leave per employee as at 31 March 2023 |
|--|----------------------------------|--|---|---|
| Lower skilled (levels 1-2) | 0 | 0 | 0 | 0 |
| Skilled (levels 3-5) | 0 | 0 | 0 | 0 |
| Highly skilled production (levels 6-8) | 0 | 0 | 0 | 0 |
| Highly skilled supervision (levels 9-12) | 0 | 0 | 0 | 0 |
| Senior management (levels 13-16) | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 |

Table 3.10.5 Leave payouts for the period 1 April 2022 to 31 March 2023

| Reason | Total amount (R'000) | Number of employees | Average per employee (R'000) |
|---|----------------------|---------------------|------------------------------|
| Leave payout for 2022/23 due to non-utilisation of leave for the previous cycle | 96 | 3 | 32 |
| Capped leave payouts on termination of service for 2022/23 | 87 | 1 | 87 |
| Current leave payout on termination of service for 2022/23 | 998 | 10 | 100 |
| Total | 1 181 | 14 | 219 |

3.11 HIV/AIDS AND HEALTH PROMOTION PROGRAMMES

Table 3.11.1 Steps taken to reduce the risk of occupational exposure

| Units/categories of employees identified to be at high risk of contracting HIV and related diseases (if any) | Key steps taken to reduce the risk |
|--|------------------------------------|
| n/a | n/a |

Table 3.11.2 Details of health promotion and HIV/Aids programmes

| Question | Yes | No | Details, if yes |
|--|-----|----|--|
| 1. Has the department designated a member of the SMS to implement the provisions contained in Part VI E of Chapter 1 of the Public Service Regulations, 2001? If so, provide her/his name and position. | X | | Ms Sipiwe Mthombeni Director: Gender and Special Programmes |
| 2. Does the department have a dedicated unit or has it designated specific staff members to promote the health and well-being of your employees? If so, indicate the number of employees who are involved in this task and the annual budget that is available for this purpose. | X | | There are three dedicated employees, the Director: Gender and Special Programmes, the Deputy Director: Special Programmes and the Assistant Director: Special Programmes. The budget allocated for this task amounted to R816 630,60 which was allocated for the promotion of employees' health and wellness, including the HIV,Aids and TB programme. |
| 3. Has the department introduced an Employee Assistance or Health Promotion Programme for your employees? If so, indicate the key elements/ services of this Programme. | X | | The Department's Employee Assistance Programme services are outsourced to ICAS. The services offered include assistance with personal, family, work, financial, health and legal challenges. Key elements of the programme include counselling, health risk assessments, HIV counselling and testing, TB screenings, the distribution of male and female condoms, education, awareness and sports activities. |
| 4. Has the department established (a) committee(s) as contemplated in Part VI E.5 (e) of Chapter 1 of the Public Service Regulations, 2001? If so, please provide the names of the members of the committee and the stakeholder(s) that they represent. | X | | The Department has an Occupational Health, Wellness and Safety Committee that represents all employees in the Department (both SMS and non-SMS members). The members are as follows: <ul style="list-style-type: none"> • Ms Nombulelo Dlalisa • Ms Vivienne Gondwe • Mr Phakamile Jim • Ms Zanele Khanyile • Ms Hlamalani Khoza • Mr Benny Nhlapo • Mr Vusi Macwele • Ms Ncedisa Mafani • Ms Tumi Maraba • Mr Livhuwani Masevhe • Mr Mkatoko Mathebula • Ms Neo Matlou • Ms Christinah Mlambo • Mr David Mmakola • Ms Truelove Mnguni • Ms Tumisang Modiole • Ms Caroline Mohlamonyane • Ms Ellen Moloji • Ms Pertunia Mphato • Ms Sipiwe Mthombeni • Ms Nokuthula Nkosi • Mr Raven Pillay • Ms Mpho Ramakhale |

| Question | Yes | No | Details, if yes |
|--|-----|----|--|
| | | | <ul style="list-style-type: none"> • Ms Ncumisa Runeyi • Mr Sengai Setumo • Ms Mpho Thakhuli • Mr Sengai Setumo • Mr Phumelele Yabo • Mr Sizo Zwane |
| <p>5. Has the department reviewed its employment policies and practices to ensure that these do not unfairly discriminate against employees on the basis of their HIV status? If so, list the employment policies/practices so reviewed.</p> | | | <p>The Department is in the process reviewing its wellness management policy, health and productivity management policy and HIV/Aids, sexually transmitted infections and TB management policy.</p> |
| <p>6. Has the department introduced measures to protect HIV-positive employees or those perceived to be HIV-positive from discrimination? If so, list the key elements of these measures.</p> | X | | <p>There is a policy in place which address issues of stigma and discrimination (HIV/Aids, sexually transmitted infections and TB management policy). A candlelight memorial service to remember those lost to Aids and a World Aids Day commemoration are used to provide awareness and address issues of stigma and discrimination.</p> |
| <p>7. Does the department encourage its employees to undergo voluntary counselling and testing? If so, list the results that you have you achieved.</p> | X | | <p>The Department conducted four health screening sessions, which focused on lifestyle diseases and HIV counselling and testing. In the four health screenings, an average of 18,7% employees were tested for HIV.</p> |
| <p>8. Has the department developed measures/ indicators to monitor and evaluate the impact of its health promotion programme? If so, list these measures/indicators.</p> | X | | <p>The Department has adopted measures and indicators as required by the Department of Public Service and Administration (DPSA) Employee Health and Wellness Strategic Framework for the Public Service. Quarterly progress reports with remedial actions were submitted to the DPSA. The Department's Directorate: Special Programmes monitors the implementation of services by ICAS, and employees provide an evaluation of the services. The Department also monitors outcome of the following indicators:</p> <ol style="list-style-type: none"> i. Percentage of employees participating in health screenings. ii. Percentage of employees participating in HIV counselling and testing. iii. The number of SMS members participating in screenings. iv. The number of wellness interventions implemented. v. Access to Employee Assistance Programme services. |

3.12 LABOUR RELATIONS

Table 3.12.1 Collective agreements for the period 1 April 2022 to 31 March 2023

| | |
|--|------|
| Total number of Collective agreements | None |
|--|------|

Table 3.12.2 Misconduct and disciplinary hearings finalised for the period 1 April 2022 to 31 March 2023

| | |
|--|------|
| Total number of disciplinary hearings finalised | None |
|--|------|

Table 3.12.3 Types of misconduct addressed at disciplinary hearings for the period 1 April 2022 to 31 March 2023

| Type of misconduct | Number | % of total |
|------------------------------------|----------|-------------|
| Conducting business with the state | 1 | 100% |
| Total | 1 | 100% |

Table 3.12.4 Grievances lodged for the period 1 April 2022 to 31 March 2023

| Grievances | Number | % of total |
|--|-----------|-------------|
| Number of grievances resolved | 7 | 64% |
| Number of grievances not resolved | 4 | 36% |
| Total number of grievances lodged | 11 | 100% |

Table 3.12.5 Disputes logged with Councils for the period 1 April 2022 to 31 March 2023

| Disputes | Number | % of total |
|--|----------|-------------|
| Number of disputes upheld | 2 | 100% |
| Number of disputes dismissed | 0 | 100% |
| Total number of disputes lodged | 2 | 100% |

Table 3.12.6 Strike actions for the period 1 April 2022 to 31 March 2023

| | |
|--|---|
| Total number of persons working days lost | 0 |
| Total cost of working days lost | 0 |
| Amount recovered as a result of no work no pay (R'000) | 0 |

Table 3.12.7 Precautionary suspensions for the period 1 April 2022 to 31 March 2023

| | |
|--|---------|
| Number of people suspended | 1 |
| Number of people whose suspension exceeded 30 days | 1 |
| Average number of days suspended | 252 |
| Cost of suspension (R'000) | 850 794 |

3.13 SKILLS DEVELOPMENT

Table 3.13.1 Training needs identified for the period 1 April 2022 to 31 March 2023

| Occupational category | Gender | Number of employees as at 1 April 2022 | Training needs identified at the start of the reporting period | | | |
|--|--------|--|--|---|-------------------------|-----------|
| | | | Learnerships | Skills programmes and other short courses | Other forms of training | Total |
| Legislators, senior officials and managers | Female | 47 | 0 | 4 | 5 | 9 |
| | Male | 51 | 0 | 4 | 4 | 8 |
| Professionals | Female | 99 | 0 | 6 | 10 | 16 |
| | Male | 74 | 0 | 6 | 7 | 13 |
| Technicians and associate professionals | Female | 71 | 0 | 8 | 9 | 17 |
| | Male | 28 | 0 | 8 | 2 | 10 |
| Clerks | Female | 8 | 0 | 3 | 1 | 4 |
| | Male | 3 | 0 | 3 | 1 | 4 |
| Service and sales workers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Skilled agriculture and fishery workers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Craft and related trades workers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Plant and machine operators and assemblers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Elementary occupations | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Subtotal | Female | 225 | 0 | 21 | 25 | 46 |
| | Male | 156 | 0 | 21 | 14 | 35 |
| Total | | 381 | 0 | 42 | 39 | 81 |

Table 3.13.2 Training provided for the period 1 April 2022 to 31 March 2023

| Occupational category | Gender | Number of employees as at 1 April 2022 | Training provided within the reporting period | | | |
|--|--------|--|---|---|-------------------------|------------|
| | | | Learnerships | Skills programmes and other short courses | Other forms of training | Total |
| Legislators, senior officials and managers | Female | 47 | 0 | 10 | 1 | 11 |
| | Male | 51 | 0 | 8 | 3 | 11 |
| Professionals | Female | 99 | 0 | 17 | 8 | 25 |
| | Male | 74 | 0 | 13 | 5 | 18 |
| Technicians and associate professionals | Female | 71 | 0 | 15 | 7 | 22 |
| | Male | 28 | 0 | 12 | 2 | 14 |
| Clerks | Female | 8 | 0 | 1 | 1 | 2 |
| | Male | 3 | 0 | 1 | 0 | 1 |
| Service and sales workers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Skilled agriculture and fishery workers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Craft and related trades workers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Plant and machine operators and assemblers | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Elementary occupations | Female | 0 | 0 | 0 | 0 | 0 |
| | Male | 0 | 0 | 0 | 0 | 0 |
| Subtotal | Female | 225 | 0 | 43 | 17 | 60 |
| | Male | 156 | 0 | 34 | 10 | 44 |
| Total | | 381 | 0 | 77 | 27 | 104 |

3.14 INJURY ON DUTY

Table 3.14.1 Injury on duty for the period 1 April 2022 to 31 March 2023

| Nature of injury on duty | Number | % of total |
|---------------------------------------|----------|-------------|
| Required basic medical attention only | 1 | 100% |
| Temporary total disablement | 0 | 0 |
| Permanent disablement | 0 | 0 |
| Fatal | 0 | 0 |
| Total | 1 | 100% |

3.15 USE OF CONSULTANTS

Table 3.15.1 Report on consultant appointments using appropriated funds for the period 1 April 2022 to 31 March 2023

| Project title | Total number of consultants that worked on project | Duration (work days) | Contract value in Rand |
|---------------|--|----------------------|------------------------|
| None | | | |

| Total number of projects | Total individual consultants | Total duration (work days) | Total contract value in Rand |
|--------------------------|------------------------------|----------------------------|------------------------------|
| n/a | n/a | n/a | n/a |

Table 3.15.2 Analysis of consultant appointments using appropriated funds in terms of historically disadvantaged individuals (HDIs) for the period 1 April 2022 to 31 March 2023

| Project title | Percentage ownership by HDI groups | Percentage management by HDI groups | Number of consultants from HDI groups that work on the project |
|---------------|------------------------------------|-------------------------------------|--|
| n/a | n/a | n/a | n/a |

Table 3.15.3 Report on consultant appointments using donor funds for the period 1 April 2022 to 31 March 2023

| Project title | Total number of consultants that worked on project | Duration (work days) | Donor and contract value in Rand |
|---------------|--|----------------------|----------------------------------|
| n/a | n/a | n/a | n/a |

| Total number of projects | Total individual consultants | Total duration (work days) | Total contract value in Rand |
|--------------------------|------------------------------|----------------------------|------------------------------|
| n/a | n/a | n/a | n/a |

Table 3.15.4 Analysis of consultant appointments using donor funds, in terms of historically disadvantaged individuals (HDIs) for the period 1 April 2022 to 31 March 2023

| Project title | Percentage ownership by HDI groups | Percentage management by HDI groups | Number of consultants from HDI groups that work on the project |
|---------------|------------------------------------|-------------------------------------|--|
| n/a | n/a | n/a | n/a |

3.16 SEVERANCE PACKAGES

Table 3.16.1 Granting of employee initiated severance packages for the period 1 April 2022 to 31 March 2023

| Salary band | Number of applications received | Number of applications referred to the MPSA | Number of applications supported by MPSA | Number of packages approved by department |
|--|---------------------------------|---|--|---|
| Lower skilled (Levels 1-2) | n/a | n/a | n/a | n/a |
| Skilled Levels 3-5) | n/a | n/a | n/a | n/a |
| Highly skilled production (Levels 6-8) | n/a | n/a | n/a | n/a |
| Highly skilled supervision (Levels 9-12) | n/a | n/a | n/a | n/a |
| Senior management (Levels 13-16) | n/a | n/a | n/a | n/a |
| Total | n/a | n/a | n/a | n/a |



PART



**PFMA COMPLIANCE
REPORT**

I. IRREGULAR, FRUITLESS AND WASTEFUL, UNAUTHORISED EXPENDITURE AND MATERIAL LOSSES

I.1 IRREGULAR EXPENDITURE

(a) Reconciliation of irregular expenditure

| Description | 2022/23 | 2021/22 |
|---|--------------|--------------|
| | R'000 | R'000 |
| Opening balance | 7,861 | 7,861 |
| Add: Irregular expenditure confirmed | - | - |
| Less: Irregular expenditure condoned | - | - |
| Less: Irregular expenditure not condoned and removed | (5,955) | - |
| Less: Irregular expenditure recoverable | - | - |
| Less: Irregular expenditure not recovered and written off | - | - |
| Closing balance | 1,906 | 7,861 |

Irregular expenditure amounting to R5 954 860,46 was removed, as per the PFMA Compliance and Reporting Framework issued by the National Treasury in the 2022/23 financial year.

Reconciling notes

The Department did not incur any irregular expenditure in the 2021/22 and 2022/23 financial years. This section is therefore not applicable.

(b) Details of current and previous year irregular expenditure (under assessment, determination, and investigation)

The Department did not have any irregular expenditure under assessment, determination or investigation in the 2021/22 and 2022/23 financial years.

(c) Details of current and previous year irregular expenditure condoned

The Department did not have any irregular expenditure condoned in the 2021/22 and 2022/23 financial years.

(d) Details of current and previous year irregular expenditure removed (not condoned)

| Description | 2023/2022 | 2022/2021 |
|--|--------------|-----------|
| | R'000 | R'000 |
| Irregular expenditure NOT condoned and removed | 5,955 | - |
| Total | 5,955 | - |

Irregular expenditure amounting to R5 954 860,46 was removed as per the PFMA Compliance and Reporting Framework issued by the National Treasury in the 2022/23 financial year.

(e) Details of current and previous year irregular expenditure recovered

The Department did not incur any recoverable irregular expenditure. The Department obtained value for money from all irregular expenditure that was incurred in the previous financial years, and there was therefore no need for recovery.

(f) Details of current and previous year irregular expenditure written off (irrecoverable)

The Department did not incur any recoverable irregular expenditure. There was therefore no irrecoverable irregular expenditure to write off.

Additional disclosure relating to inter-institutional arrangements

(g) Details of non-compliance cases where an institution is involved in an inter-institutional arrangement (where such institution is not responsible for the non-compliance)

The Department does not have any inter-institutional arrangements and the disclosure note is therefore not applicable.

(h) Details of non-compliance cases where an institution is involved in an inter-institutional arrangement (where such institution is responsible for the non-compliance)

The Department does not have any inter-institutional arrangements and the disclosure note is therefore not applicable.

(i) Details of current and previous year disciplinary or criminal steps taken as a result of irregular expenditure

The Department did not need to take disciplinary steps related to irregular expenditure in the current or previous financial year.

I.2 FRUITLESS AND WASTEFUL EXPENDITURE

(a) Reconciliation of fruitless and wasteful expenditure

The Department did not incur fruitless and wasteful expenditure in the current financial year and does not have any outstanding fruitless and wasteful expenditure from previous years.

Reconciling notes

The Department did not incur fruitless and wasteful expenditure in the current financial year and does not have any outstanding fruitless and wasteful expenditure from previous years.

(b) Details of current and previous year fruitless and wasteful expenditure (under assessment, determination, and investigation)

The Department did not incur fruitless and wasteful expenditure in the current financial year and does not have any outstanding fruitless and wasteful expenditure from previous years.

(c) Details of current and previous year fruitless and wasteful expenditure recovered

The Department did not incur fruitless and wasteful expenditure in the current financial year and does not have any outstanding fruitless and wasteful expenditure from previous years.

(d) Details of current and previous year fruitless and wasteful expenditure not recovered and written off

The Department did not incur fruitless and wasteful expenditure in the current financial year and does not have any outstanding fruitless and wasteful expenditure from previous years.

(e) Details of current and previous year disciplinary or criminal steps taken as a result of fruitless and wasteful expenditure

The Department did not incur fruitless and wasteful expenditure in the current financial years and does not have any outstanding fruitless and wasteful expenditure from previous years. No disciplinary steps related to fruitless or wasteful expenditure were therefore required.

I.3 UNAUTHORISED EXPENDITURE

(a) Reconciliation of unauthorised expenditure

The Department did not incur unauthorised expenditure in the previous and current financial years.

Reconciling notes

The Department did not incur unauthorised expenditure in the previous and current financial years.

(b) Details of current and previous year unauthorised expenditure (under assessment, determination, and investigation)

The Department did not incur unauthorised expenditure in the previous or the current financial year.

1.4 ADDITIONAL DISCLOSURES RELATING TO MATERIAL LOSSES IN TERMS OF PFMA SECTION 40(3)(B)(I) AND (III)

(a) Details of current and previous year material losses through criminal conduct

The Department did not incur any material losses through criminal conduct in the current or previous financial years.

(b) Details of other material losses

The Department did not incur any material losses in the current or previous financial years.

(c) Other material losses recovered

The Department did not recover any material losses during the financial year.

(d) Other material losses written off

| Nature of losses | 2022/23 | 2021/22 |
|--|----------|-----------|
| | R'000 | R'000 |
| Losses in respect of damaged vehicle written off | 7 | 92 |
| Total | 7 | 92 |

The number of damage and loss cases has decreased significantly, and therefore so has the value of cases written-off.

2. LATE AND/OR NON-PAYMENT OF SUPPLIERS

| Description | Number of invoices | Consolidated value R'000 |
|---|--------------------|--------------------------|
| Valid invoices received | 2 387 | 9 333 529 594,16 |
| Invoices paid within 30 days or agreed period | 2 387 | 9 333 529 594,16 |
| Invoices paid after 30 days or agreed period | - | - |
| Invoices older than 30 days or agreed period (unpaid and without dispute) | - | - |
| Invoices older than 30 days or agreed period (unpaid and in dispute) | - | - |

The amount includes invoices to suppliers and payments for transfers and subsidies. The Department paid 100% of invoices and contractual agreements within 30 days in the 2022/23 financial year.

3. SUPPLY CHAIN MANAGEMENT

3.1 PROCUREMENT BY OTHER MEANS

| No. | Project description | Name of supplier | Type of procurement by other means | Contract number | Value of contract R'000 |
|-----|---|---|---|-----------------|-------------------------|
| 1. | Provision of perimeter security services with effect from 1 April 2020 until 31 March 2025 | Council for Scientific and Industrial Research | Deviation Sole provider | OR-022771 | 976 713,00 |
| 2. | Reappoint a service provider to finalise an ongoing disciplinary hearing | Puke Maserumule Attorneys Inc. | Deviation Impractical to follow normal procurement process | OR-022792 | 80 859,02 |
| 3. | Certified Internal Auditor Learning System instructor-led training (Mr Jefferson du Preez) | Leadership Academy (Governance Academy) | Deviation Sole provider | OR-022742 | 11 684,00 |
| 4. | Auditing projects, project management and project risk online training (Mr Jefferson du Preez) | Leadership Academy (Governance Academy) | Deviation Sole provider | OR-022729 | 5 166,95 |
| 5. | Renewing the software license for the telephone management system | Scopserv Integrated Services | Deviation Sole provider | OR-022754 | 221 007,00 |
| 6. | Certified Internal Auditor Learning System instructor-led training (Ms Aletta Molokwe) | Leadership Academy (Governance Academy) | Deviation Sole provider | | 11 684,00 |
| 7. | Webinar on Guidelines on Integrated Strategy and Risk Management | The Institute of Risk Management South Africa | Deviation Sole provider | OR-022741 | 5 290,00 |
| 8. | Supply and replacement of a glass and roof panel at DSI | La-Kwekwe Construction and Multi Projects | Deviation Insufficient quotes received | OR-022745 | 59 934,00 |
| 9. | Repair the main fire pipe that is leaking at the Department of Science and Innovation | TransFire | Deviation Emergency/urgency | OR-022772 | 5 865,00 |
| 10. | SAIOSH Health and Safety Conference scheduled for 31 May-1 June 2022 | The South African Institute of Occupational Safety and Health | Deviation Sole provider | OR-022755 | R10 000,00 |
| 11. | Attend 2022 IRMSA Annual Conference | The Institute of Risk Management South Africa | Deviation Sole provider | OR-022875 | 17 144,00 |
| 12. | Reappoint a service provider to finalise an ongoing disciplinary hearing | Puke Maserumule Attorneys Inc. | Deviation Impractical to follow normal procurement process | OR-022922 | 41 939,89 |
| 13. | Attend the 2022 Southern African Research and Innovation Management Association Conference from 1-4 August 2022 | Conference Partner (PTY) LTD | Deviation Sole provider | OR-022860 | 13 167,50 |

| No. | Project description | Name of supplier | Type of procurement by other means | Contract number | Value of contract R'000 |
|-----|--|--|------------------------------------|-----------------|-------------------------|
| 14. | Information System Audit and Control Association (ISACA) Annual Conference | ISACA SA Chapter | Deviation | OR-022927 | 9 000,00 |
| 15. | Attend e-learning: Managing Performance in the Public Service | National School of Government | Deviation | OR-022950 | 24 000,00 |
| 16. | Attend the 25th anniversary conference: EAPA-SA Eduweek | The Employee Assistance Professionals Association of South Africa. (EAPA-SA) | Deviation | OR-022882 | 43 996,00 |
| 17. | Attend Compulsory Induction Programme | National School of Government | Deviation | OR-022905 | 15 750,00 |
| 18. | Attend GovTech Conference 13-15 September 2022 (Mr Shilangu) | SITA (SOC) Ltd | Deviation | OR-022946 | 60 000,00 |
| 19. | Subscription to Creamer Media for the provision of sourcing of information on local markets for benchmarking | Creamer Media | Deviation | OR-022936 | 6 785,00 |
| 20. | Subscription to EBSCO for a database that fulfils diverse information needs, like Harvard Business Review | EBSCO | Deviation | OR-022942 | 437 115,00 |
| 21. | Subscription to Juta/LexisNexis for the provision of access to legal, government and business information sources (library material) | LexisNexis Risk Management | Deviation | OR-022910 | 226 909,46 |
| 22. | Subscription to Quantec Enterprises for library services (access to an academic database) | Quantec Enterprises | Deviation | OR-022997 | 281 694,80 |
| 23. | Attend Smart Procurement World Indaba (public sector supply chain summit) in Midrand, South Africa, from 12 to 15 September 2022 | Commerce Edge | Deviation | OR-022886 | 39 433,50 |
| 24. | Attend the 66th Annual Institute of People Management Convention and Exhibition 17 to 18 October 2022 | The Institute of People Management | Deviation | OR-022994 | 41 400,00 |
| 25. | South African Monitoring and Evaluation Association institutional membership and individual membership | The South African Monitoring and Evaluation Association | Deviation | OR-022904 | 13 024,00 |
| 26. | Attend GovTech Conference 13-15 September 2022 (Mr Simpson and Mr P Dlamini) | SITA (SOC) Ltd | Deviation | OR-022934 | 30 000,00 |

| No. | Project description | Name of supplier | Type of procurement by other means | Contract number | Value of contract R'000 |
|-----|--|--|------------------------------------|-----------------|-------------------------|
| 27. | Attend the Water Institute of Southern Africa Biennial Conference | The Water Institute of Southern Africa | Deviation | OR-022931 | 9 573,75 |
| 28. | Attending 25th Annual Southern African Internal Audit Online Conference from 31 October to 2 November 2022 | The Institute of Internal Auditors | Deviation | OR-022932 | 18 975,00 |
| 29. | Annual supply of corporate clothing and personal protective clothing to the Department of Science and Innovation | Image Makers | Deviation | OR-022967 | 90 689,00 |
| 30. | Attend GovTech Conference 13-15 September 2022 (Ms Malatjie, Mr Mbonwa, Mr S Dlamini and Mr Phalane) | SITA (SOC) Ltd | Deviation | OR-022935 | 60 000,00 |
| 31. | Appointing a service provider to organise meetings on behalf of the Department in the United States of America | Silicon Valley Innovation Center | Deviation | | USD22 000 |
| 32. | Payment of the 2022/23 DSI membership fees to the National Science and Technology Forum | National Science and Technology Forum | Deviation | OR-022859 | 800 183,25 |
| 33. | Procurement of diesel for the generator | Rolec Electrical | Deviation | OR-022809 | 23 748,64 |
| 34. | Procurement of diesel for the generator | Rolec Electrical | Deviation | OR-668115 | 27 400,00 |
| 35. | Provide security guarding services at the launch of National Science Week | Servest Security Company | Deviation | OR-022883 | 31 579,00 |
| 36. | Once-off event – public liability insurance for National Science Week event at Mangosuthu University of Technology | Sankofa Insurance Brokers | Deviation | OR-022885 | 7 500,00 |
| 37. | Emergency medical services for the National Science Week event at Mangosuthu University of Technology | ER24 | Deviation | OR-022884 | 4 617,14 |
| 38. | Subscription to Elsevier ScienceDirect for a database that fulfils diverse information needs, like bibliographies | Elsevier | Deviation | 2424111 | 553 501,00 |
| 39. | Starter replacement on the generator | Diesel Innovations | Deviation | AI-668135 | 57 573,37 |
| 40. | Appointment of a scribe for the quarterly review session on 14 October 2022 | HMSS | Deviation | AI-907959 | 28 175,00 |

| No. | Project description | Name of supplier | Type of procurement by other means | Contract number | Value of contract R'000 |
|-----|--|---|------------------------------------|-----------------|-------------------------|
| 41. | Render catering services for the launch of the World Science Forum | Chef's Connection | Deviation | AI-68139 | 49 737,50 |
| 42. | 6th Annual Leadership Development for Women in Government & SOEs Conference to be attended by Ms Corrine Makatini and Ms Dina Magwiri | Robert Edwin Conferences | Deviation | OR-023042 | 29 897,70 |
| 43. | 6th Annual Leadership Development for Women in Government & SOEs Conference to be attended by Ms Ncumisa Runeyi, Ms Thembi Mdepa and Ms Lisbeth Mlangeni | Robert Edwin Conferences | Deviation | OR-023041 | 44 846,55 |
| 44. | 6th Annual Leadership Development for Women in Government & SOEs Conference to be attended by Ms Joyce Maluleke | Robert Edwin Conferences | Deviation | OR-023040 | 14 948,85 |
| 45. | Procurement of diesel for the generator | Rolec Electrical | Deviation | OR-022991 | 55 300,00 |
| 46. | Replacement of toilet pan | Leano Construction | Deviation | OR-023080 | 3 161,44 |
| 47. | Emergency medical services for the citizen's run for clean air routes at Sea Point and Khayelitsha | SA Paramedics | Deviation | OR-023108 | 4 885,20 |
| 48. | Reappoint a service provider to finalise an ongoing disciplinary hearing | Puke Maserumule Attorneys Inc. | Deviation | OR-023125 | 2 997,70 |
| 49. | Renewing the annual membership of the Gartner Risk Management Leadership Council | Gartner South Africa (Pty) Ltd | Deviation | OR-023193 | 426 324,55 |
| 50. | Train DSI officials on spending review methodology | Government Technical Advisory Centre (GTAC) | Deviation | OR-022945 | 824 388,00 |
| 51. | Subscription to Sabinet Online for the provision of library material | Sabinet | Deviation | OR-023123 | 463 316,40 |
| 52. | Subscription to Sabinet Online for the provision of library material (WorldShare Management Services) | Sabinet | Deviation | OR-023122 | 289 991,98 |
| 53. | Attend five days' Breaking Barriers to entry into the Public Service training for 35 interns | National School of Government | Deviation | OR-023089 | 116 900,00 |
| 54. | Repair of the generator | Diesel Innovations | Deviation | OR-023136 | 2 435,01 |
| 55. | TeamMate annual software license subscription | Wolters Kluwer Tax & Accounting Southern Africa (Pty) Ltd | Deviation | OR-023155 | 488 488,12 |

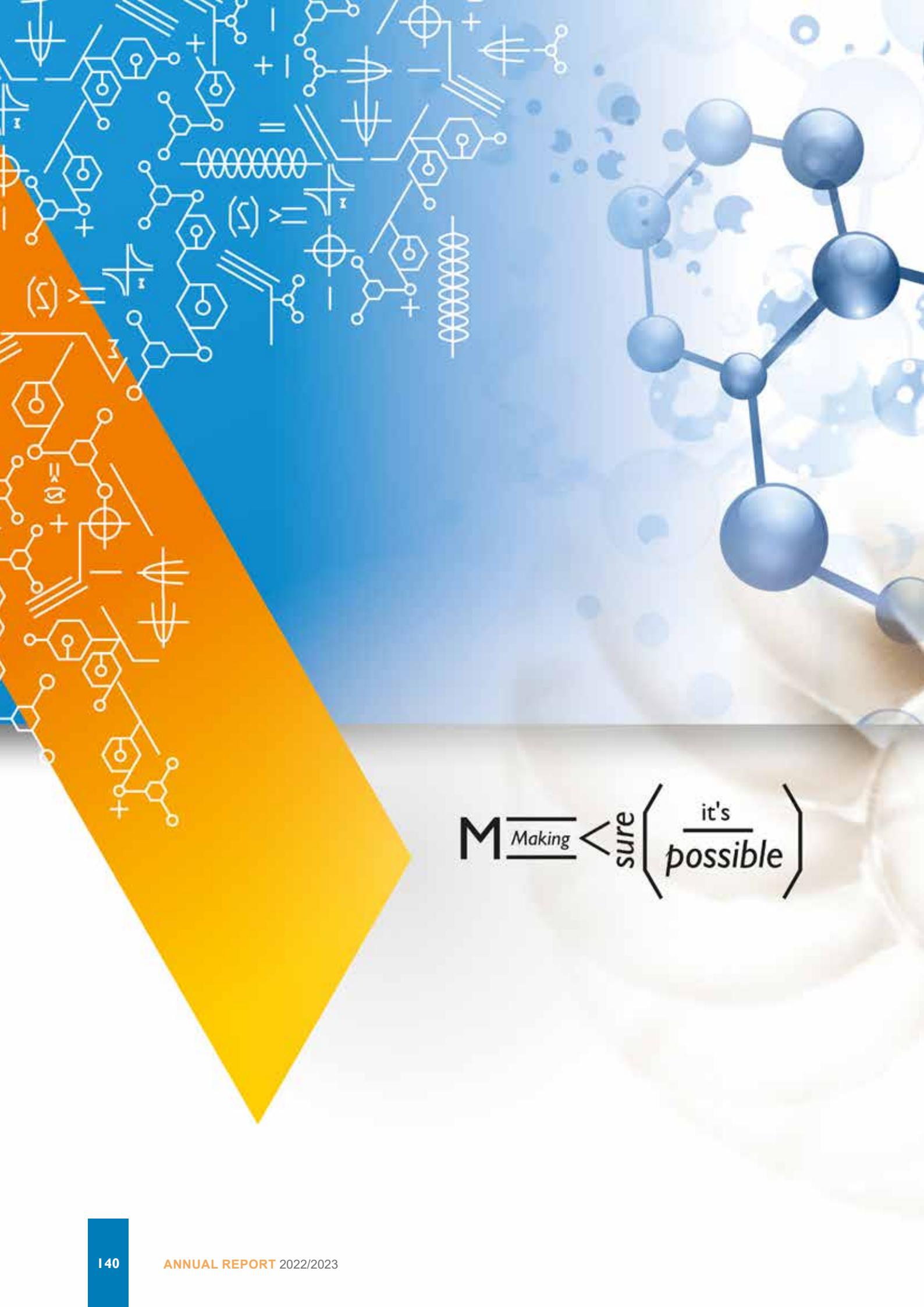
| No. | Project description | Name of supplier | Type of procurement by other means | Contract number | Value of contract R'000 |
|--------------|---|---|------------------------------------|-----------------|-------------------------|
| 56. | Individual membership of the Institution of Directors South Africa: Ms B Khumalo | Institution of Directors South Africa | Deviation | OR-023232 | 3 760,00 |
| 57. | Appoint the Library and Information Association of South Africa to provide library professional membership services | Library and Information Association of South Africa | Deviation | OR-022677 | 3 600,00 |
| 58. | Attending training on building effective combined assurance on 3 March 2023 | The Institute of Internal Auditors | Deviation | OR-023211 | 5 888,00 |
| TOTAL | | | | | 7 233 944,27 |

3.2 CONTRACT VARIATIONS AND EXPANSIONS

The contract variations and expansions on the table below relates to those that were varied and expanded by more than 15% of the initial contract.

| No. | Project description | Name of supplier | Contract modification type | Contract number | Original contract value | Value of previous contract expansion/s or variation/s | Value of current contract expansion or variation |
|-----|--|-----------------------------------|---|-----------------------|-------------------------|---|--|
| | | | | | R'000 | R'000 | R'000 |
| 1. | Fact-finding investigation | Madhlopa & Thenga Incorporated | Amendment: Extensive work, travel and interviews outside the scope of the original terms of reference were conducted. | DSI/CON/01/C2206/2021 | 353 200,00 | n/a | 121 900,00 |
| 2. | Revision of spending review methodology training costs for the 2022/23 financial year | GTAC | Amendment: The increased costs are the alignment of expenditure data to Standard Chart of Accounts (SCOA) from different financial systems used by the entities | OI-022945 | 800 000,00 | | 124 388,00 |
| 3. | Payment of additional costs anticipated by Meeting Planners International amounting to R1 289 000 | Meeting Planners International | Amendment: An increased number of delegates resulted in additional management fees, among other costs. | DSI/CON I/ C2846/2022 | 4 950 197,03 | n/a | 1 289 000,00 |
| 4. | Amount added to the initial quote for the digital Corporate Services Handbook | UVO Communication | Amendment: Due to additional information provided by the units involved, seven more pages than the 57 specified in the terms of reference were needed. | OR-023120 | 29 088,24 | n/a | 23 701,50 |
| 5. | Lease agreement for the National Advisory Council on Innovation (NACI) and the National Intellectual Property Management Office (NIPMO) for a further period of six months, with effect from 1 March to 31 August 2023 | Innovation Hub Management Company | The Department of Public Works and Infrastructure (DPWI) has not concluded the office space project. The DPWI process must be followed in acquiring office space. NACI and NIPMO are already occupying the space, however, the notice of 90 days must be given. | TIHMC/DST A:4590035 | 2 676 732,00 | 1 304 137,88 | 1 443 085,40 |

| No. | Project description | Name of supplier | Contract modification type | Contract number | Original contract value R'000 | Value of previous contract expansion/s or variation/s R'000 | Value of current contract expansion or variation R'000 |
|--------------|---|----------------------|---|-----------------|----------------------------------|--|---|
| 6. | Reinstatement of temporary contract of three months at Asset Management in the Directorate: Supply Chain Management | Watershed Consulting | Renewal: Although Human Resources advertised the position with the intention of appointing a permanent incumbent before the temporary contract ended in March 2023, interviews were scheduled for 27 March 2023. It is therefore not feasible to appoint a candidate during April or May 2023, so the temporary contract was renewed to close the gap until the permanent appointment could be made in June 2023. | | 439 581,80 | n/a | 109 895,45 |
| TOTAL | | | | | 9 248 799,07 | 1 304 137,88 | 3 111 970,35 |



M Making **< sure** **(it's possible)**

PART

FINANCIAL INFORMATION

I. REPORT OF THE AUDITOR-GENERAL

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE DEPARTMENT OF SCIENCE AND INNOVATION

Report on the audit of the financial statements

Opinion

1. I have audited the financial statements of the Department of Science and Innovation set out on pages 149 to 279, which comprise the appropriation statement, statement of financial position as at 31 March 2023, statement of financial performance, statement of changes in net assets and cash flow statement for the year then ended, as well as notes to the financial statements, including a summary of significant accounting policies.
2. In my opinion, the financial statements present fairly, in all material respects, the financial position of the Department of Science and Innovation as at 31 March 2023 and its financial performance and cash flows for the year then ended in accordance with the Modified Cash Standards (MCS) and the requirements of the Public Management Act 1 of 1999 (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the responsibilities of the auditor-general for the audit of the financial statements section of my report.
4. I am independent of the department in accordance with the International Ethics Standards Board for Accountants' *International code of ethics for professional accountants (including International Independence Standards)* (IESBA code) as well as other ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA code.
5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Other matters

6. I draw attention to the matters below. My opinion is not modified in respect of these matter.

Unaudited supplementary schedules

7. The supplementary information set out on pages 280 to 300 does not form part of the financial statements and is presented as additional information. I have not audited these schedules and, accordingly, I do not express an opinion on them.

National Treasury Instruction No. 4 of 2022-23: PFMA Compliance and Reporting Framework

8. On 23 December 2022 National Treasury issued Instruction No. 4: PFMA Compliance and Reporting Framework of 2022-23 in terms of section 76(1)(b), (e) and (f), 2(e) and (4)(a) and (c) of the PFMA, which came into effect on 3 January 2023. The PFMA Compliance and Reporting Framework also addresses the disclosure of unauthorised expenditure, irregular expenditure and fruitless and wasteful expenditure. Among the effects of this framework is that irregular and fruitless and wasteful expenditure incurred in previous financial years and not addressed is no longer disclosed in the disclosure notes of the annual financial statements, only the current year and prior year figures are disclosed in note 24 to the financial statements. The movements in respect of irregular expenditure and fruitless and wasteful expenditure are no longer disclosed in the notes to the annual financial statements of the Department of Science and Innovation. The disclosure of these movements (e.g. condoned, recoverable, removed, written off, under assessment, under determination and under investigation) are now required to be included as part of other information in the annual report of the auditees.
9. I do not express an opinion on the disclosure of irregular expenditure and fruitless and wasteful expenditure in the annual report.

Responsibilities of the accounting officer for the financial statements

10. The accounting officer is responsible for the preparation and fair presentation of the financial statements in accordance with the MCS and the requirements of the PFMA and for such internal control as the accounting officer determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

11. In preparing the financial statements, the accounting officer is responsible for assessing the department's ability to continue as a going concern; disclosing, as applicable, matters relating to going concern; and using the going concern basis of accounting unless the appropriate governance structure either intends to liquidate the department or to cease operations, or has no realistic alternative but to do so.

Responsibilities of the auditor-general for the audit of the financial statements

12. My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error; and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.
13. A further description of my responsibilities for the audit of the financial statements is included in the annexure to this auditor's report.

Report on the annual performance report

14. In accordance with the Public Audit Act 25 of 2004 (PAA) and the general notice issued in terms thereof, I must audit and report on the usefulness and reliability of the reported performance information against predetermined objectives for the selected material performance indicators presented in the annual performance report. The accounting officer is responsible for the preparation of the annual performance report.
15. I selected the following material performance indicators related to programme 2: technology innovation, programme 4: research development and support and programme 5: socio-economic innovation partnership presented in the annual performance report for the year ended 31 March 2023. I selected those indicators that measure the department's performance on its primary mandated functions and that are of significant national, community or public interest.

PROGRAMME 2: TECHNOLOGY INNOVATION

- Number of postgraduate students (master's and doctoral) supported in designated energy, space, Innovation Priorities and Instruments and bio economy areas
- Number of artisans and/or technicians trained in the space, energy and bio economy sectors of the economy
- Number of UoT and TVET graduates offered experiential learning opportunities in the energy sector
- Number of unemployed youth supported under the TTI00 Learnership/ Internship Programme
- Number of trainees upskilled in intellectual property management and technology transfer
- Number of disclosures, received from publicly financed research and development institutions as reported to NIPMO
- Number of disclosures licensed for the first time received from publicly financed research and development institutions and recipients as reported by NIPMO
- Number of intellectual property rights filed based on RDI conducted in designated areas
- Number of technology demonstrations, prototypes, products and services developed.
- Number of stationary fuel cell systems/clean energy technologies deployed in partnership with local and district municipalities in rural and informal settlements
- Number of SMMEs contracted and/or assisted for business development and commercialisation
- Number of black emerging farmers (subsistence, small-scale and potential commercial farmers) benefiting from technology/innovation support programmes

PROGRAMME 4: RESEARCH DEVELOPMENT AND SUPPORT

- Number of PhD students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities
- Number of pipeline postgraduate students awarded bursaries annually as reflected in the reports from the NRF and other relevant entities

- Number of emerging researchers awarded research grants as reflected in the NRF project reports
- Number of black and female emerging researchers awarded research grants as reflected in the NRF project reports
- Number of graduates and students placed in DSI-funded work preparation programmes in SETI institutions
- Number of research infrastructure grants awarded
- Number of researchers awarded research grants through NRF-managed programmes as reflected in the NRF project reports

PROGRAMME 5: SOCIO-ECONOMIC INNOVATION PARTNERSHIP

- Number of knowledge products on innovation for inclusive development published
 - Number of high-level research students (honours, master's and doctoral students) fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals, mining, advanced metals, ICTs, the Industry Innovation Programme (incl. SIF) and the green economy (STI for the circular economy))
 - Number of knowledge and innovation products added to the industrial development and green economy IP portfolios through fully funded or cofunded research initiatives
 - Number of instruments funded in support of increased localisation, competitiveness and R&D-led industry development in aerospace, advanced manufacturing, chemicals, mining, advanced metals, and ICTs, Industry Innovation Programme and the sector innovation fund
16. I evaluated the reported performance information for the selected material performance indicators against the criteria developed from the performance management and reporting framework, as defined in the general notice. When an annual performance report is prepared using these criteria, it provides useful and reliable information and insights to users on the department's planning and delivery on its mandate and objectives.
17. I performed procedures to test whether:
- the indicators used for planning and reporting on performance can be linked directly to the department's mandate and the achievement of its planned objectives
 - the indicators are well defined and verifiable to ensure that they are easy to understand and apply consistently and that I can confirm the methods and processes to be used for measuring achievements
 - the targets linked directly to the achievement of the indicators and are specific, time bound and measurable to ensure that it is easy to understand what should be delivered and by when, the required level of performance as well as how performance will be evaluated
 - the indicators and targets reported on in the annual performance report are the same as what was committed to in the approved initial or revised planning documents
 - the reported performance information is presented in the annual performance report in the prescribed manner
 - there are adequate supporting evidence for the achievements reported and for the reasons provided for any over- or underachievement of targets.
18. I performed the procedures for the purpose of reporting material findings only.
19. I did not identify any material findings on the reported performance information for the selected material performance indicators.

Other matter

20. I draw attention to the matter below.

Achievement of planned targets

21. The annual performance report includes information on reported achievements against planned targets and provides explanations for over- and under-achievements.

Report on compliance with legislation

22. In accordance with the PAA and the general notice issued in terms thereof, I must audit and report on compliance with applicable legislation relating to financial matters, financial management and other related matters. The accounting officer is responsible for the department's compliance with legislation.
23. I performed procedures to test compliance with selected requirements in key legislation in accordance with the findings engagement methodology of the Auditor-General of South Africa (AGSA). This engagement is not an assurance engagement. Accordingly, I do not express an assurance opinion or conclusion.
24. Through an established AGSA process, I selected requirements in key legislation for compliance testing that are relevant to the financial and performance management of the department, clear to allow consistent measurement and evaluation, while also sufficiently detailed and readily available to report in an understandable manner. The selected legislative requirements are included in the annexure to this auditor's report.
25. I did not identify any material non-compliance with the selected legislative requirements.

Other information in the annual report

26. The accounting officer is responsible for the other information included in the annual report. The other information referred to does not include the financial statements, the auditor's report and those selected material indicators in the scoped-in programmes presented in the annual performance report that have been specifically reported on in this auditor's report.
27. My opinion on the financial statements, the report on the audit of the annual performance report and the report on compliance with legislation do not cover the other information included in the annual report and I do not express an audit opinion or any form of assurance conclusion on it.
28. My responsibility is to read this other information and, in doing so, consider whether it is materially inconsistent with the financial statements and the selected material indicators in the scoped-in programmes presented in the annual performance report, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.
29. I did not receive the other information prior to the date of this auditor's report. When I do receive and read this information, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance and request that the other information be corrected. If the other information is not corrected, I may have to retract this auditor's report and re-issue an amended report as appropriate. However, if it is corrected this will not be necessary.

Internal control deficiencies

30. I considered internal control relevant to my audit of the financial statements, annual performance report and compliance with applicable legislation; however, my objective was not to express any form of assurance on it.
31. I did not identify any significant deficiencies in internal control.

Auditor - General

Pretoria
31 July 2023



AUDITOR - GENERAL
SOUTH AFRICA

Auditing to build public confidence

ANNEXURE TO THE AUDITOR'S REPORT

The annexure includes the following:

- The Auditor-General's responsibility for the audit
- The selected legislative requirements for compliance testing.

AUDITOR-GENERAL'S RESPONSIBILITY FOR THE AUDIT

Professional judgement and professional scepticism

As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements and the procedures performed on reported performance information for selected material performance indicators and on the department's compliance with selected requirements in key legislation.

Financial statements

In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the department's internal control
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made.
- conclude on the appropriateness of the use of the going concern basis of accounting in the preparation of the financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists relating to events or conditions that may cast significant doubt on the ability of the department to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify my opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause an department to cease operating as a going concern
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and determine whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation

Communication with those charged with governance

I communicate with the accounting officer regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide the accounting officer with a statement that I have complied with relevant ethical requirements regarding independence and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence and, where applicable, actions taken to eliminate threats or safeguards applied.

COMPLIANCE WITH LEGISLATION – SELECTED LEGISLATIVE REQUIREMENTS

The selected legislative requirements are as follows:

| Legislation | Sections or regulations |
|--|---|
| Public Finance Management Act No.1 of 1999 (PFMA) | 38(1)(b); PFMA 38(1)(c); 38(1)(c)(i); 38(1)(c)(ii); 38(1)(d); 38(1)(h)(iii); Section 39(1)(a); 39(2)(a); Section 40(1)(a); 40(1)(b); 40(1)(c)(i) Section 43(4); 44 (1); 45(b); |
| Treasury Regulations for departments, trading entities, constitutional institutions and public entities (TR) | Treasury Regulation 4.1.1; 4.1.3 Treasury Regulation 5.1.1; 5.2.1; 5.2.3(a); 5.2.3(d); 5.3.1 Treasury Regulation 6.3.1(a); 6.3.1(b); 6.3.1(c'); 6.3.1(d); 6.4.1(b) Treasury Regulation 7.2.1 Treasury Regulation 8.1.1; 8.2.1; 8.2.3; 8.4.1 Treasury Regulation 9.1.1; 9.1.4 Treasury Regulation 10.1.1(a); 10.1.2 Treasury Regulation 11.4.1; 11.4.2; 11.5.1 Treasury Regulation 12.5.1 Treasury Regulation 15.10.1.2(c') Treasury Regulation 16A 6.1; 16A6.2(a) ,(b) & (e) ; 16A 6.3(a) ;16A 6.3(b); 16A 6.3(c);16A6.3(d) ; 16A 6.3(e); 16A 6.4; 16A 6.5; 16A 6.6; 16A7.1; 16A.7.3; 16A.7.6; 16A.7.7;TR 16A8.2 (1) and (2); 16A 8.3 16A8.3 (d); 16A 8.4; 16A9.1(b)(ii);16A 9.1(d); 16A 9.1(e); 16A9.1(f). Treasury Regulation 17.1.1 Treasury Regulation 18.2 Treasury Regulation 19.8.4 |
| Public service regulation | Public service regulation 18; 18 (1) and (2); 25(1)(e)(i); 25(1)(e)(iii) |
| Prevention and Combating of Corrupt Activities Act No.12 of 2004 (PRECCA) | Section 34(1) |
| Construction Industry Development Board Act No.38 of 2000 (CIDB) | Section 18(1) |
| CIDB Regulations | CIDB regulation 17; 25(7A) |
| PPPFA | 2.1 (a); 2.1(b); 2.1(f) |
| PPR 2017 | Paragraph 4.1; 4.2 Paragraph 5.1; 5.3; 5.6; 5.7 Paragraph 6.1; 6.2; 6.3; 6.6 Paragraph 7.1; 7.2; 7.3; 7.6 Paragraph 8.2; 8.5 Paragraph 9.1 Paragraph 11.2 |
| PPR 2022 | Paragraph 4.1; 4.2; 4.3; 4.4 Paragraph 5.1; 5.2; 5.3; 5.4 |
| SITA ACT | Section 7(3) |
| National Treasury Instruction No.1 of 2015/16 | Paragraph 3.1 |
| NT SCM Instruction Note 03 2021/22 | Paragraph 4.3; 4.4; 4.4 (a); 4.4 (c) -(d); |
| NT SCM Instruction Note 11 2020/21 | Paragraph 3.1; 3.4 (b); 3.9 |
| NT SCM Instruction note 2 of 2021/22 | Paragraph 3.2.1; 3.2.4(a) |
| NT instruction note 4 of 2015/16 | Paragraph 3.4 |
| Second amendment of NTI 05 of 2020/21 | Paragraph 4.8; 4.9 ; 5.1 ; 5.3 |
| Erratum NTI 5 of 202/21 | Paragraph 1 |
| Erratum NTI 5 of 202/21 | Paragraph 2 |
| Practice note 7 of 2009/10 | Paragraph 4.1.2 |
| NT instruction note 1 of 2021/22 | Paragraph 4.1 |

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SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| APPROPRIATION STATEMENT | Appropriation per Programme | | | | | | | | | |
|---|-----------------------------|-------------------|----------|---------------------|--------------------|---------------|---|---------------------|--------------------|--|
| | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | |
| Economic classification | | | | | | | | | | |
| Current payments | 579,881 | - | (714) | 579,167 | 559,664 | 19,502 | 96.6% | 521,882 | 485,583 | |
| Compensation of employees | 357,650 | - | - | 357,650 | 340,478 | 17,172 | 95.2% | 363,326 | 332,751 | |
| Salaries and wages | 317,784 | (985) | 400 | 317,199 | 304,541 | 12,658 | 96.0% | 324,662 | 298,060 | |
| Social contributions | 39,866 | 985 | (400) | 40,451 | 35,937 | 4,514 | 88.8% | | | |
| Goods and services | 222,231 | - | (714) | 221,517 | 219,186 | 2,330 | 98.9% | 158,556 | 152,832 | |
| Administrative fees | 1,914 | (621) | (235) | 1,058 | 775 | 282 | 73.3% | 521 | 229 | |
| Advertising | 11,316 | 3,811 | 8,755 | 23,882 | 23,494 | 388 | 98.4% | 21,801 | 21,340 | |
| Minor assets | 742 | (320) | - | 422 | 369 | 53 | 87.4% | 173 | 40 | |
| Audit costs: External | 3,948 | 1,310 | - | 5,258 | 5,254 | 4 | 99.9% | 5,380 | 5,380 | |
| Bursaries: Employees | 3,140 | (1,907) | - | 1,233 | 1,209 | 24 | 98.1% | 1,425 | 1,397 | |
| Catering: Departmental activities | 3,652 | (2,581) | (335) | 736 | 526 | 210 | 71.5% | 395 | 111 | |
| Communication (G&S) | 10,471 | 2,972 | 240 | 13,683 | 13,600 | 83 | 99.4% | 11,250 | 10,930 | |
| Computer services | 5,867 | 22,596 | (90) | 28,373 | 28,326 | 47 | 99.8% | 28,808 | 28,620 | |
| Consultants: Business and advisory services | 21,232 | 15 | (1,569) | 19,678 | 19,483 | 195 | 99.0% | 14,393 | 13,944 | |
| Scientific and technological services | - | - | - | - | - | - | - | - | - | |
| Legal services | - | 5 | - | 5 | 3 | 2 | 60.0% | 835 | 720 | |
| Contractors | 17,601 | (4,002) | (11,350) | 2,249 | 2,213 | 36 | 98.4% | 1,057 | 982 | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| APPROPRIATION STATEMENT | Appropriation per Programme | | | | | | | | | |
|--|-----------------------------|-------------------|----------|---------------------|--------------------|----------|---|---------------------|--------------------|--|
| | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | |
| Agency and support/ outsourced services | 13,774 | 5,017 | (2,630) | 16,161 | 16,045 | 116 | 99.3% | 14,675 | 14,239 | |
| Entertainment | 5,558 | (1,909) | (3,445) | 204 | 62 | 142 | 30.4% | 533 | 39 | |
| Fleet services (incl. government motor transport) | 163 | 1,408 | - | 1,571 | 1,560 | 11 | 99.3% | 1,096 | 987 | |
| Inventory: Clothing, material and accessories | - | - | - | - | - | - | - | - | - | |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - | |
| Inventory: Materials and supplies | - | - | - | - | - | - | - | - | - | |
| Inventory: Medical supplies | - | - | - | - | - | - | - | - | - | |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - | |
| Consumable supplies | 1,523 | (583) | (20) | 920 | 823 | 97 | 89.4% | 2,055 | 1,889 | |
| Consumable: Stationery, printing and office supplies | 6,285 | (3,565) | - | 2,720 | 2,687 | 33 | 98.8% | 1,955 | 1,514 | |
| Operating leases | 4,712 | (1,228) | - | 3,484 | 3,477 | 7 | 99.8% | 3,708 | 3,683 | |
| Property payments | 14,454 | (1,062) | - | 13,392 | 13,370 | 22 | 99.8% | 16,306 | 16,226 | |
| Transport provided: | - | - | - | - | - | - | - | - | - | |
| Departmental activity | - | - | - | - | - | - | - | 593 | 551 | |
| Travel and subsistence | 59,960 | (1,006) | 1,510 | 60,464 | 60,222 | 242 | 99.6% | 17,819 | 17,256 | |
| Training and development | 6,672 | (4,000) | - | 2,672 | 2,643 | 29 | 98.9% | 1,224 | 1,067 | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| APPROPRIATION STATEMENT | Appropriation per Programme | | | | | | | | | |
|---|-----------------------------|-------------------|-----------------|---------------------|--------------------|------------------|---|---------------------|--------------------|--|
| | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | |
| Operating payments | 13,248 | (9,433) | 85 | 3,900 | 3,779 | 121 | 96.9% | 9,119 | 8,892 | |
| Venues and facilities | 16,001 | (6,674) | 8,370 | 17,697 | 17,525 | 172 | 99.0% | 2,579 | 2,383 | |
| Rental and hiring | - | 1,757 | - | 1,757 | 1,742 | 15 | 99.1% | 858 | 412 | |
| Transfers and subsidies | 8,554,102 | - | 710 | 8,554,812 | 8,550,022 | 4,790 | 99.9% | 8,470,925 | 8,467,427 | |
| Departmental agencies and accounts | 6,547,787 | - | 17,840 | 6,565,627 | 5,919,853 | 645,774 | 90.2% | 6,522,705 | 6,017,023 | |
| Departmental agencies | 6,547,787 | - | 17,840 | 6,565,627 | 5,919,853 | 645,774 | 90.2% | 6,522,705 | 6,017,023 | |
| Higher education institutions | - | - | - | - | 255,827 | (255,827) | - | - | 240,526 | |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | 2,000 | |
| Public corporations and private enterprises | 1,512,710 | - | (18,474) | 1,494,236 | 2,143,320 | (649,084) | 143.4% | 1,512,323 | 1,957,502 | |
| Public corporations | 1,512,710 | - | (18,474) | 1,494,236 | 1,838,452 | (344,216) | 123.0% | 1,512,323 | 1,814,291 | |
| Subsidies on products | 1,002,269 | - | - | 1,002,269 | 1,002,269 | - | 100.0% | 978,449 | 978,449 | |
| Other transfers to public corporations | 510,441 | - | (18,474) | 491,967 | 836,183 | (344,216) | 170.0% | 533,874 | 835,842 | |
| Private enterprises | - | - | - | - | 304,868 | (304,868) | - | - | 143,210 | |
| Other transfers to private enterprises | - | - | - | - | 304,868 | (304,868) | - | - | 143,210 | |
| Non-profit institutions | 493,605 | - | 634 | 494,239 | 229,936 | 264,303 | 46.5% | 435,325 | 249,246 | |
| Households | - | - | 710 | 710 | 1,086 | (376) | 153.0% | 572 | 1,130 | |
| Social benefits | - | - | 710 | 710 | 1,086 | (376) | 153.0% | 512 | 1,070 | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| APPROPRIATION STATEMENT | Appropriation per Programme | | | | | | | | | |
|--------------------------------------|-----------------------------|-------------------|----------|---------------------|--------------------|---------------|---|---------------------|--------------------|-------|
| | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 |
| Other transfers to households | - | - | - | - | - | - | - | 60 | 60 | |
| Payments for capital assets | 11,279 | - | - | 11,279 | 11,162 | 117 | 99.0% | 12,731 | 8,941 | |
| Buildings and other fixed structures | | | | | | | | | | |
| Machinery and equipment | 11,279 | - | - | 11,279 | 11,162 | 117 | 99.0% | 12,731 | 8,941 | |
| Transport equipment | - | 2,036 | - | 2,036 | 2,036 | - | 100.0% | 3,000 | 1,530 | |
| Other machinery and Equipment | 11,279 | (2,036) | - | 9,243 | 9,126 | 117 | 98.7% | 9,731 | 7,411 | |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | |
| Payments for financial assets | - | - | 4 | 4 | 7 | (3) | 173.5% | 100 | 92 | |
| Total | 9,145,262 | - | - | 9,145,262 | 9,120,855 | 24,407 | 99.7% | 9,005,638 | 8,962,043 | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| Detail per Programme 1 – Administration for the year ended 31 March 2023 | | | | | | | | | |
|---|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| 1.1 Ministry | 5,828 | - | (1,500) | 4,328 | 2,796 | 1,532 | 64.6% | 5,597 | 2,581 |
| 1.2 Institutional Planning and Support | 162,724 | - | 6,900 | 169,624 | 165,905 | 3,720 | 97.8% | 155,647 | 145,262 |
| 1.3 Corporate Services | 177,819 | (2,380) | (14,300) | 161,139 | 159,311 | 1,828 | 98.9% | 156,306 | 145,922 |
| 1.4 Office accommodation | 5,703 | 2,380 | - | 8,083 | 8,075 | 8 | 99.9% | 10,758 | 10,689 |
| Total | 352,074 | - | (8,900) | 343,174 | 336,087 | 7,087 | 97.9% | 328,308 | 304,454 |

| Economic classification | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|----------------------------------|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| Current payments | 325,130 | - | (9,394) | 315,736 | 310,184 | 5,553 | 98.2% | 299,862 | 279,577 |
| Compensation of employees | 169,232 | - | (5,500) | 163,732 | 158,877 | 4,855 | 97.0% | 172,538 | 154,952 |
| Salaries and wages | 149,283 | (715) | (4,000) | 144,568 | 141,441 | 3,126 | 97.8% | 155,699 | 138,296 |
| Social contributions | 19,949 | 715 | (1,500) | 19,164 | 17,436 | 1,729 | 91.0% | 16,839 | 16,656 |
| Goods and services | 155,898 | - | (3,894) | 152,004 | 151,307 | 698 | 99.5% | 127,324 | 124,625 |
| Administrative fees | 572 | 92 | (175) | 489 | 485 | 4 | 99.2% | 208 | 166 |
| Advertising | 10,080 | 4,657 | 8,900 | 23,637 | 23,319 | 318 | 98.7% | 21,511 | 21,284 |
| Minor assets | 728 | (312) | - | 416 | 369 | 47 | 88.7% | 159 | 40 |
| Audit costs: External | 3,948 | 1,310 | - | 5,258 | 5,254 | 4 | 99.9% | 5,380 | 5,380 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Detail per Programme 1 – Administration for the year ended 31 March 2023 | | | | | | | | | | | |
|---|---------------------------------|----------------------------|-------------------|------------------------------|-----------------------------|-------------------|--|------------------------------|-----------------------------|--|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | |
| | Adjusted appropriation R'000 | Shifting of funds R'000 | Virement R'000 | Final appropriation R'000 | Actual expenditure R'000 | Variance R'000 | Expenditure as % of final appropriation % | Final appropriation R'000 | Actual expenditure R'000 | | |
| Bursaries: Employees | 3,111 | (1,880) | - | 1,231 | 1,209 | 22 | 98.2% | 1,397 | 1,397 | | |
| Catering: | | | | | | | | | | | |
| Departmental activities | 1,768 | (1,310) | - | 458 | 438 | 20 | 95.6% | 151 | 90 | | |
| Communication (G&S) | 5,530 | 3,015 | - | 8,545 | 8,538 | 8 | 99.9% | 6,457 | 6,376 | | |
| Computer services | 5,391 | 22,935 | - | 28,326 | 28,303 | 23 | 99.9% | 28,655 | 28,581 | | |
| Consultants: Business and advisory services | 15,139 | (530) | (319) | 14,290 | 14,197 | 93 | 99.3% | 8,519 | 8,415 | | |
| Science and technological services | - | - | - | - | - | - | - | - | - | | |
| Legal services | - | - | - | - | - | - | - | 430 | 430 | | |
| Contractors | 17,304 | (3,780) | (12,300) | 1,224 | 1,217 | 8 | 99.4% | 1,018 | 982 | | |
| Agency and support/outsourced services | 5,787 | 2,340 | - | 8,127 | 8,113 | 14 | 99.8% | 10,079 | 9,785 | | |
| Entertainment | 653 | (600) | - | 53 | 45 | 9 | 83.4% | 351 | 36 | | |
| Fleet services (incl. government motor transport) | 163 | 1,403 | - | 1,566 | 1,556 | 10 | 99.4% | 1,096 | 987 | | |
| Inventory: Clothing, material and accessories | - | - | - | - | - | - | - | - | - | | |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - | | |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - | | |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - | | |
| Consumable supplies | 1,106 | (318) | - | 788 | 778 | 10 | 98.7% | 1,883 | 1,801 | | |
| Consumable: Stationery, printing and office supplies | 6,277 | (3,598) | - | 2,679 | 2,657 | 22 | 99.2% | 1,810 | 1,471 | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| Detail per Programme 1 – Administration for the year ended 31 March 2023 | | | | | | | | | | |
|---|------------------------|-------------------|------------|---------------------|--------------------|--------------|---|---------------------|--------------------|-------|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 |
| Operating leases | 4,712 | (1,228) | - | 3,484 | 3,477 | 7 | 99.8% | 3,706 | 3,681 | |
| Property payments | 13,488 | (102) | - | 13,386 | 13,370 | 16 | 99.9% | 16,281 | 16,226 | |
| Transport provided: | | | | | | | | | | |
| Departmental activity | - | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | 36,801 | (7,535) | - | 29,266 | 29,260 | 5 | 100.0% | 11,437 | 11,024 | |
| Training and development | 6,672 | (4,000) | - | 2,672 | 2,643 | 29 | 98.9% | 1,500 | 1,489 | |
| Operating payments | 10,868 | (8,729) | - | 2,139 | 2,136 | 4 | 99.8% | 3,704 | 3,639 | |
| Venues and facilities | 5,799 | (3,450) | - | 2,349 | 2,328 | 22 | 99.1% | 1,278 | 1,204 | |
| Rental and hiring | - | 1,620 | - | 1,620 | 1,616 | 4 | 99.7% | 316 | 140 | |
| Transfers and subsidies | 15,665 | - | 490 | 16,155 | 14,735 | 1,420 | 91.2% | 15,615 | 15,844 | |
| Departmental agencies and accounts | - | - | - | - | - | - | - | - | - | |
| Departmental agencies | - | - | - | - | - | - | - | - | - | |
| Higher education institutions | - | - | - | - | 4,596 | (4,596) | - | - | - | 3,121 |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - | |
| Public corporations and private enterprises | - | - | - | - | - | - | - | - | - | |
| Public corporations | - | - | - | - | - | - | - | - | - | |
| Subsidies on products | - | - | - | - | - | - | - | - | - | |
| Other transfers to public corporations | - | - | - | - | - | - | - | - | - | |
| Private enterprises | - | - | - | - | - | - | - | - | - | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Detail per Programme 1 – Administration for the year ended 31 March 2023 | | | | | | | | | | | |
|---|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|-------|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - | - | - | |
| Non-profit institutions | 15,665 | - | - | 15,665 | 9,554 | 6,111 | 61.0% | 15,264 | 12,021 | | |
| Households | - | - | 490 | 490 | 585 | (95) | 119.4% | 351 | 702 | | |
| Social benefits | - | - | 490 | 490 | 585 | (95) | 119.4% | 351 | 702 | | |
| Other transfers to households | - | - | - | - | - | - | - | - | - | | |
| Payment for capital assets | 11,279 | - | - | 11,279 | 11,162 | 117 | 99.0% | 12,731 | 8,941 | | |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | | |
| Machinery and equipment | 11,279 | - | - | 11,279 | 11,162 | 117 | 99.0% | 12,731 | 8,941 | | |
| Transport equipment | - | 2,036 | - | 2,036 | 2,036 | - | 100.0% | 3,000 | 1,530 | | |
| Other machinery and equipment | 11,279 | (2,036) | - | 9,243 | 9,126 | 117 | 98.7% | 9,731 | 7,411 | | |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | | |
| Payment for financial assets | - | - | 4 | 4 | 7 | (3) | 173.5% | 100 | 92 | | |
| Total | 352,074 | - | (8,900) | 343,174 | 336,087 | 7,087 | | 328,308 | 304,454 | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| Detail per Programme 1 – Administration for the year ended 31 March 2023 | | | | | | | | | |
|---|------------------------|-------------------|---------------------|----------------|--------------------|--------------|---|---------------------|--------------------|
| Subprogramme 1.1: Ministry | Adjusted appropriation | Shifting of funds | 2022/23 | | | Variance | Expenditure as % of final appropriation | 2021/22 | |
| | | | Final appropriation | Virement | Actual expenditure | | | Final appropriation | Actual expenditure |
| Current payments | 5,828 | - | 4,328 | (1,500) | 2,796 | 1,532 | 64.6% | 5,597 | 2,581 |
| Compensation of employees | 5,828 | - | 4,328 | (1,500) | 2,796 | 1,532 | 64.6% | 5,597 | 2,581 |
| Salaries and wages | 5,804 | (715) | 3,589 | (1,500) | 2,420 | 1,169 | 67.4% | 5,240 | 2,234 |
| Social contributions | 24 | 715 | 739 | - | 376 | 363 | 50.9% | 357 | 346 |
| Goods and services | - | - | - | - | - | - | - | - | - |
| Administrative fees | - | - | - | - | - | - | - | - | - |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | - | - | - | - | - | - | - | - | - |
| Communication (G&S) | - | - | - | - | - | - | - | - | - |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | - | - | - | - | - | - | - | - | - |
| Entertainment | - | - | - | - | - | - | - | - | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35

Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Consumable supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Consumable: Stationery, printing and office supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operating leases | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Property payments | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Training and development | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operating payments | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Venues and facilities | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rental and hiring | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Transfers and subsidies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Departmental agencies and accounts | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Higher education institutions | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Public corporations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Subsidies on products | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to Public corporations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Non-profit institutions | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Households | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35

Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|---|---|---|---|
| Other transfers to households | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 5,828 | 4,328 | 2,796 | 1,532 | 5,597 | 64.6% | 2,581 | | | | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 1.2: Institutional Planning and Support | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Current payments | 147,059 | - | 6,581 | 153,640 | 151,372 | 2,268 | 98.5% | 140,283 | 129,718 |
| Compensation of employees | 85,044 | - | (2,000) | 83,044 | 81,231 | 1,813 | 97.8% | 87,935 | 79,607 |
| Salaries and wages | 75,557 | - | (1,000) | 74,557 | 73,559 | 998 | 98.7% | 80,522 | 72,220 |
| Social contributions | 9,487 | - | (1,000) | 8,487 | 7,672 | 814 | 90.4% | 7,413 | 7,387 |
| Goods and services | 62,015 | - | 8,581 | 70,596 | 70,141 | 455 | 99.4% | 52,348 | 50,111 |
| Administrative fees | 198 | 202 | - | 400 | 400 | 1 | 99.8% | 140 | 105 |
| Advertising | 5,099 | 9,267 | 8,900 | 23,266 | 22,950 | 316 | 98.6% | 20,990 | 20,754 |
| Minor assets | 217 | (216) | - | 1 | - | 1 | - | 78 | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 503 | (80) | - | 423 | 419 | 3 | 99.2% | 100 | 70 |
| Communication (G&S) | 2,747 | 500 | - | 3,247 | 3,245 | 2 | 99.9% | 2,762 | 2,681 |
| Computer services | 2,264 | (1,200) | - | 1,064 | 1,053 | 11 | 98.9% | 600 | 526 |
| Consultants: Business and advisory services | 12,779 | (7,000) | (319) | 5,460 | 5,375 | 85 | 98.4% | 5,759 | 5,727 |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | 34 | 290 | - | 324 | 323 | 2 | 99.5% | 40 | 40 |
| Agency and support/outsourced Services | 1,604 | 1,530 | - | 3,134 | 3,129 | 5 | 99.8% | 4,782 | 4,548 |
| Entertainment | 369 | (325) | - | 44 | 38 | 7 | 85.0% | 333 | 33 |
| Fleet services (incl. government motor transport) | 39 | 1,013 | - | 1,052 | 1,049 | 3 | 99.7% | 816 | 737 |
| Inventory: Clothing, material and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35

Appropriation Statement

for the year ended 31 March 2023

| | | | | | | | | | | | | | | | | | | | | | |
|--|---------------|---------------|---------------|--------------|---------------|---------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Consumable supplies | 80 | 82 | 79 | 3 | 438 | 402 | 438 | 96.2% | 3 | 438 | 402 | 96.2% | 3 | 438 | 402 | 96.2% | 3 | 438 | 402 | 96.2% | 3 |
| Consumable: Stationery, printing and office supplies | 745 | 47 | 45 | 2 | 571 | 232 | 571 | 95.7% | 2 | 571 | 232 | 95.7% | 2 | 571 | 232 | 95.7% | 2 | 571 | 232 | 95.7% | 2 |
| Operating leases | 1,612 | 2 | - | 2 | - | - | - | - | 2 | - | - | - | - | 2 | - | - | - | - | - | - | - |
| Property payments | 4,030 | 5 | - | 5 | - | - | - | - | 5 | - | - | - | - | 5 | - | - | - | - | - | - | - |
| Transport provided: | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Departmental activities | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | 26,801 | 26,616 | 26,614 | 2 | 10,844 | 10,473 | 10,844 | 100.0% | 2 | 10,844 | 10,473 | 100.0% | 2 | 10,844 | 10,473 | 100.0% | 2 | 10,844 | 10,473 | 100.0% | 2 |
| Training and development | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Operating payments | 1,830 | 1,740 | 1,739 | 1 | 2,637 | 2,572 | 2,637 | 99.9% | 1 | 2,637 | 2,572 | 99.9% | 1 | 2,637 | 2,572 | 99.9% | 1 | 2,637 | 2,572 | 99.9% | 1 |
| Venues and facilities | 1,063 | 2,143 | 2,143 | 1 | 1,248 | 1,175 | 1,248 | 100.0% | 1 | 1,248 | 1,175 | 100.0% | 1 | 1,248 | 1,175 | 100.0% | 1 | 1,248 | 1,175 | 100.0% | 1 |
| Rental and hiring | - | 1,545 | 1,543 | 2 | 212 | 36 | 212 | 99.8% | 2 | 212 | 36 | 99.8% | 2 | 212 | 36 | 99.8% | 2 | 212 | 36 | 99.8% | 2 |
| Transfers and subsidies | 15,665 | 15,980 | 14,526 | 1,454 | 15,264 | 15,452 | 15,264 | 90.9% | 1,454 | 15,264 | 15,452 | 90.9% | 1,454 | 15,264 | 15,452 | 90.9% | 1,454 | 15,264 | 15,452 | 90.9% | 1,454 |
| Departmental agencies and accounts | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Departmental agencies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Higher education institutions | - | - | 4,596 | (4,596) | - | - | (4,596) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Public corporations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Subsidies on products and production | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to Public corporations | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | |
|--------------------------------------|----------------|----------|----------------|----------------|--------------|--------------|----------------|----------------|
| Non-profit institutions | 15,665 | - | 15,665 | 9,554 | 6,111 | 61.0% | 15,264 | 12,021 |
| Households | - | - | 315 | 375 | (60) | 119.2% | - | 310 |
| Social benefits | - | - | 315 | 375 | (60) | 119.2% | - | 310 |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | 7 | (3) | 173.5% | 100 | 92 |
| Total | 162,724 | - | 169,624 | 165,905 | 3,720 | 97.8% | 155,647 | 145,262 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 1.3: Corporate Services | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|---|------------------------|-------------------|-----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Current payments | 166,540 | (2,380) | (14,475) | 149,685 | 147,940 | 1,745 | 98.8% | 143,224 | 136,589 |
| Compensation of employees | 78,360 | - | (2,000) | 76,360 | 74,850 | 1,510 | 98.0% | 79,006 | 72,765 |
| Salaries and wages | 67,921 | - | (1,500) | 66,421 | 65,463 | 959 | 98.6% | 69,937 | 63,842 |
| Social contributions | 10,439 | - | (500) | 9,939 | 9,387 | 552 | 94.4% | 9,069 | 8,923 |
| Goods and services | 88,180 | (2,380) | (12,475) | 73,325 | 73,090 | 235 | 99.7% | 64,218 | 63,824 |
| Administrative fees | 373 | (110) | (175) | 88 | 85 | 3 | 96.7% | 68 | 61 |
| Advertising | 4,981 | (4,610) | - | 371 | 370 | 2 | 99.6% | 521 | 530 |
| Minor assets | 511 | (96) | - | 415 | 369 | 46 | 89.0% | 81 | 40 |
| Audit costs: External | 3,948 | 1,310 | - | 5,258 | 5,254 | 4 | 99.9% | 5,380 | 5,380 |
| Bursaries: Employees | 3,111 | (1,880) | - | 1,231 | 1,209 | 22 | 98.2% | 1,397 | 1,397 |
| Catering: Departmental activities | 1,266 | (1,230) | - | 36 | 19 | 17 | 52.6% | 51 | 20 |
| Communication (G&S) | 2,783 | 2,515 | - | 5,298 | 5,293 | 5 | 99.9% | 3,695 | 3,695 |
| Computer services | 3,127 | 24,135 | - | 27,262 | 27,251 | 11 | 100.0% | 28,055 | 28,055 |
| Consultants: Business and advisory services | 2,360 | 6,470 | - | 8,830 | 8,822 | 8 | 99.9% | 2,760 | 2,688 |
| Scientific and technological services | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | 430 | 430 |
| Contractors | 17,270 | (4,070) | (12,300) | 900 | 894 | 6 | 99.3% | 978 | 942 |
| Agency and support/outsourced services | 4,183 | 810 | - | 4,993 | 4,985 | 8 | 99.8% | 5,297 | 5,237 |
| Entertainment | 284 | (275) | - | 9 | 7 | 2 | 75.9% | 18 | 4 |
| Fleet services (incl. government motor transport) | 124 | 390 | - | 514 | 507 | 7 | 98.6% | 280 | 250 |
| Inventory: Clothing, material and accessories | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Detail per Programme 2 – Technology Innovation for the year ended 31 March 2023 | | | | | | | | | |
|--|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
| 2.1 Space Science | 285,985 | (1,300) | 5,366 | 290,051 | 289,258 | 792 | 99.7% | 289,056 | 286,289 |
| 2.2 Hydrogen and Energy | 253,428 | 824 | - | 254,252 | 253,842 | 410 | 99.8% | 184,867 | 184,782 |
| 2.3 Bio-economy | 248,852 | 1,000 | (366) | 249,486 | 245,904 | 3,582 | 98.6% | 237,879 | 237,106 |
| 2.4 Innovation Priorities and Instruments | 1,058,588 | 50 | (12,630) | 1,046,008 | 1,045,835 | 173 | 100.0% | 954,618 | 953,934 |
| 2.5 National Intellectual Property Management Office | 56,270 | (524) | (640) | 55,106 | 53,994 | 1,112 | 98.0% | 54,390 | 53,316 |
| 2.6 Office of the DDG: Technology Innovation | 3,902 | (50) | (1,030) | 2,822 | 1,731 | 1,091 | 61.4% | 4,207 | 4,186 |
| Total | 1,907,025 | - | (9,300) | 1,897,725 | 1,890,565 | 7,160 | 99.6% | 1,725,017 | 1,719,613 |
| Economic classification | | | | | | | | | |
| Current payments | 69,226 | - | (9,300) | 59,926 | 55,871 | 4,056 | 93.2% | 57,699 | 52,541 |
| Compensation of employees | 48,925 | - | (1,500) | 47,425 | 43,775 | 3,650 | 92.3% | 49,516 | 44,658 |
| Salaries and wages | 42,725 | 980 | (1,500) | 42,205 | 39,394 | 2,811 | 93.3% | 42,410 | 40,072 |
| Social contributions | 6,200 | (980) | - | 5,220 | 4,381 | 839 | 83.9% | 7,106 | 4,587 |
| Goods and services | 20,301 | - | (7,800) | 12,501 | 12,096 | 405 | 96.8% | 8,183 | 7,883 |
| Administrative fees | 274 | (113) | (40) | 121 | 105 | 16 | 86.7% | 27 | 17 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | Detail per Programme 2 – Technology Innovation for the year ended 31 March 2023 | | | | | | | | | |
|--|--|---------|---------|-------|-------|---------|-------|-------|-------|--|
| | 2022/23 | | | | | 2021/22 | | | | |
| Advertising | 434 | (322) | (100) | 12 | - | 12 | - | 85 | 56 | |
| Minor assets | - | - | - | - | - | - | - | - | - | |
| Audit costs: External | - | - | - | - | - | - | - | - | - | |
| Bursaries: Employees | 29 | (27) | - | 2 | - | 2 | - | 28 | - | |
| Catering: Departmental activities | 370 | (312) | - | 58 | 46 | 12 | 79.0% | 46 | 9 | |
| Communication (G&S) | 1,125 | 15 | - | 1,140 | 1,116 | 24 | 97.9% | 1,020 | 995 | |
| Computer services | - | - | - | - | - | - | - | - | - | |
| Consultants: Business and advisory services | 1,522 | (1,095) | (340) | 87 | 67 | 19 | 77.5% | 2,192 | 2,192 | |
| Legal services | - | - | - | - | - | - | - | - | - | |
| Contractors | - | 10 | - | 10 | 7 | 3 | 65.7% | - | - | |
| Agency and support/outsourced services | 5,713 | (1,316) | (2,520) | 1,877 | 1,823 | 54 | 97.1% | 2,372 | 2,336 | |
| Entertainment | 3,601 | (139) | (3,430) | 32 | 1 | 31 | 3.1% | 45 | 1 | |
| Fleet services (incl. government motor transport) | - | 5 | - | 5 | 4 | 1 | 88.9% | - | - | |
| Inventory: Clothing, material and supplies | - | - | - | - | - | - | - | - | - | |
| Accessories | - | - | - | - | - | - | - | - | - | |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - | |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - | |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - | |
| Consumable supplies | 129 | (59) | - | 70 | 28 | 42 | 40.7% | 23 | 6 | |
| Consumable: Stationery, printing and office supplies | - | 3 | - | 3 | 2 | 1 | 66.7% | 2 | 2 | |
| Operating leases | - | - | - | - | - | - | - | - | - | |
| Property payments | - | - | - | - | - | - | - | - | - | |
| Transport provided: | 366 | (360) | - | 6 | - | 6 | - | - | - | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Detail per Programme 2 – Technology Innovation for the year ended 31 March 2023 | | | | | | | | | | |
|--|------------------|-----------------|------------------|---|------------------|---------------|------------------|---|------------------|---|
| | 2022/23 | | | | | 2021/22 | | | | |
| Departmental activity | - | - | - | - | - | - | 7,327 | - | - | - |
| Travel and subsistence | 3,728 | (1,200) | 7,423 | - | 95 | 98.7% | 1,497 | - | 1,469 | - |
| Training and development | - | - | - | - | - | - | - | - | - | - |
| Operating payments | 390 | - | 42 | - | 28 | 34.6% | 72 | - | 71 | - |
| Venues and facilities | 2,621 | (170) | 1,614 | - | 59 | 96.3% | 774 | - | 730 | - |
| Rental and hiring | - | - | - | - | - | - | - | - | - | - |
| Transfers and subsidies | 1,837,799 | - | 1,837,799 | - | 3,104 | 99.8% | 1,667,318 | - | 1,667,071 | - |
| Departmental agencies and accounts | 1,299,459 | 12,866 | 1,312,325 | - | 125,320 | 90.5% | 1,196,097 | - | 1,224,005 | - |
| Departmental agencies | 1,299,459 | 12,866 | 1,312,325 | - | 125,320 | 90.5% | 1,196,097 | - | 1,224,005 | - |
| Higher education institutions | - | - | - | - | (98,417) | - | - | - | 62,351 | - |
| Public corporations and private enterprises | 119,750 | (13,500) | 106,250 | - | (416,898) | 492.4% | 108,989 | - | 349,576 | - |
| Public corporations | 119,750 | (13,500) | 106,250 | - | (114,398) | 207.7% | 108,989 | - | 207,099 | - |
| Subsidies on products | - | - | - | - | - | - | - | - | - | - |
| Other transfers to public corporations | 119,750 | (13,500) | 106,250 | - | (114,398) | 207.7% | 108,989 | - | 207,099 | - |
| Private enterprises | - | - | - | - | (302,500) | - | 142,477 | - | 142,477 | - |
| Other transfers to private enterprises | - | - | - | - | (302,500) | - | - | - | - | - |
| Non-profit institutions | 418,590 | 634 | 419,224 | - | 393,229 | 6.2% | 362,227 | - | 31,135 | - |
| Households | - | - | - | - | (130) | - | 5 | - | 5 | - |
| Social benefits | - | - | - | - | (130) | - | 5 | - | 5 | - |
| Other transfers to households | - | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | Detail per Programme 2 – Technology Innovation for the year ended 31 March 2023 | | | | | 2021/22 | |
|--------------------------------------|------------------|--|----------------|------------------|------------------|--------------|--------------|------------------|
| | | 2022/23 | | | | | | |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | 1,907,025 | - | (9,300) | 1,897,725 | 1,890,565 | 7,160 | 99.6% | 1,719,613 |
| Total | | | | | | | | |

| | | Detail per Programme 2 – Technology Innovation for the year ended 31 March 2023 | | | | | | | 2021/22 | |
|---|---------------|--|----------------|--------------|--------------|------------|--------------|---------------|--------------|--|
| | | 2022/23 | | | | | | | | |
| Subprogramme: 2.1: Space Science | | | | | | | | | | |
| Current payments | 12,425 | (1,300) | (1,600) | 9,525 | 8,732 | 792 | 91.7% | 12,034 | 9,422 | |
| Compensation of employees | 9,864 | (1,300) | (1,500) | 7,064 | 6,330 | 734 | 89.6% | 8,601 | 5,989 | |
| Salaries and wages | 8,672 | (1,000) | (1,500) | 6,172 | 5,745 | 427 | 93.1% | 7,260 | 5,439 | |
| Social contributions | 1,191 | (300) | - | 891 | 584 | 307 | 65.6% | 1,341 | 550 | |
| Goods and services | 2,561 | - | (100) | 2,461 | 2,402 | 58 | 97.6% | 3,433 | 3,433 | |
| Administrative fees | 97 | (72) | - | 25 | 22 | 3 | 88.4% | 1 | 1 | |
| Advertising | 246 | (145) | (100) | 1 | - | 1 | - | - | - | |
| Minor assets | - | - | - | - | - | - | - | - | - | |
| Audit costs: External | - | - | - | - | - | - | - | - | - | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | |
|---|----------------|--------------|----------------|----------------|----------------|--------------|----------------|----------------|
| Departmental agencies and accounts | 273,560 | 6,966 | 280,526 | 266,349 | 14,177 | 94.9% | 277,022 | 244,583 |
| Departmental agencies | 273,560 | 6,966 | 280,526 | 266,349 | 14,177 | 94.9% | 277,022 | 244,583 |
| Higher education institutions | - | - | - | 9,373 | (9,373) | - | - | 2,237 |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | 4,804 | (4,804) | - | - | 30,047 |
| Public corporations | - | - | - | 4,804 | (4,804) | - | - | 29,070 |
| Subsidies on products | - | - | - | - | - | - | - | - |
| Other transfers to public corporations | - | - | - | 4,804 | (4,804) | - | - | 29,070 |
| Private enterprises | - | - | - | - | - | - | - | 977 |
| Other transfers to private enterprises | - | - | - | - | - | - | - | 977 |
| Non-profit institutions | - | - | - | - | - | - | - | - |
| Households | - | - | - | - | - | - | - | - |
| Social benefit | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Total | 285,985 | (1,300) | 5,366 | 290,051 | 289,258 | 792 | 99.7% | 289,056 | 286,289 |
|---|---------|---------|-------|---------|---------|-----|-------|---------|---------|
| Subprogramme | | | | | | | | | |
| 2.2: Hydrogen and Energy | | | | | | | | | |
| Current payments | 11,879 | 824 | - | 12,703 | 12,293 | 410 | 96.8% | 8,640 | 8,555 |
| Compensation of employees | 8,359 | 524 | - | 8,883 | 8,533 | 350 | 96.1% | 8,087 | 8,013 |
| Salaries and wages | 7,559 | 304 | - | 7,863 | 7,629 | 234 | 97.0% | 7,207 | 7,154 |
| Social contributions | 800 | 220 | - | 1,020 | 904 | 116 | 88.7% | 880 | 858 |
| Goods and services | 3,520 | 300 | - | 3,820 | 3,760 | 60 | 98.4% | 553 | 542 |
| Administrative fees | 26 | - | - | 26 | 23 | 2 | 90.8% | 3 | 3 |
| Advertising | 86 | (84) | - | 2 | - | 2 | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 22 | (18) | - | 4 | 3 | 1 | 85.0% | 2 | 2 |
| Communication (G&S) | 219 | (39) | - | 180 | 178 | 1 | 99.2% | 174 | 174 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | 676 | (670) | - | 6 | - | 6 | - | 35 | 35 |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | 1,314 | (1,311) | - | 3 | - | 3 | - | - | - |
| Entertainment | 8 | - | - | 8 | - | 8 | - | - | - |
| Fleet services (incl. government motor transport) | - | 3 | - | 3 | 2 | 1 | 81.5% | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| Payment for financial assets | | | | | | | | | | |
|---|------------------------|-------------------|----------------|---------------------|--------------------|------------|---|---------------------|--------------------|---------|
| Total | 248,852 | 1,000 | (366) | 249,486 | 245,904 | 3,582 | 98.6% | 237,879 | - | 237,106 |
| Subprogramme: 2.4 Innovation Priorities and Instrument | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| Current payments | 12,174 | 50 | (5,030) | 7,194 | 6,951 | 244 | 96.6% | 6,696 | 6,093 | |
| Compensation of employees | 6,406 | 300 | - | 6,706 | 6,524 | 182 | 97.3% | 6,435 | 5,838 | |
| Salaries and wages | 4,918 | 1,100 | - | 6,018 | 5,890 | 128 | 97.9% | 5,238 | 5,230 | |
| Social contributions | 1,488 | (800) | - | 688 | 633 | 54 | 92.1% | 1,197 | 608 | |
| Goods and services | 5,768 | (250) | (5,030) | 488 | 427 | 61 | 87.4% | 261 | 255 | |
| Administrative fees | - | 5 | - | 5 | 3 | 2 | 56.6% | - | - | |
| Advertising | 57 | (55) | - | 2 | - | 2 | - | - | - | |
| Minor assets | - | - | - | - | - | - | - | - | - | |
| Audit costs: External | - | - | - | - | - | - | - | - | - | |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - | |
| Catering: Departmental activities | 4 | - | - | 4 | - | 4 | 5.5% | 2 | 2 | |
| Communication (G&S) | 14 | 140 | - | 154 | 150 | 4 | 97.1% | 132 | 132 | |
| Computer services | - | - | - | - | - | - | - | - | - | |
| Consultants: Business and advisory services | - | - | - | - | - | - | - | 96 | 96 | |
| Legal services | - | - | - | - | - | - | - | - | - | |
| Contractors | - | - | - | - | - | - | - | - | - | |
| Agency and support/outsourced services | 938 | (20) | (900) | 18 | 13 | 5 | 71.3% | - | - | |
| Entertainment | 3,495 | (63) | (3,430) | 2 | - | 2 | - | 6 | - | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | |
|--------------------------------------|------------------|-----------|-----------------|------------------|------------|---------------|----------------|----------------|
| Non-profit institutions | - | - | - | 6,133 | (6,133) | - | - | 5,000 |
| Households | - | - | - | 90 | (90) | - | - | - |
| Social benefits | - | - | - | 90 | (90) | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - |
| Total | 1,058,588 | 50 | (12,630) | 1,045,835 | 173 | 100.0% | 954,618 | 953,934 |

| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|------------------------|-------------------|----------|---------------------|--------------------|----------|---|---------------------|--------------------|
| Subprogramme: 2.5: National Intellectual Property Management Office | | | | | | | | | |
| Current payments | 12,197 | (524) | (640) | 11,033 | 9,921 | 1,112 | 89.9% | 9,390 | 8,295 |
| Compensation of employees | 9,764 | (524) | - | 9,240 | 8,207 | 1,033 | 88.8% | 8,777 | 7,683 |
| Salaries and wages | 8,764 | (524) | - | 8,240 | 7,312 | 928 | 88.7% | 6,942 | 6,807 |
| Social contributions | 1,000 | - | - | 1,000 | 895 | 105 | 89.5% | 1,835 | 877 |
| Goods and services | 2,433 | - | (640) | 1,793 | 1,714 | 79 | 95.6% | 613 | 612 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | |
|--|-----|-------|-------|-------|-----|----|--------|-----|-----|
| Administrative fees | 16 | 10 | - | 26 | 26 | 1 | 98.1% | 1 | 1 |
| Advertising | 5 | - | - | 5 | - | 5 | - | 56 | 56 |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 1 | 34 | - | 35 | 32 | 3 | 91.7% | 5 | 4 |
| Communication (G&S) | 107 | 93 | - | 200 | 195 | 4 | 97.9% | 204 | 204 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | 409 | - | (340) | 69 | 67 | 2 | 97.2% | 55 | 55 |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | 10 | - | 10 | 7 | 3 | 65.7% | - | - |
| Agency and support/outsourced services | 419 | (75) | (300) | 44 | 42 | 3 | 93.7% | 110 | 110 |
| Entertainment | 16 | - | - | 16 | - | 16 | - | 1 | 1 |
| Fleet services (incl. government motor transport) | - | 2 | - | 2 | 2 | - | 100.0% | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - |
| Consumable supplies | - | 1 | - | 1 | 1 | - | 100.0% | - | - |
| Consumable: Stationery, printing and office supplies | - | 1 | - | 1 | 1 | - | 100.0% | 1 | 1 |
| Operating leases | - | - | - | - | - | - | - | - | - |
| Property payments | 366 | (360) | - | 6 | - | 6 | - | - | - |
| Transport provided: Departmental activity | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | 577 | 427 | - | 1,004 | 974 | 30 | 97.0% | 147 | 147 |
| Training and development | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | 12 | 12 | 10 | 2 | 80.0% | 9 |
|---|---------------|---------------|---------------|-----------------|---------------|---------------|
| Operating payments | - | - | 358 | 2 | 80.0% | 9 |
| Venues and facilities | 516 | (155) | 361 | 2 | 99.3% | 24 |
| Rental and hiring | - | - | - | - | - | - |
| Transfers and subsidies | 44,073 | 44,073 | 44,073 | - | 100.0% | 45,021 |
| Departmental agencies and accounts | - | - | 3,408 | (3,408) | - | 3,471 |
| Departmental agencies | - | - | 3,408 | (3,408) | - | 3,471 |
| Higher education institutions | - | - | 32,100 | (32,100) | - | 33,805 |
| Foreign governments and international organisations | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | 7,324 | (7,324) | - | 7,745 |
| Public corporations | - | - | 7,324 | (7,324) | - | 7,745 |
| Subsidies on products | - | - | - | - | - | - |
| Other transfers to public corporations | - | - | 7,324 | (7,324) | - | 7,745 |
| Private enterprises | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - |
| Non-profit institutions | 44,073 | 44,073 | 1,240 | 42,833 | 2.8% | - |
| Households | - | - | - | - | - | - |
| Social benefits | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | |
|--------------------------------------|---------------|--------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|---|---|
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | 56,270 | (524) | (640) | 55,106 | 53,994 | 1,112 | 98.0% | 54,390 | 53,316 | | |
| Total | | | | | | | | | | | |

| Subprogramme: 2.6: Office of the DDG: Technology Innovation | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|---|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Current payments | 3,902 | (50) | (1,030) | 2,822 | 1,731 | 1,091 | 61.4% | 4,207 | 4,186 |
| Compensation of employees | 2,158 | - | - | 2,158 | 1,143 | 1,014 | 53.0% | 3,711 | 3,711 |
| Salaries and wages | 1,882 | - | - | 1,882 | 1,007 | 874 | 53.5% | 3,281 | 3,281 |
| Social contributions | 276 | - | - | 276 | 136 | 140 | 49.3% | 430 | 430 |
| Goods and services | 1,745 | (50) | (1,030) | 665 | 588 | 77 | 88.5% | 496 | 475 |
| Administrative fees | 60 | (3) | (40) | 17 | 10 | 7 | 60.5% | 18 | 11 |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | - | 1 | - | 1 | 1 | - | 100.0% | - | - |
| Communication (G&S) | 89 | 1 | - | 90 | 90 | - | 100.0% | 73 | 65 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |

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Appropriation Statement
 for the year ended 31 March 2023

| Detail per Programme 3 – International Cooperation and Resources for the year ended 31 March 2023 | | | | | | | | | | |
|--|------------------------|-------------------|---------------|---------------------|--------------------|--------------|---|---------------------|--------------------|--|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | |
| 3.1 Multilateral Cooperation and Africa | 33,362 | 3,458 | 16,300 | 53,120 | 52,833 | 287 | 99.5% | 28,972 | 28,477 | |
| 3.2 International Resources | 68,970 | 1,875 | - | 70,845 | 69,414 | 1,432 | 98.0% | 67,082 | 65,008 | |
| 3.3 Overseas Bilateral Cooperation | 44,263 | (9,958) | - | 34,305 | 32,011 | 2,294 | 93.3% | 34,176 | 32,376 | |
| 3.4 Office of the DDG: International Cooperation and Resources | 2,792 | 4,625 | - | 7,417 | 7,011 | 406 | 94.5% | 6,046 | 5,948 | |
| Total | 149,387 | - | 16,300 | 165,687 | 161,269 | 4,418 | 97.3% | 136,276 | 131,808 | |
| Economic classification | | | | | | | | | | |
| Current payments | 72,960 | - | 16,300 | 89,260 | 84,843 | 4,417 | 95.1% | 61,648 | 56,973 | |
| Compensation of employees | 53,558 | - | - | 53,558 | 49,436 | 4,122 | 92.3% | 52,508 | 48,345 | |
| Salaries and wages | 48,452 | (400) | - | 48,052 | 44,559 | 3,493 | 92.7% | 46,546 | 43,635 | |
| Social contributions | 5,106 | 400 | - | 5,506 | 4,877 | 629 | 88.6% | 5,962 | 4,710 | |
| Goods and services | 19,402 | - | 16,300 | 35,702 | 35,407 | 295 | 99.2% | 9,140 | 8,629 | |
| Administrative fees | 199 | (93) | - | 106 | 59 | 47 | 55.7% | 73 | 5 | |
| Advertising | 504 | (417) | - | 87 | 74 | 13 | 84.8% | 73 | - | |
| Minor assets | 14 | (8) | - | 6 | - | 6 | - | 14 | - | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Economic classification | | | | | | | | | | | | | | |
|--|-------|-------|--------|--------|----|-------|-------|---|---|---|---|---|---|---|
| Audit costs: External | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 470 | (432) | 38 | 27 | 11 | 19 | 5 | | | | | | | |
| Communication (G&S) | 1,740 | (547) | 1,433 | 1,417 | 16 | 1,587 | 1,569 | | | | | | | |
| Computer services | 208 | (176) | 32 | 22 | 10 | 44 | 39 | | | | | | | |
| Consultants: Business and advisory services | 322 | 3,152 | 3,474 | 3,467 | 7 | 44 | - | | | | | | | |
| Legal services | | | | | | | | | | | | | | |
| Contractors | 297 | (232) | 1,015 | 990 | 25 | 39 | - | | | | | | | |
| Agency and support/outsourced services | 787 | (668) | 174 | 167 | 7 | 103 | 49 | | | | | | | |
| Entertainment | 940 | (915) | 25 | 14 | 11 | 34 | 2 | | | | | | | |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | | | | | | | |
| Inventory: Clothing, material and accessories | - | - | - | - | - | - | - | | | | | | | |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | | | | | | | |
| Inventory: Material and supplies | - | - | - | - | - | - | - | | | | | | | |
| Inventory: Medical supplies | - | - | - | - | - | - | - | | | | | | | |
| Inventory: Other supplies | - | - | - | - | - | - | - | | | | | | | |
| Consumable supplies | 260 | (214) | 46 | 9 | 37 | 44 | 27 | | | | | | | |
| Consumable: Stationery, printing and office supplies | 3 | 23 | 26 | 21 | 5 | 27 | 16 | | | | | | | |
| Operating leases | - | - | - | - | - | - | - | | | | | | | |
| Property payments | 600 | (600) | - | - | - | 25 | - | | | | | | | |
| Transport provided: | | | | | | | | | | | | | | |
| Departmental activity | - | - | - | - | - | - | - | | | | | | | |
| Travel and subsistence | 7,470 | 2,495 | 15,075 | 15,041 | 34 | 1,969 | 1,938 | | | | | | | |
| Training and development | - | - | - | - | - | - | - | | | | | | | |
| Operating payments | 1,392 | (205) | 1,362 | 1,344 | 18 | 4,346 | 4,314 | | | | | | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | | |
|---|---------------|----------|----------|---------------|---------------|----------------|---------------|---------------|---------------|--|--|--|--|
| Economic classification | | | | | | | | | | | | | |
| Venues and facilities | 4,196 | (1,300) | 9,770 | 12,666 | 12,628 | 38 | 99.7% | 319 | 288 | | | | |
| Rental and hiring | - | 137 | - | 137 | 126 | 11 | 92.1% | 380 | 376 | | | | |
| Transfers and subsidies | 76,427 | - | - | 76,427 | 76,426 | 1 | 100.0% | 74,628 | 74,835 | | | | |
| Departmental agencies and accounts | 17,077 | - | - | 17,077 | 42,825 | (25,748) | 250.8% | 16,670 | 42,026 | | | | |
| Departmental agencies | 17,077 | - | - | 17,077 | 42,825 | (25,748) | 250.8% | 16,670 | 42,026 | | | | |
| Higher education institutions | - | - | - | - | 17,918 | (17,918) | - | - | 12,414 | | | | |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | 2,000 | | | | |
| Public corporations and private enterprises | - | - | - | - | 3,512 | (3,512) | - | - | 7,173 | | | | |
| Public corporations | - | - | - | - | 1,371 | (1,371) | - | - | 6,440 | | | | |
| Other transfers to public corporation | - | - | - | - | 1,371 | (1,371) | - | - | 6,440 | | | | |
| Private enterprises | - | - | - | - | 2,141 | (2,141) | - | - | 733 | | | | |
| Other transfers to private enterprises | - | - | - | - | 2,141 | (2,141) | - | - | 733 | | | | |
| Non-profit institutions | 59,350 | - | - | 59,350 | 12,170 | 47,180 | 20.5% | 57,834 | 10,890 | | | | |
| Households | - | - | - | - | - | - | - | 124 | 331 | | | | |
| Social benefits | - | - | - | - | - | - | - | 124 | 331 | | | | |
| Other transfers to households | - | - | - | - | - | - | - | - | - | | | | |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | | | | |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | | | | |
| Machinery and equipment | - | - | - | - | - | - | - | - | - | | | | |
| Transport equipment | - | - | - | - | - | - | - | - | - | | | | |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | | | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | |
|--|---------------|----------|----------|---------------|----------------|---------------|---------------|---------------|
| Agency and support/ outsourced services | - | 55 | 55 | 54 | 1 | 98.0% | 57 | 49 |
| Entertainment | 133 | - | (130) | - | 3 | - | 8 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - |
| Consumable supplies | 28 | - | (13) | - | 15 | - | - | - |
| Consumable: Stationery, printing and office supplies | - | - | - | - | - | - | 6 | - |
| Operating leases | - | - | - | - | - | - | - | - |
| Property payments | - | - | - | - | - | - | - | - |
| Travel and subsistence | 3,653 | 5,110 | - | 8,761 | 2 | 100.0% | 290 | 288 |
| Training and development | - | - | - | - | - | - | - | - |
| Operating payments | 201 | 175 | - | 371 | 5 | 98.7% | 2,250 | 2,250 |
| Venues and facilities | 1,900 | 9,770 | - | 11,660 | 10 | 99.9% | 20 | 11 |
| Rental and hiring | - | - | - | - | - | - | - | - |
| Transfers and subsidies | 10,769 | - | - | 10,769 | - | 100.0% | 28,972 | 28,517 |
| Departmental agencies and accounts | - | - | - | 5,594 | (5,594) | - | - | 1,307 |
| Departmental agencies | - | - | - | 5,594 | (5,594) | - | - | 1,307 |
| Higher education institutions | - | - | - | 2,426 | (2,426) | - | - | 1,299 |
| Public corporations and private enterprises | - | - | - | - | - | - | - | 4,000 |
| Public corporations | - | - | - | - | - | - | - | 4,000 |
| Subsidies on products | - | - | - | - | - | - | - | - |
| Other transfers to public corporations | - | - | - | - | - | - | - | 4,000 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | | | | | | | | | |
|--|---------------|--------------|---------------|---------------|---------------|------------|--------------|---------------|---------------|------------|--------------|---------------|---------------|------------|--------------|---------------|---------------|------------|--------------|---------------|
| Private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Non-profit institutions | 10,769 | - | - | 10,769 | 2,748 | 8,021 | 25.5% | 10,493 | 3,887 | - | - | - | - | - | - | - | - | - | - | - |
| Households | - | - | - | - | - | - | - | - | 43 | - | - | - | - | - | - | - | - | - | - | - |
| Social benefit | - | - | - | - | - | - | - | - | 43 | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 33,362 | 3,458 | 16,300 | 53,120 | 52,833 | 287 | 99.5% | 28,972 | 28,477 | 287 | 99.5% | 28,972 | 28,477 | 287 | 99.5% | 28,972 | 28,477 | 287 | 99.5% | 28,972 |

| Subprogramme: 3.2 International Resources | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|------------------------|-------------------|----------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Current payments | 20,389 | 1,875 | - | 22,264 | 20,833 | 1,431 | 93.6% | 19,617 | 17,507 |
| Compensation of employees | 16,882 | (400) | - | 16,482 | 15,137 | 1,346 | 91.8% | 16,325 | 14,330 |
| Salaries and wages | 15,256 | (400) | - | 14,856 | 13,771 | 1,085 | 92.7% | 14,485 | 13,038 |
| Social contributions | 1,626 | - | - | 1,626 | 1,366 | 260 | 84.0% | 1,840 | 1,292 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | |
|--|--------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|
| Goods and services | 3,507 | 2,275 | 5,782 | 5,697 | 86 | 98.5% | 3,292 | 3,176 |
| Administrative fees | 120 | (93) | 27 | 22 | 4 | 83.9% | 16 | 5 |
| Advertising | 240 | (170) | 70 | 67 | 3 | 95.8% | 62 | - |
| Minor assets | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 221 | (210) | 11 | 9 | 2 | 78.6% | 5 | 2 |
| Communication (G&S) | 338 | 68 | 406 | 404 | 2 | 99.4% | 412 | 412 |
| Computer services | 168 | (160) | 8 | 4 | 4 | 51.2% | 24 | 20 |
| Consultants: Business and advisory services | 81 | (80) | 1 | - | 1 | - | 9 | - |
| Legal services | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | 26 | 90 | 116 | 114 | 2 | 97.9% | 5 | - |
| Entertainment | 226 | (210) | 16 | 13 | 3 | 79.8% | 10 | 2 |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - |
| Inventory: Clothing, material and accessories | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - |
| Consumable supplies | 18 | - | 18 | - | 18 | - | 35 | 27 |
| Consumable: Stationery, printing and office supplies | - | 23 | 23 | 21 | 2 | 92.7% | 8 | 8 |
| Operating leases | - | - | - | - | - | - | - | - |
| Property payments | - | - | - | - | - | - | - | - |
| Travel and subsistence | 939 | 2,995 | 3,934 | 3,928 | 6 | 99.9% | 875 | 869 |
| Training and development | - | - | - | - | - | - | - | - |
| Operating payments | 102 | 205 | 307 | 304 | 3 | 99.2% | 1,186 | 1,186 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | |
|---|---------------|-------|---|---------------|---------------|-----------------|---------------|---------------|---------------|
| Venues and facilities | 1,029 | (315) | - | 714 | 689 | 25 | 96.4% | 275 | 275 |
| Rental and hiring | - | 132 | - | 132 | 122 | 10 | 92.6% | 370 | 370 |
| Transfers and subsidies | 48,581 | - | - | 48,581 | 48,581 | - | 100.0% | 47,501 | 47,501 |
| Departmental agencies and accounts | - | - | - | - | 24,122 | (24,122) | - | - | 26,049 |
| Departmental agencies | - | - | - | - | 24,122 | (24,122) | - | - | 26,049 |
| Higher education institutions | - | - | - | - | 13,922 | (13,922) | - | - | 11,115 |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | - | 3,115 | (3,115) | - | - | 3,173 |
| Public corporations | - | - | - | - | 1,371 | (1,371) | - | - | 2,440 |
| Subsidies | - | - | - | - | - | - | - | - | - |
| Other transfers to public corporations | - | - | - | - | 1,371 | (1,371) | - | - | 2,440 |
| Private enterprises | - | - | - | - | 1,744 | (1,744) | - | - | 733 |
| Other transfers to private enterprises | - | - | - | - | 1,744 | (1,744) | - | - | 733 |
| Non-profit institutions | 48,581 | - | - | 48,581 | 7,422 | 41,159 | 15.3% | 47,341 | 7,003 |
| households | - | - | - | - | - | - | - | 124 | 160 |
| Social benefits | - | - | - | - | - | - | - | 124 | 160 |
| Other transfers to households | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | | |
|--------------------------------------|---------------|--------------|---------------|---------------|--------------|--------------|---------------|---------------|---|
| Software and other intangible assets | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - |
| Total | 68,970 | 1,875 | 70,845 | 69,414 | 1,432 | 98.0% | 67,082 | 65,008 | |

| Subprogramme: 3.3 Overseas Bilateral Cooperation | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|---|------------------------|-------------------|----------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Current payments | 27,186 | (9,958) | - | 17,228 | 14,934 | 2,294 | 86.7% | 17,506 | 15,578 |
| Compensation of employees | 19,205 | (4,700) | - | 14,505 | 12,277 | 2,228 | 84.6% | 15,011 | 13,303 |
| Salaries and wages | 17,757 | (4,700) | - | 13,057 | 11,097 | 1,959 | 85.0% | 13,340 | 12,076 |
| Social contributions | 1,448 | - | - | 1,448 | 1,180 | 268 | 81.5% | 1,671 | 1,227 |
| Goods and services | 7,981 | (5,258) | - | 2,723 | 2,657 | 66 | 97.6% | 2,495 | 2,275 |
| Administrative fees | 20 | - | - | 20 | 10 | 10 | 50.2% | 19 | 1 |
| Advertising | 83 | (75) | - | 8 | 1 | 6 | 16.8% | 11 | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 98 | (95) | - | 3 | 2 | 1 | 52.7% | 5 | 3 |
| Communication (G&S) | 998 | (670) | - | 328 | 320 | 8 | 97.5% | 582 | 579 |
| Computer services | - | 19 | - | 19 | 18 | 1 | 96.7% | 20 | 19 |
| Consultants: Business and advisory services | 241 | (238) | - | 3 | 2 | 1 | 57.5% | 35 | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | |
|--|---------------|-------|---|---------------|---------------|--------------|---------------|---------------|---------------|
| Agency and support/ outsourced services | 761 | (758) | - | 3 | - | 3 | - | 41 | - |
| Entertainment | 579 | (575) | - | 4 | 1 | 3 | 23.9% | 14 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - |
| Inventory: Medical supplies | - | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - |
| Consumable supplies | 211 | (201) | - | 10 | 8 | 2 | 80.0% | 6 | - |
| Consumable: Stationery, printing and office supplies | - | - | - | - | - | - | - | 10 | 8 |
| Operating leases | - | - | - | - | - | - | - | - | - |
| Property payments | 600 | (600) | - | - | - | - | - | 25 | - |
| Transport provided: departmental activity | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | 2,095 | (460) | - | 1,635 | 1,614 | 21 | 98.7% | 791 | 780 |
| Training and development | - | - | - | - | - | - | - | - | - |
| Operating payments | 1,029 | (625) | - | 404 | 398 | 6 | 98.6% | 902 | 878 |
| Venues and facilities | 1,267 | (985) | - | 282 | 279 | 3 | 99.0% | 24 | 2 |
| Rental and hiring | - | 5 | - | 5 | 4 | 1 | 79.8% | 10 | 6 |
| Transfers and subsidies | 17,077 | - | - | 17,077 | 17,077 | - | 100.0% | 16,670 | 16,798 |
| Departmental agencies and accounts | 17,077 | - | - | 17,077 | 13,110 | 3,967 | 76.8% | 16,670 | 14,670 |
| Departmental agencies | 17,077 | - | - | 17,077 | 13,110 | 3,967 | 76.8% | 16,670 | 14,670 |
| Higher education institutions | - | - | - | - | 1,570 | (1,570) | - | - | - |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | 2,000 |
| Public corporations and private enterprises | - | - | - | - | 397 | (397) | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 3.4 Office of the DDG: International Cooperation and Resources | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|---|---------------------------|----------------------|----------|------------------------|-----------------------|------------|---|------------------------|-----------------------|
| Current payments | 2,792 | 4,625 | - | 7,417 | 7,011 | 406 | 94.5% | 6,046 | 5,948 |
| Compensation of employees | 1,503 | 4,700 | - | 6,203 | 5,860 | 343 | 94.5% | 5,840 | 5,840 |
| Salaries and wages | 1,163 | 4,400 | - | 5,563 | 5,287 | 277 | 95.0% | 5,279 | 5,279 |
| Social contributions | 340 | 300 | - | 640 | 573 | 66 | 89.6% | 561 | 561 |
| Goods and services | 1,289 | (75) | - | 1,214 | 1,151 | 63 | 94.8% | 206 | 108 |
| Administrative fees | 13 | - | - | 13 | 1 | 12 | 9.6% | 13 | - |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | 14 | (8) | - | 6 | - | 6 | - | 14 | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 25 | (22) | - | 3 | - | 3 | - | 4 | - |
| Communication (G&S) | 89 | 55 | - | 144 | 141 | 3 | 97.9% | 107 | 107 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | - | - | - | - | - | - | - | - | - |
| Scientific and technology | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | 297 | (275) | - | 22 | - | 22 | - | 39 | - |
| Agency and support/ outsourced services | - | - | - | - | - | - | - | - | - |
| Entertainment | 2 | - | - | 2 | - | 2 | - | 2 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | |
|--------------------------------------|--------------|--------------|----------|--------------|--------------|------------|--------------|--------------|--------------|---|---|---|
| Other transfers to households | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 2,792 | 4,625 | - | 7,417 | 7,011 | 406 | 94.5% | 6,046 | 5,948 | | | |

| Detail per Programme 4 – Research Development and Support for the year ended 31 March 2023 | | | | | | | | | | | | |
|---|------------------------|-------------------|----------|---------------------|--------------------|----------|---|---------------------|--------------------|--|--|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | | | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | | | |
| 4.1 Human Capital and Science Promotion | 2,756,200 | - | (1,425) | 2,754,775 | 2,754,322 | 453 | 100.0% | 2,711,737 | 2,710,695 | | | |
| 4.2 Science Missions | 112,581 | 4,150 | 1,700 | 118,431 | 117,798 | 632 | 99.5% | 187,522 | 186,692 | | | |
| 4.3 Basic Sciences and Infrastructure | 958,813 | (1,190) | 1,925 | 959,548 | 959,334 | 214 | 100.0% | 1,042,175 | 1,041,969 | | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Detail per Programme 4 – Research Development and Support for the year ended 31 March 2023 | | | | | | | | | |
|---|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Subprogramme | 2022/23 | | | | | 2021/22 | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| 4.4 Astronomy | 1,147,433 | (2,400) | - | 1,145,033 | 1,144,810 | 223 | 100.0% | 1,050,709 | 1,049,952 |
| 4.5 Office of the DDG: Research Development and Support | 4,125 | (560) | 1,700 | 5,265 | 4,961 | 303 | 94.2% | 2,918 | 2,135 |
| Total | 4,979,151 | - | 3,900 | 4,983,051 | 4,981,225 | 1,826 | 100.0% | 4,995,061 | 4,991,443 |
| Economic classification | | | | | | | | | |
| Current payments | 56,133 | - | 3,890 | 60,023 | 58,224 | 1,800 | 97.0% | 49,367 | 47,362 |
| Compensation of employees | 40,753 | - | 7,000 | 47,753 | 46,389 | 1,364 | 97.1% | 43,806 | 42,562 |
| Salaries and wages | 36,440 | 250 | 5,900 | 42,590 | 41,613 | 977 | 97.7% | 39,553 | 38,309 |
| Social contributions | 4,313 | (250) | 1,100 | 5,163 | 4,776 | 387 | 92.5% | 4,253 | 4,253 |
| Goods and services | 15,380 | - | (3,110) | 12,270 | 11,835 | 436 | 96.4% | 5,561 | 4,800 |
| Administrative fees | 702 | (495) | (20) | 187 | 90 | 97 | 48.3% | 111 | 38 |
| Advertising | 48 | - | (45) | 3 | - | 3 | - | 32 | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 691 | (276) | (335) | 80 | 12 | 67 | 15.5% | 56 | 6 |
| Communication (G&S) | 832 | 424 | - | 1,256 | 1,241 | 15 | 98.8% | 1,048 | 933 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | |
|--|------------------|----------|-----------|------------------|------------------|----------------|---------------|------------------|------------------|---|----|------------------|
| Computer services | 183 | (80) | (90) | 13 | - | 13 | - | - | - | - | 26 | - |
| Consultants: Business and advisory services | 1,354 | (1,025) | - | 329 | 268 | 61 | 81.5% | 1,610 | 1,514 | | | |
| Scientific and technology services | - | - | - | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | 1,276 | 2,633 | (165) | 3,744 | 3,717 | 27 | 99.3% | 212 | 212 | | | 212 |
| Entertainment | 241 | (213) | (15) | 13 | 1 | 12 | 10.3% | 60 | - | | | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - | | | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - | | | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - | | | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - | | | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - | | | - |
| Consumable supplies | 23 | 6 | (20) | 9 | 5 | 4 | 61.1% | - | - | | | - |
| Consumable: Stationery, printing and office supplies | 5 | 7 | - | 12 | 7 | 5 | 54.6% | 116 | 25 | | | 25 |
| Operating leases | - | - | - | - | - | - | - | - | - | | | - |
| Property payments | - | - | - | - | - | - | - | - | - | | | - |
| Travel and subsistence | 7,049 | (227) | (1,100) | 5,722 | 5,673 | 50 | 99.1% | 1,746 | 1,632 | | | 1,632 |
| Training and development | - | - | - | - | - | - | - | - | - | | | - |
| Operating payments | 548 | (150) | (90) | 308 | 260 | 48 | 84.3% | 466 | 383 | | | 383 |
| Venues and facilities | 2,428 | (604) | (1,230) | 594 | 560 | 34 | 94.3% | 78 | 58 | | | 58 |
| Rental and hiring | - | - | - | - | - | - | - | - | - | | | - |
| Transfers and subsidies | 4,923,018 | - | 10 | 4,923,028 | 4,923,002 | 26 | 100.0% | 4,945,694 | 4,944,081 | | | 4,944,081 |
| Departmental agencies and accounts | 4,711,579 | - | - | 4,711,579 | 4,256,495 | 455,084 | 90.3% | 4,708,481 | 4,226,994 | | | 4,226,994 |
| Departmental agencies | 4,711,579 | - | - | 4,711,579 | 4,256,495 | 455,084 | 90.3% | 4,708,481 | 4,226,994 | | | 4,226,994 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | |
|---|------------------|--------------|------------------|------------------|------------------|----------------|------------------|------------------|------------------|
| Higher education institutions | - | - | - | 132,034 | (132,034) | - | - | - | 154,490 |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - |
| Public corporations and private enterprise | 211,439 | - | 211,439 | 376,175 | (164,736) | 177.9% | 237,121 | 237,121 | 402,200 |
| Public corporations | 211,439 | - | 211,439 | 376,175 | (164,736) | 177.9% | 237,121 | 237,121 | 402,200 |
| Subsidies | 211,439 | - | 211,439 | 376,175 | (164,736) | 177.9% | 237,121 | 237,121 | 402,200 |
| Other transfers to Public corporations | - | - | - | - | - | - | - | - | - |
| Private enterprises | - | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - | - |
| Non-profit institutions | - | - | - | 158,134 | (158,134) | - | - | - | 160,305 |
| Households | - | 10 | 10 | 164 | (154) | 1642.2% | 92 | 92 | 92 |
| Social benefit | - | 10 | 10 | 164 | (154) | 1642.2% | 32 | 32 | 32 |
| Other transfers to households | - | - | - | - | - | - | 60 | 60 | 60 |
| Payment for capital assets | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - |
| Other machinery and Equipment | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - |
| Total | 4,979,151 | 3,900 | 4,983,051 | 4,981,225 | 1,826 | 100.0% | 4,995,061 | 4,995,061 | 4,991,443 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 4.1: Human Capital and Science Promotion | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|---------------------------|----------------------|----------|------------------------|-----------------------|----------|---|------------------------|-----------------------|
| Current payments | 16,523 | - | (1,435) | 15,088 | 14,636 | 452 | 97.0% | 14,151 | 14,151 |
| Compensation of employees | 11,955 | - | 1,600 | 13,555 | 13,203 | 352 | 97.4% | 12,699 | 12,699 |
| Salaries and wages | 10,259 | 250 | 1,600 | 12,109 | 11,921 | 188 | 98.4% | 11,479 | 11,479 |
| Social contributions | 1,696 | (250) | - | 1,446 | 1,282 | 164 | 88.7% | 1,220 | 1,220 |
| Goods and services | 4,568 | - | (3,035) | 1,533 | 1,433 | 100 | 93.5% | 1,452 | 1,452 |
| Administrative fees | 59 | (10) | (20) | 29 | 7 | 22 | 23.5% | 7 | 7 |
| Advertising | 48 | - | (45) | 3 | - | 3 | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 268 | - | (260) | 8 | 1 | 7 | 11.5% | 2 | 2 |
| Communication (G&S) | 359 | 10 | - | 369 | 366 | 3 | 99.2% | 262 | 262 |
| Computer services | 91 | - | (90) | 1 | - | 1 | - | - | - |
| Consultants: Business and advisory services | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/ outsourced services | 220 | - | (165) | 55 | 51 | 4 | 92.2% | 212 | 212 |
| Entertainment | 18 | - | (15) | 3 | - | 3 | - | - | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | |
|--------------------------------------|------------------|----------|----------------|------------------|------------------|------------|---------------|------------------|-----------|
| Other transfers to households | - | - | - | - | - | - | - | - | 60 |
| Payment for capital assets | | | | | | | | | |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | | | | | | | | | |
| Total | 2,756,200 | - | (1,425) | 2,754,775 | 2,754,322 | 453 | 100.0% | 2,711,737 | 60 |

| Subprogramme: 4.2: Science Missions | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|------------------------|-------------------|--------------|---------------------|--------------------|------------|---|---------------------|--------------------|
| Current payments | 15,249 | 4,150 | 1,700 | 21,099 | 20,648 | 450 | 97.9% | 15,558 | 15,299 |
| Compensation of employees | 11,830 | - | 1,700 | 13,530 | 13,161 | 369 | 97.3% | 14,137 | 14,137 |
| Salaries and wages | 10,758 | - | 1,400 | 12,158 | 11,852 | 306 | 97.5% | 12,815 | 12,815 |
| Social contributions | 1,072 | - | 300 | 1,372 | 1,309 | 63 | 95.4% | 1,322 | 1,322 |
| Goods and services | 3,419 | 4,150 | - | 7,569 | 7,488 | 81 | 98.9% | 1,421 | 1,162 |
| Administrative fees | 66 | - | - | 66 | 65 | 1 | 98.5% | 59 | 26 |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | | |
|--|---------------|----------|----------|---------------|---------------|---------------|--------------|----------------|----------------|
| Catering: Departmental activities | 48 | - | - | 48 | 9 | 39 | 19.5% | 50 | - |
| Communication (G&S) | 220 | 190 | - | 410 | 405 | 5 | 98.8% | 349 | 318 |
| Computer services | 47 | (40) | - | 7 | - | 7 | - | - | - |
| Consultants: Business and advisory services | 597 | (585) | - | 12 | - | 12 | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | 315 | 3,355 | - | 3,670 | 3,666 | 4 | 99.9% | - | - |
| Entertainment | 5 | - | - | 5 | 1 | 4 | 12.9% | 34 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - |
| Consumable supplies | - | 5 | - | 5 | 4 | 1 | 80.0% | - | - |
| Consumable: Stationery, printing and office supplies | - | 1 | - | 1 | 1 | 1 | 50.0% | 50 | 25 |
| Operating leases | - | - | - | - | - | - | - | - | - |
| Property payments | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | 1,711 | 1,325 | - | 3,036 | 3,033 | 3 | 99.9% | 768 | 725 |
| Training and development | - | - | - | - | - | - | - | - | - |
| Operating payments | 206 | (197) | - | 9 | 7 | 2 | 73.5% | 33 | 10 |
| Venues and facilities | 203 | 96 | - | 299 | 296 | 3 | 99.1% | 78 | 58 |
| Rental and hiring | - | - | - | - | - | - | - | - | - |
| Transfers and subsidies | 97,332 | - | - | 97,332 | 97,150 | 182 | 99.8% | 171,964 | 171,393 |
| Departmental agencies and accounts | 97,332 | - | - | 97,332 | 79,000 | 18,332 | 81.2% | 171,964 | 135,600 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | |
|--|----------------|--------------|--------------|----------------|----------------|--------------|----------------|----------------|
| Departmental agencies | 97,332 | - | 97,332 | 79,000 | 18,332 | 81.2% | 171,964 | 135,600 |
| Higher education institutions | - | - | - | 16,750 | (16,750) | - | - | 17,560 |
| Foreign governments and v international organisations | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | - | - | - | - | 17,633 |
| Public corporations | - | - | - | - | - | - | - | 17,633 |
| Subsidies | - | - | - | - | - | - | - | - |
| Other transfers to Public corporations | - | - | - | - | - | - | - | 17,633 |
| Private enterprises | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - |
| Non-profit institutions | - | - | - | 1,400 | (1,400) | - | - | 600 |
| Households | - | - | - | - | - | - | - | - |
| Social benefits | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - |
| Total | 112,581 | 4,150 | 1,700 | 118,431 | 117,798 | 99.5% | 187,522 | 186,692 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 4.3: Basic Sciences and Infrastructure | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|---------------------------|----------------------|--------------|------------------------|-----------------------|------------|---|------------------------|-----------------------|
| Current payments | 9,735 | (1,190) | 1,925 | 10,470 | 10,099 | 371 | 96.5% | 9,828 | 9,622 |
| Compensation of employees | 7,553 | - | 2,000 | 9,553 | 9,261 | 292 | 96.9% | 9,406 | 9,406 |
| Salaries and wages | 6,631 | - | 1,800 | 8,431 | 8,231 | 200 | 97.6% | 8,365 | 8,365 |
| Social contributions | 922 | - | 200 | 1,122 | 1,030 | 92 | 91.8% | 1,041 | 1,041 |
| Goods and services | 2,182 | (1,190) | (75) | 917 | 838 | 79 | 91.4% | 422 | 216 |
| Administrative fees | 15 | - | - | 15 | 10 | 5 | 66.8% | 1 | 1 |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 90 | - | (75) | 15 | 1 | 14 | 6.6% | - | - |
| Communication (G&S) | 202 | 45 | - | 247 | 245 | 2 | 99.3% | 242 | 183 |
| Computer services | 45 | (40) | - | 5 | - | 5 | - | - | - |
| Consultants: Business and advisory services | 442 | (440) | - | 2 | - | 2 | - | 90 | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/ outsourced services | 246 | (240) | - | 6 | - | 6 | - | - | - |
| Entertainment | - | - | - | - | - | - | - | - | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | | |
|--------------------------------------|----------------|----------------|--------------|----------------|------------|---------------|------------------|------------------|---|
| Social benefits | - | - | - | 156 | (156) | - | - | - | - |
| Other transfers to Households | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - |
| Total | 958,813 | (1,190) | 1,925 | 959,334 | 214 | 100.0% | 1,042,175 | 1,041,969 | |

| Subprogramme: | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|----------------------------------|------------------------|-------------------|----------|---------------------|--------------------|----------|---|---------------------|--------------------|
| 4.4 Astronomy | | | | | | | | | |
| Current payments | 10,502 | (2,400) | - | 8,102 | 7,879 | 223 | 97.3% | 6,912 | 6,155 |
| Compensation of employees | 6,113 | - | - | 6,113 | 5,982 | 131 | 97.9% | 4,867 | 4,249 |
| Salaries and wages | 5,490 | - | - | 5,490 | 5,367 | 123 | 97.8% | 4,415 | 3,797 |
| Social contributions | 623 | - | - | 623 | 615 | 8 | 98.8% | 452 | 452 |
| Goods and services | 4,389 | (2,400) | - | 1,989 | 1,897 | 92 | 95.4% | 2,045 | 1,906 |
| Administrative fees | 495 | (485) | - | 10 | 8 | 3 | 75.3% | 18 | 4 |
| Advertising | - | - | - | - | - | - | - | 7 | - |
| Minor assets | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | |
|---|-----------|---|-----------|-------|--------|-----------|-----------|-----------|
| Transfers and subsidies | 1,136,931 | - | 1,136,931 | - | 100.0% | 1,043,797 | 1,043,797 | 1,043,797 |
| Departmental agencies and accounts | 1,136,931 | - | 1,136,931 | 5,080 | 99.6% | 1,043,797 | 1,043,797 | 1,038,842 |
| Departmental agencies | 1,136,931 | - | 1,136,931 | 5,080 | 99.6% | 1,043,797 | 1,043,797 | 1,038,842 |
| Higher education institutions | - | - | - | - | - | - | - | - |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | - | - | - | - | - |
| Public corporations | - | - | - | - | - | - | - | - |
| Subsidies on Products | - | - | - | - | - | - | - | - |
| Other transfers to public corporations | - | - | - | - | - | - | - | - |
| Private enterprises | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - |
| Non-profit institutions | - | - | - | 5,080 | - | - | - | 4,955 |
| Households | - | - | - | - | - | - | - | - |
| Social benefits | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | | | |
|--------------------------------------|------------------|----------------|----------|------------------|------------------|------------|---------------|------------------|------------------|----------|
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - | - |
| Total | 1,147,433 | (2,400) | - | 1,145,033 | 1,144,810 | 223 | 100.0% | 1,050,709 | 1,049,952 | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 4.5 Office of the DDG: Research Development and Support | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|---|---------------------------|----------------------|--------------|------------------------|-----------------------|------------|---|------------------------|-----------------------|
| Current payments | 4,125 | (560) | 1,700 | 5,265 | 4,961 | 303 | 94.2% | 2,918 | 2,135 |
| Compensation of employees | 3,302 | - | 1,700 | 5,002 | 4,782 | 220 | 95.6% | 2,697 | 2,071 |
| Salaries and wages | 3,302 | - | 1,100 | 4,402 | 4,242 | 160 | 96.4% | 2,479 | 1,853 |
| Social contributions | - | - | 600 | 600 | 540 | 60 | 90.0% | 218 | 218 |
| Goods and services | 823 | (560) | - | 263 | 179 | 84 | 68.2% | 221 | 64 |
| Administrative fees | 66 | - | - | 66 | - | 66 | 0.5% | 26 | - |
| Advertising | - | - | - | - | - | - | - | 25 | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental | 5 | (4) | - | 1 | 1 | - | 70.7% | - | - |
| activities | - | - | - | - | - | - | - | - | - |
| Communication (G&S) | 51 | 4 | - | 55 | 55 | - | 99.6% | 75 | 50 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and | - | - | - | - | - | - | - | - | - |
| advisory services | - | - | - | - | - | - | - | - | - |
| Scientific and technology | - | - | - | - | - | - | - | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/ outsourced services | - | - | - | - | - | - | - | - | - |
| Entertainment | 2 | - | - | 2 | - | 2 | - | 24 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | | | | | |
|--------------------------------------|--------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|---|---|---|
| Other transfers to households | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 4,125 | (560) | 1,700 | 5,265 | 4,961 | 303 | 94.2% | 2,918 | 2,135 | | | |

| Detail per Programme 5 – Socio-Economic Innovation Partnerships for the year ended 31 March 2023 | | | | | | | | | | | | |
|---|------------------------|-------------------|----------|---------------------|--------------------|----------|---|---------------------|--------------------|--|-------|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | | | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | | R'000 | |
| 5.1 Sector Innovation and Green Economy | 1,093,355 | (768) | (2,000) | 1,090,587 | 1,089,837 | 750 | 99.9% | 1,120,160 | 1,117,731 | | | |
| 5.2 Innovation for Inclusive Development | 380,624 | (1,838) | - | 378,786 | 377,382 | 1,404 | 99.6% | 399,889 | 399,215 | | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Detail per Programme 5 – Socio-Economic Innovation Partnerships for the year ended 31 March 2023 | | | | | | | | | | | |
|---|------------------------|-------------------|----------------|---------------------|--------------------|--------------|---|---------------------|--------------------|--|--|
| Subprogramme | 2022/23 | | | | | | 2021/22 | | | | |
| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure | | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | | |
| 5.3 Science and Technology Investment | 25,356 | 4,982 | (3,415) | 26,923 | 26,553 | 370 | 98.6% | 39,139 | 39,007 | | |
| 5.4 Technology Localisation, Beneficiation and Advanced Manufacturing | 256,087 | (6,930) | 3,415 | 252,572 | 251,556 | 1,016 | 99.6% | 254,728 | 251,799 | | |
| 5.5 Office of the DDG: Socio Economic Innovation Partnership | 2,202 | 4,554 | - | 6,756 | 6,381 | 375 | 94.5% | 7,060 | 6,973 | | |
| Total | 1,757,624 | - | (2,000) | 1,755,624 | 1,751,708 | 3,916 | 99.8% | 1,820,977 | 1,814,725 | | |
| Economic classification | | | | | | | | | | | |
| Current payments | 56,431 | - | (2,210) | 54,221 | 50,544 | 3,677 | 93.2% | 53,307 | 49,129 | | |
| Compensation of employees | 45,182 | - | - | 45,182 | 42,001 | 3,181 | 93.0% | 44,959 | 42,233 | | |
| Salaries and wages | 40,884 | (1,100) | - | 39,784 | 37,534 | 2,250 | 94.3% | 40,455 | 37,748 | | |
| Social contributions | 4,298 | 1,100 | - | 5,398 | 4,467 | 931 | 82.8% | 4,504 | 4,485 | | |
| Goods and services | 11,249 | - | (2,210) | 9,039 | 8,543 | 496 | 94.5% | 8,348 | 6,896 | | |
| Administrative fees | 167 | (12) | - | 155 | 36 | 119 | 23.0% | 102 | 3 | | |
| Advertising | 249 | (107) | - | 142 | 101 | 41 | 71.1% | 100 | - | | |
| Minor assets | - | - | - | - | - | - | - | - | - | | |
| Audit costs: External | - | - | - | - | - | - | - | - | - | | |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | |
|--|------------------|----------------|------------------|------------------|-----------------|---------------|------------------|------------------|
| Departmental agencies and accounts | 519,672 | 4,974 | 524,646 | 433,529 | 91,117 | 82.6% | 601,457 | 523,998 |
| Departmental agencies | 519,672 | 4,974 | 524,646 | 433,529 | 91,117 | 82.6% | 601,457 | 523,998 |
| Higher education institutions | - | - | - | 2,862 | (2,862) | - | - | - |
| Public corporations and private enterprises | 1,181,521 | (4,974) | 1,176,547 | 1,240,485 | (63,938) | 105.4% | 1,166,213 | 1,198,552 |
| Public corporations | 1,181,521 | (4,974) | 1,176,547 | 1,240,258 | (63,711) | 105.4% | 1,166,213 | 1,198,552 |
| Subsidies on products | 1,002,269 | - | 1,002,269 | 1,002,269 | - | 100.0% | 978,449 | 978,449 |
| Other transfers to public corporations | 179,252 | (4,974) | 174,278 | 237,989 | (63,711) | 136.6% | 187,764 | 220,103 |
| Private enterprises | - | - | - | 226 | (226) | - | - | - |
| Other transfers to private enterprises | - | - | - | 226 | (226) | - | - | - |
| Non-profit institutions | - | - | - | 24,081 | (24,081) | - | - | 34,896 |
| Households | - | 210 | 210 | 207 | 3 | 98.8% | - | - |
| Social benefits | - | 210 | 210 | 207 | 3 | 98.8% | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - |
| Total | 1,757,624 | (2,000) | 1,755,624 | 1,751,708 | 3,916 | 99.8% | 1,820,977 | 1,814,725 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| Subprogramme: 5.1: Sector Innovation and Green Economy | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|---------------------------|----------------------|----------------|------------------------|-----------------------|------------|---|------------------------|-----------------------|
| Current payments | 13,944 | (768) | (2,210) | 10,966 | 10,454 | 513 | 95.3% | 12,220 | 11,318 |
| Compensation of employees | 9,107 | - | - | 9,107 | 8,762 | 345 | 96.2% | 9,909 | 9,882 |
| Salaries and wages | 7,956 | - | - | 7,956 | 7,804 | 152 | 98.1% | 8,820 | 8,804 |
| Social contributions | 1,151 | - | - | 1,151 | 958 | 193 | 83.2% | 1,089 | 1,078 |
| Goods and services | 4,837 | (768) | (2,210) | 1,859 | 1,692 | 167 | 91.0% | 2,311 | 1,436 |
| Administrative fees | 76 | - | - | 76 | 10 | 66 | 12.9% | 72 | - |
| Advertising | 96 | (67) | - | 29 | 2 | 27 | 7.0% | 94 | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 108 | (105) | - | 3 | - | 3 | - | 105 | - |
| Communication (G&S) | 406 | - | - | 406 | 402 | 4 | 99.0% | 306 | 302 |
| Computer services | 85 | (83) | - | 2 | - | 2 | - | 83 | - |
| Consultants: Business and advisory services | 1,063 | (100) | (910) | 53 | 52 | 1 | 98.9% | 1,126 | 1,124 |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/ outsourced services | 50 | (43) | - | 7 | - | 7 | - | 49 | - |
| Entertainment | 24 | - | - | 24 | 1 | 23 | 4.8% | 23 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | |
|--------------------------------------|------------------|--------------|----------------|------------------|------------|--------------|------------------|------------------|
| Social benefits | - | 210 | 210 | 207 | 3 | 98.8% | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - |
| Total | 1,093,355 | (768) | (2,000) | 1,090,587 | 750 | 99.9% | 1,120,160 | 1,117,731 |

| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|------------------------|-------------------|----------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Subprogramme: 5.2: Innovation for Inclusive Development | | | | | | | | | |
| Current payments | 12,749 | (1,838) | - | 10,911 | 9,507 | 1,404 | 87.1% | 8,337 | 7,713 |
| Compensation of employees | 12,000 | (3,199) | - | 8,801 | 7,496 | 1,305 | 85.2% | 7,612 | 7,081 |
| Salaries and wages | 11,255 | (3,299) | - | 7,956 | 6,739 | 1,217 | 84.7% | 6,885 | 6,354 |
| Social contributions | 745 | 100 | - | 845 | 757 | 88 | 89.6% | 727 | 727 |
| Goods and services | 749 | 1,361 | - | 2,110 | 2,011 | 99 | 95.3% | 725 | 632 |
| Administrative fees | 49 | - | - | 49 | 15 | 34 | 29.7% | 5 | 3 |
| Advertising | 13 | - | - | 13 | - | 13 | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | |
|---|----------------|----------|----------|----------------|----------------|-----------------|--------------|----------------|----------------|
| Departmental agencies and accounts | 367,875 | - | - | 367,875 | 340,132 | 27,743 | 92.5% | 391,552 | 374,742 |
| Departmental agencies | 367,875 | - | - | 367,875 | 340,132 | 27,743 | 92.5% | 391,552 | 374,742 |
| Higher education institutions | - | - | - | - | 2,862 | (2,862) | - | - | 8,150 |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | - | - | - | - | 2,000 | (2,000) | - | - | 5,758 |
| Public corporations | - | - | - | - | 2,000 | (2,000) | - | - | 5,758 |
| Subsidies on products | - | - | - | - | - | - | - | - | - |
| Other transfers to public corporations | - | - | - | - | 2,000 | (2,000) | - | - | 5,758 |
| Private enterprises | - | - | - | - | - | - | - | - | - |
| Other transfers to private enterprises | - | - | - | - | - | - | - | - | - |
| Non-profit institutions | - | - | - | - | 22,881 | (22,881) | - | - | 2,852 |
| Households | - | - | - | - | - | - | - | - | - |
| Social benefits | - | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | 380,624 | (1,838) | - | 378,786 | 377,382 | 1,404 | 99.6% | 399,889 | 399,215 |
|---|--------------|--------------|---|---------------|---------------|------------|--------------|---------------|---------------|
| Total | | | | | | | | | |
| Subprogramme: 5.3: Science and Technology Investment | | | | | | | | | |
| Current payments | 9,799 | 4,982 | - | 14,781 | 14,411 | 370 | 97.5% | 13,168 | 13,036 |
| Compensation of employees | 8,066 | 3,240 | - | 11,306 | 11,006 | 300 | 97.3% | 10,082 | 10,082 |
| Salaries and wages | 7,241 | 2,840 | - | 10,081 | 9,902 | 179 | 98.2% | 9,069 | 9,069 |
| Social contributions | 825 | 400 | - | 1,225 | 1,104 | 121 | 90.1% | 1,013 | 1,013 |
| Goods and services | 1,733 | 1,742 | - | 3,475 | 3,405 | 70 | 98.0% | 3,086 | 2,954 |
| Administrative fees | 23 | (15) | - | 8 | 7 | 1 | 88.3% | 22 | - |
| Advertising | 140 | (40) | - | 100 | 99 | 1 | 98.7% | 6 | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 88 | (85) | - | 3 | 1 | 2 | 30.4% | 6 | - |
| Communication (G&S) | 344 | (30) | - | 314 | 312 | 2 | 99.3% | 335 | 268 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | 468 | 115 | - | 583 | 580 | 3 | 99.5% | 705 | 700 |
| Legal services | - | - | - | - | - | - | - | 80 | 71 |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | - | 2,230 | - | 2,230 | 2,225 | 5 | 99.8% | 1,860 | 1,856 |
| Entertainment | 45 | - | - | 45 | - | 45 | - | 4 | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---------------|--------------|----------------|---------------|---------------|------------|--------------|---------------|---------------|---|---|---|---|---|---|---|---|---|---|
| Non-profit institutions | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Households | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Social benefit | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Software and other intangible assets | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 25,356 | 4,982 | (3,415) | 26,923 | 26,553 | 370 | 98.6% | 39,139 | 39,007 | | | | | | | | | | |

| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|---|------------------------|-------------------|----------|---------------------|--------------------|--------------|---|---------------------|--------------------|
| Subprogramme: | | | | | | | | | |
| 5.4: Technology Localisation, Beneficiation and Advanced Manufacturing | | | | | | | | | |
| Current payments | 17,737 | (6,930) | - | 10,807 | 9,791 | 1,016 | 90.6% | 12,521 | 10,089 |
| Compensation of employees | 14,551 | (4,240) | - | 10,311 | 9,380 | 931 | 91.0% | 12,018 | 9,851 |
| Salaries and wages | 13,063 | (4,240) | - | 8,823 | 8,370 | 453 | 94.9% | 10,972 | 8,813 |
| Social contributions | 1,488 | - | - | 1,488 | 1,010 | 478 | 67.9% | 1,046 | 1,039 |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | 3,186 | (2,690) | - | 496 | 411 | 85 | 82.9% | 503 | 238 |
|--|-------|---------|---|-----|-----|----|--------|-----|-----|
| Goods and services | | | | | | | | | |
| Administrative fees | - | 3 | - | 3 | 2 | 1 | 56.7% | - | - |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 73 | (29) | - | 44 | - | 44 | - | - | - |
| Communication (G&S) | 234 | - | - | 234 | 223 | 11 | 95.3% | 184 | 181 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | 1,343 | (1,339) | - | 4 | - | 4 | - | 125 | - |
| Legal services | - | - | - | - | - | - | - | 100 | - |
| Contractors | - | - | - | - | - | - | - | - | - |
| Agency and support/outsourced services | - | - | - | - | - | - | - | - | - |
| Entertainment | 36 | (27) | - | 9 | - | 9 | - | - | - |
| Fleet services (incl. government motor transport) | - | - | - | - | - | - | - | - | - |
| Inventory: Clothing and accessories | - | - | - | - | - | - | - | - | - |
| Inventory: Fuel, oil and gas | - | - | - | - | - | - | - | - | - |
| Inventory: Material and supplies | - | - | - | - | - | - | - | - | - |
| Inventory: Other supplies | - | - | - | - | - | - | - | - | - |
| Consumable supplies | - | 2 | - | 2 | 2 | - | 100.0% | 92 | 55 |
| Consumable: Stationery, printing and office supplies | - | - | - | - | - | - | - | - | - |
| Operating leases | - | - | - | - | - | - | - | 2 | 2 |
| Property payments | - | - | - | - | - | - | - | - | - |
| Travel and subsistence | 1,243 | (1,102) | - | 141 | 132 | 9 | 93.8% | - | - |
| Training and development | - | - | - | - | - | - | - | - | - |
| Operating payments | - | 2 | - | 2 | 2 | - | 100.0% | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
for the year ended 31 March 2023

| | 257 | (200) | - | 57 | 50 | 7 | 87.9% | - | - |
|---|----------------|-------|---------|---------|---------|----------|--------|---------|---------|
| Venues and facilities | | | | | | | | | |
| Rental and hiring | - | - | - | - | - | - | - | - | - |
| Transfers and subsidies | 238,350 | - | 3,415 | 241,765 | 241,764 | 1 | 100.0% | 242,207 | 241,710 |
| Departmental agencies and accounts | 102,027 | - | 8,389 | 110,416 | 67,618 | 42,798 | 61.2% | 96,264 | 79,840 |
| Departmental agencies | 102,027 | | 8,389 | 110,416 | 67,618 | 42,798 | 61.2% | 96,264 | 79,840 |
| Higher education institutions | - | - | - | - | - | - | - | - | - |
| Foreign governments and international organisations | - | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | 136,323 | - | (4,974) | 131,349 | 174,147 | (42,798) | 132.6% | 145,943 | 161,870 |
| Public corporations | 136,323 | - | (4,974) | 131,349 | 173,920 | (42,571) | 132.4% | 145,943 | 161,870 |
| Subsidies on products | | | | | | | | | |
| Other transfers to public corporations | 136,323 | - | (4,974) | 131,349 | 173,920 | (42,571) | 132.4% | 145,943 | 161,870 |
| Private enterprises | - | - | - | - | 226 | (226) | - | - | - |
| Other transfers to private enterprises | - | - | - | - | 226 | (226) | - | - | - |
| Non-profit institutions | | | | | | | | | |
| Households | - | - | - | - | - | - | - | - | - |
| Social benefits | - | - | - | - | - | - | - | - | - |
| Other transfers to households | - | - | - | - | - | - | - | - | - |
| Payment for capital assets | - | - | - | - | - | - | - | - | - |
| Buildings and other fixed structures | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | - | - | - | - | - | - | - | - |
| Transport equipment | - | - | - | - | - | - | - | - | - |
| Other machinery and equipment | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Appropriation Statement
 for the year ended 31 March 2023

| | | | | | | | | | |
|--------------------------------------|----------------|----------------|--------------|----------------|----------------|--------------|--------------|----------------|----------------|
| Software and other intangible assets | - | - | - | - | - | - | - | - | - |
| Payment for financial assets | - | - | - | - | - | - | - | - | - |
| Total | 256,087 | (6,930) | 3,415 | 252,572 | 251,556 | 1,016 | 99.6% | 254,728 | 251,799 |

| | Adjusted appropriation | Shifting of funds | Virement | Final appropriation | Actual expenditure | Variance | Expenditure as % of final appropriation | Final appropriation | Actual expenditure |
|--|------------------------|-------------------|----------|---------------------|--------------------|------------|---|---------------------|--------------------|
| Subprogramme: 5.5 Office of the DDG: Socio-Economic Innovation Partnerships | | | | | | | | | |
| Current payments | 2,202 | 4,554 | - | 6,756 | 6,381 | 375 | 94.5% | 7,060 | 6,973 |
| Compensation of employees | 1,458 | 4,199 | - | 5,657 | 5,357 | 300 | 94.7% | 5,337 | 5,337 |
| Salaries and wages | 1,369 | 3,599 | - | 4,968 | 4,720 | 248 | 95.0% | 4,708 | 4,708 |
| Social contributions | 89 | 600 | - | 689 | 638 | 51 | 92.6% | 629 | 629 |
| Goods and services | 744 | 355 | - | 1,099 | 1,024 | 75 | 93.2% | 1,723 | 1,636 |
| Administrative fees | 19 | - | - | 19 | 3 | 16 | 13.5% | 3 | - |
| Advertising | - | - | - | - | - | - | - | - | - |
| Minor assets | - | - | - | - | - | - | - | - | - |
| Audit costs: External | - | - | - | - | - | - | - | - | - |
| Bursaries: Employees | - | - | - | - | - | - | - | - | - |
| Catering: Departmental activities | 19 | - | - | 19 | - | 19 | - | 10 | - |
| Communication (G&S) | 69 | 60 | - | 129 | 128 | 1 | 99.5% | 118 | 116 |
| Computer services | - | - | - | - | - | - | - | - | - |
| Consultants: Business and advisory services | - | 37 | - | 37 | 35 | 2 | 93.9% | - | - |
| Legal services | - | - | - | - | - | - | - | - | - |
| Contractors | - | - | - | - | - | - | - | - | - |

SCIENCE AND INNOVATION - VOTE 35
Notes to the Appropriation Statement
for the year ended 31 March 2023

1. Details of transfers and subsidies as per Appropriation Act (after virement):

Details of these transactions can be viewed in the note to the Transfers and Subsidies, disclosure notes and Annexure 1 (B, C, E, D, F and G) to the Annual Financial Statements.

2. Details of specifically and exclusively appropriated amounts voted (after virement):

Details of these transactions can be viewed in note 1 (Annual Appropriation) to the Annual Financial Statements.

3. Details on payments for financial assets.

The details of these transactions can be viewed in note 7 to the Annual Financial Statements.

4. Explanations of material variances from amounts voted (after virement):

| 4.1 Per programme: | Final appropriation R'000 | Actual expenditure R'000 | Variance R'000 R'000 | Variance as a % of final appropriation % |
|---------------------------|-------------------------------------|------------------------------------|--------------------------------|---|
| Programme name | | | | |
| Administration | | | | |
| Compensation of employees | 163,732 | 158,877 | 4,855 | 3.0% |
| Transfers and subsidies | 16,155 | 14,736 | 1,419 | 8.8% |

The variance is due to delays in filling prioritised positions and additional funding received under compensation of employees from National Treasury due the Adjusted Estimates of National Expenditure (AENE). In addition, expenditure on transfers and subsidies under the Programmes is dependent on requests for funding for science and technology initiatives. Some of the requests for funding were not aligned to the objectives of the DSI.

Programme name

**International Cooperation
and Resources**

| | | | | |
|---------------------------|--------|--------|-------|------|
| Compensation of employees | 53,558 | 49,436 | 4,122 | 7.7% |
|---------------------------|--------|--------|-------|------|

The variance is due to delays in filling prioritised positions and additional funding received under compensation of employees from National Treasury due to the Adjusted Estimates of National Expenditure (AENE).

SCIENCE AND INNOVATION - VOTE 35

Notes to the Appropriation Statement

for the year ended 31 March 2023

| 4.2 | Per economic classification | Final appropriation | Actual expenditure | Variance | Variance as a % of final appropriation |
|-----|---|---------------------|--------------------|-----------|--|
| | | R'000 | R'000 | R'000 | % |
| | Current payments | | | | |
| | Compensation of employees | 357,650 | 340,478 | 17,171 | 4.8% |
| | Goods and services | 221,517 | 219,186 | 2,331 | 1.1% |
| | Transfers and subsidies | | | | |
| | Departmental agencies and accounts | 6,565,627 | 5,919,853 | 645,774 | 9.8% |
| | Higher education institutions | - | 255,827 | (255,827) | - |
| | Public corporations and private enterprises | 1,494,236 | 2,143,320 | (649,084) | (43) % |
| | Non-profit institutions | 494,239 | 229,936 | 264,303 | 53.5% |
| | Households | 710 | 1,086 | (376) | (53.0) % |
| | Payments for capital assets | | | | |
| | Machinery and equipment | 11,279 | 11,162 | 117 | 1.0% |
| | Payments for financial assets | | | | |
| | | 4 | 7 | (3) | (73.5) % |

The variance is due to delays in filling prioritised positions and additional funding received under compensation of employees from National Treasury due to the Adjusted Estimates of National Expenditure (AENE). The variance under transfers and subsidies was due to tranche payments that were not processed due to slow spending by implementing agencies.

SCIENCE AND INNOVATION - VOTE 35
Statement of Financial Performance
for the year ended 31 March 2023

| PERFORMANCE | Note | 2022/23 R'000 | 2021/22 R'000 |
|---|------|------------------|------------------|
| REVENUE | | | |
| Annual appropriation | 1 | 9,145,262 | 9,005,638 |
| Departmental revenue | 2 | 688 | 1,090 |
| Aid assistance | 3 | 95,484 | 69,822 |
| TOTAL REVENUE | | 9,241,434 | 9,076,550 |
| EXPENDITURE | | | |
| Current expenditure | | | |
| Compensation of employees | 4 | 340,478 | 332,751 |
| Goods and services | 5 | 219,186 | 152,832 |
| Aid assistance | 3 | - | 1,527 |
| Total current expenditure | | 559,664 | 487,110 |
| Transfers and subsidies | | | |
| Transfers and subsidies | 7 | 8,550,022 | 8,467,427 |
| Aid assistance | 3 | 77,480 | 58,428 |
| Total transfers and subsidies | | 8,627,502 | 8,525,855 |
| Expenditure for capital assets | | | |
| Tangible capital assets | 8 | 11,162 | 8,941 |
| Intangible assets | 8 | - | - |
| Total expenditure for capital assets | | 11,162 | 8,941 |
| Unauthorised expenditure approved without funding | | | |
| Payment for financial assets | 6 | 7 | 92 |
| TOTAL EXPENDITURE | | 9,198,335 | 9,021,998 |
| SURPLUS FOR THE YEAR | | 43,099 | 54,552 |
| Reconciliation of net surplus for the year | | | |
| Voted funds | | 24,407 | 43,595 |
| Departmental revenue | 14 | 688 | 1,090 |
| Aid assistance | 3 | 18,004 | 9,867 |
| SURPLUS FOR THE YEAR | | 43,099 | 54,552 |

SCIENCE AND INNOVATION - VOTE 35
Statement of Financial Position
for the year ended 31 March 2023

| POSITION | Note | 2022/23 | 2021/22 |
|--|-----------|---------------|---------------|
| | | R'000 | R'000 |
| ASSETS | | | |
| Current assets | | 39,366 | 53,824 |
| Cash and cash equivalents | <u>9</u> | 29,950 | 41,779 |
| Prepayments and advances | <u>10</u> | 9,057 | 10,138 |
| Receivables | <u>11</u> | 359 | 1,907 |
| Non-current assets | | 3,698 | 194 |
| Prepayments and advances | <u>10</u> | 2,057 | - |
| Receivables | | 1,641 | 194 |
| TOTAL ASSETS | | 43,064 | 54,018 |
| LIABILITIES | | | |
| Current liabilities | | 42,674 | 53,542 |
| Voted funds to be surrendered to the Revenue Fund | <u>13</u> | 24,407 | 43,595 |
| Departmental revenue to be surrendered to the Revenue Fund | <u>14</u> | 6 | 15 |
| Payables | <u>15</u> | 257 | 65 |
| Aid assistance repayable | <u>3</u> | 18,004 | 9,867 |
| TOTAL LIABILITIES | | 42,674 | 53,542 |
| NET ASSETS | | 390 | 476 |
| Represented by: | | | |
| Recoverable revenue | | 390 | 476 |
| TOTAL | | 390 | 476 |

SCIENCE AND INNOVATION - VOTE 35
Statement of Changes in Net Assets
for the year ended 31 March 2023

| NET ASSETS | <i>Note</i> | 2022/23 | 2021/22 |
|---|-------------|----------------|----------------|
| | | R'000 | R'000 |
| Recoverable revenue | | | |
| Opening balance | | 476 | 509 |
| Transfers: | | -86 | -33 |
| Debts revised | | - | - |
| Debts recovered (included in departmental receipts) | | -112 | -87 |
| Debts raised | | 26 | 54 |
| Closing balance | | 390 | 476 |
| TOTAL | | 390 | 476 |

SCIENCE AND INNOVATION - VOTE 35

Cash Flow Statement

for the year ended 31 March 2023

| CASH FLOW | Note | 2022/23 R'000 | 2021/22 R'000 |
|--|------------|------------------|------------------|
| CASH FLOWS FROM OPERATING ACTIVITIES | | | |
| Receipts | | 9,241,434 | 9,076,315 |
| Annual appropriated funds received | <u>1.1</u> | 9,145,262 | 9,005,638 |
| Departmental revenue received | <u>2</u> | 625 | 818 |
| Interest received | <u>2.2</u> | 63 | 37 |
| Aid assistance received | <u>3</u> | 95,484 | 69,822 |
| Net (increase) decrease in working capital | | 764 | (3,505) |
| Surrendered to Revenue Fund | | (44,292) | (114,124) |
| Surrendered to RDP Fund/Donor | | (9,867) | (421) |
| Current payments | | (559,664) | (487,110) |
| Interest paid | | - | - |
| Payments for financial assets | | (7) | (92) |
| Transfers and subsidies paid | | (8,627,502) | (8,525,855) |
| Net cash flow available from operating activities | <u>16</u> | 866 | (54,792) |
| CASH FLOWS FROM INVESTING ACTIVITIES | | | |
| Payments for capital assets | <u>8</u> | (11,162) | (8,941) |
| Proceeds from sale of capital assets | 2.3 | - | 235 |
| Increase in non-current-current receivables | | (1,447) | (51) |
| Net cash flows from investing activities | | (12,609) | (8,757) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | | |
| Increase/(decrease) in net assets | | (86) | (33) |
| Net cash flows from financing activities | | (86) | (33) |
| Net increase/(decrease) in cash and cash equivalents | | (11,829) | (63,582) |
| Cash and cash equivalents at the beginning of the period | | 41,779 | 105,361 |
| Cash and cash equivalents at end of period | <u>17</u> | 29,950 | 41,779 |

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023

The Financial Statements have been prepared in accordance with the policies indicated below, which have been applied consistently in all material aspects, unless otherwise indicated. Management has concluded that the financial statements present fairly the Department's primary and secondary information.

The historical cost convention has been used, except where otherwise indicated. Management has used assessments and estimates in preparing the annual financial statements where necessary. These are based on the best information available at the time of preparation.

Where appropriate and meaningful, additional information has been disclosed to enhance the usefulness of the Financial Statements and to comply with the statutory requirements of the Public Finance Management Act, 1999, and the Treasury Regulations issued in terms of the Act and the Division of Revenue Act.

1. Basis of preparation

The Financial Statements have been prepared in accordance with the Modified Cash Standard.

2. Going concern

The financial statements have been prepared on a going concern basis for the following reasons, among others:

- (i) The Department was allocated a budget over the Medium-Term Expenditure Framework period that includes R10,9 billion that was allocated for the next financial year for its operations. This budget will assist in paying for short-term financial obligations such as personnel and other priority projects.
- (ii) The Department's five-year (2020-2025) strategic plan is still ongoing. The plan is being implemented and will only be reviewed after five years.

3. Presentation currency

All amounts have been presented in South African rand (R), which is also the functional currency of the Department.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**4. Rounding**

Unless otherwise stated financial figures have been rounded to the nearest one thousand rand (R'000).

5. Foreign currency translation

Cash flows arising from foreign currency transactions are translated into South African rands using the spot exchange rates prevailing on the date of payment/receipt.

6. Comparative information**6.1 Prior period comparative information**

Prior period comparative information has been presented in the current year's financial statements. Where necessary figures included in the prior period financial statements have been reclassified to ensure that, the format in which the information is presented is consistent with the format of the current year's financial statements.

6.2 Current year comparison with budget

A comparison between the approved, final budget and actual amounts for each Programme and economic classification is included in the appropriation statement.

7. Revenue**7.1 Appropriated funds**

Appropriated funds comprise of departmental allocations. Appropriated funds are recognised in the Statement of Financial Performance on the date the appropriation becomes effective. Adjustments to the appropriated funds made in terms of the adjustments budget process are recognised in the Statement of Financial Performance on the date the adjustments become effective.

The net amount of any appropriated funds due to or from the National Revenue Fund at the reporting date is recognised as payable or receivable in the Statement of Financial Position.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**7.2 Departmental revenue**

Departmental revenue is recognised in the Statement of Financial Performance when received and is subsequently paid into the National Revenue Fund, unless otherwise stated. Any amount owing to the National Revenue Fund at the reporting date is recognised as payable in the Statement of Financial Position.

7.2.1 Accrued departmental revenue

Accruals in respect of departmental revenue (excluding tax revenue) are recorded in the Notes to the Financial Statements when –

- it is probable that the economic benefits or service potential associated with the transaction will flow to the Department;
- the amount of revenue can be measured reliably.

The accrued revenue is measured at the fair value of the consideration receivable. If there are any write-offs, these are made according to the Department's debt write-off policy.

8. Expenditure**8.1 Compensation of employees****8.1.1 Salaries and wages**

Salaries and wages are recognised in the Statement of Financial Performance on the date of payment.

8.1.2 Social contributions

Social contributions made by the Department in respect of current employees are recognised in the Statement of Financial Performance on the date of payment. Social contributions made by the Department in respect of ex-employees are classified as transfers to households in the Statement of Financial Performance on the date of payment.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**8.2 Other expenditure**

Other expenditure such as goods and services, transfers and subsidies and payments for capital assets are recognised in the Statement of Financial Performance on the date of payment. The expense is classified as a capital expense if the total consideration paid is more than the capitalisation threshold.

8.3 Accruals and payables not recognised

Accruals and payables not recognised are recorded in the Notes to the Financial Statements when the goods are received or in the case of services, when they are rendered to the Department or in the case of transfers and subsidies when they are due and payable. Accruals and payables not recognised are measured at cost.

Leases**8.3.1 Operating leases**

Operating lease payments made during the reporting period are recognised as current expenditure in the Statement of Financial Performance on the date of payment. The operating lease commitments are recorded in the Notes to the Financial Statements.

8.3.2 Finance leases

Finance lease payments made during the reporting period are recognised as capital expenditure in the Statement of Financial Performance on the date of payment. The finance lease commitments are recorded in the Notes to the Financial Statements and are not apportioned between the capital and interest portions.

Finance lease acquired at the end of the lease term are recorded and measured at the lower of –

- cost, being the fair value of the asset; or
- the sum of the minimum lease payments made, including any payments made to acquire ownership at the end of the lease term, excluding interest.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**9. Aid assistance****9.1 Aid assistance received.**

Aid assistance received in cash is recognised in the Statement of Financial Performance when received. In-kind aid assistance is recorded in the Notes to the Financial Statements on the date of receipt and is measured at fair value.

Aid assistance not spent for the intended purpose and any unused funds from aid assistance that are required to be refunded to the donor are recognised as a payable in the Statement of Financial Position.

9.2 Aid assistance paid.

Aid assistance paid is recognised in the Statement of Financial Performance on the date of payment. Aid assistance payments made prior to the receipt of funds are recognised as a receivable in the Statement of Financial Position.

10. Cash and cash equivalents

Cash and cash equivalents are stated at cost in the Statement of Financial Position. Bank overdrafts are shown separately on the face of the Statement of Financial Position. For the purposes of the Cash Flow Statement, cash and cash equivalents comprise cash on hand, deposits held, other short-term highly liquid investments and bank overdrafts.

11. Prepayments and advances

Prepayments and advances are recognised in the Statement of Financial Position when the Department receives or disburses the cash. Prepayments and advances are initially and subsequently measured at cost.

12. Loans and receivables

Loans and receivables are recognised in the Statement of Financial Position at cost plus accrued interest, where interest is charged, less amounts already settled or written off. Write-offs are made according to the Department's write-off policy.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**13. Investments**

Investments are recognised in the Statement of Financial Position at cost.

14. Financial assets**14.1 Financial assets (not covered elsewhere)**

A financial asset is recognised initially at its cost, plus transaction costs that are directly attributable to the acquisition or issue of the financial assets. At the reporting date, a department must measure its financial assets at cost, less amounts already settled or written off, except for recognised loans and receivables, which are measured at cost plus accrued interest, where interest is charged, less amounts already settled or written off.

14.2 Impairment of financial assets

Where there is an indication of impairment of a financial asset, an estimation of the reduction in the recorded carrying value, to reflect the best estimate of the amount of the future economic benefits expected to be recovered from that asset is recorded in the Notes to the Financial Statements.

15. Payables

Payables are recognised in the Statement of Financial Position at cost.

16. Capital assets**16.1 Immovable capital assets**

Immovable capital assets are reflected in the asset register of the Department and recorded in the Notes to the Financial Statements at cost or fair value where the cost cannot be determined reliably. Immovable capital assets acquired in a non-exchange transaction are recorded at fair value at the date of acquisition. Immovable assets are subsequently carried in the asset register at cost and are not currently subject to depreciation or impairment.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023

Subsequent expenditure of a capital nature forms part of the cost of the existing asset when ready for use.

Additional information on immovable assets not reflected in the asset register is provided in the Notes to the Financial Statements.

16.2 Movable capital assets

Movable capital assets are initially recorded in the Notes to the Financial Statements at cost. Movable capital assets acquired through a non-exchange transaction are measured at fair value as at the date of acquisition.

Where the cost of movable capital assets cannot be determined reliably, the movable capital assets are measured at fair value and where fair value cannot be determined; the movable assets are measured at R1.

All assets acquired prior to 1 April 2002 (or late as approved by the Office of the Accountant-General) are measured at R1.

Movable capital assets are subsequently carried at cost and are not subject to depreciation or impairment.

Subsequent expenditure that is of capital nature is added to the cost of the asset at the end of the capital project unless the movable asset is recorded by another department in which case the completed project costs are transferred to the Department.

16.3 Intangible assets

Intangible assets are initially recorded in the Notes to the Financial Statements at cost. Intangible assets acquired through a non-exchange transaction are measured at fair value as at the date of acquisition.

Internally generated intangible assets are recorded in the Notes to the Financial Statements when the Department commences the development phase of the project.

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Accounting Policies
for the year ended 31 March 2023

Where the cost of intangible assets cannot be determined reliably, the intangible capital assets are measured at fair value and where fair value cannot be determined; the intangible assets are measured at R1. All assets acquired prior to 1 April 2002 (or a later date as approved by the Office of the Auditor-General) are recorded at R1. Intangible assets are subsequently carried at cost and are not subject to depreciation or impairment.

Subsequent expenditure that is of a capital nature is added to the cost of the asset at the end of the capital project unless the intangible asset is recorded by another department/entity in which case the completed project costs are transferred to that department.

16.4 Project costs: Work in progress

Expenditure of a capital nature is initially recognised in the Statement of Financial Performance at cost when paid. Amounts paid towards capital projects are separated from the amounts recognised and accumulated in work-in progress until the underlying assets are ready for use. Once ready for use, the total accumulated payments are recorded in the assets register. Subsequent payments to complete the project are added to the capital asset in the asset register. Where the Department is not the custodian of the completed project asset, the asset is transferred to the custodian after completion.

17. Provisions and contingencies**17.1 Provisions**

Provisions are recorded in the Notes to the Financial Statements when there is a legal or constructive obligation to forfeit economic benefits as a result of events in the past and it is probable that an outflow of resources embodying economic benefits or service potential will be required to settle the obligation and a reliable estimate of the obligation can be made. The provision is measured as the best estimate of the funds required to settle the present obligation at the reporting date.

17.2 Contingent liabilities

Contingent liabilities are recorded in the Notes to the Financial Statements when there is a possible obligation that arises from past events, and the existence of which will be

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023

confirmed only by the occurrence or non-occurrence of one or more uncertain future events not within the control of the Department, or when there is a present obligation that is not recognised because it is not probable that an outflow of resources will be required to settle the obligation or the amount of the obligation cannot be measured reliably.

17.3 Contingent assets

Contingent assets are recorded in the Notes to the Financial Statements when a possible asset arises from past events, and whose existence will be confirmed by the occurrence or non-occurrence of one or more uncertain future events not within the control of the Department.

17.4 Capital commitments

Capital commitments are recorded at cost in the Notes to the Financial Statements when there is a contractual arrangement or an approval by management in a manner that raises a valid expectation that the Department will discharge its responsibilities thereby incurring future expenditure that will result in the outflow of cash.

18. Unauthorised expenditure

Unauthorised expenditure is measured at the amount of the confirmed unauthorised expenditure. Unauthorised expenditure is recognised in the statement of changes in net assets until such time as the expenditure is –

- approved by Parliament with funding and the related funds are received; or
- approved by Parliament without funding and is written off against the appropriation in the statement of financial performance; or
- transferred to receivables for recovery.

Unauthorised expenditure recorded in the Notes to the Financial Statements comprises:

- unauthorised expenditure that was under assessment in the previous financial year;
- unauthorised expenditure relating to previous financial year and identified in the current year;
- unauthorised expenditure incurred in the current year.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**19. Fruitless and wasteful expenditure**

Fruitless and wasteful expenditure receivables are recognised in the Statement of Financial Position when recoverable. The receivable is measured at the amount that is expected to be recovered and is de-recognised when settled or subsequently written off as irrecoverable.

Fruitless and wasteful expenditure is recorded in the Notes to the Financial Statements when and at amounts confirmed and comprises –

- fruitless and wasteful expenditure that was under assessment in the previous financial year;
- fruitless and wasteful expenditure relating to previous financial year and identified in the current year;
- fruitless and wasteful expenditure incurred in the current year.

20. Irregular expenditure

Irregular expenditure is recorded in the Notes to the Financial Statements when confirmed after its assessment. The amount recorded is equal to the value of the irregular expenditure incurred unless it is impracticable to determine, in which case reasons therefore are provided in the note. Irregular expenditure is recorded in the Notes to the Financial Statements when and at amounts confirmed and comprises –

- irregular expenditure that was under assessment in the previous financial year;
- irregular expenditure relating to previous financial year and identified in the current year;
- irregular expenditure incurred in the current year.

Irregular expenditure receivables are measured at the amount that is expected to be recoverable and are de-recognised when settled or subsequently written off as irrecoverable.

21. Changes in accounting estimates

Changes in accounting estimates that are effected by management have been applied retrospectively in accordance with MCS requirements, except to the extent that it is

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023

impracticable to determine the period-specific effects or the cumulative effect of the change in policy. In such instances the Department will restate the opening balances of assets, liabilities, and net assets for the earliest period for which retrospective restatement is practicable.

Changes in accounting estimates are applied prospectively in accordance with MCS requirements.

Correction of errors is applied retrospectively in the period in which the error has occurred in accordance with MCS requirements, except to the extent that it is impracticable to determine the period-specific effects or the cumulative effect of the error. In such cases the Department will restate the opening balances of assets, liabilities, and net assets for the earliest period for which retrospective restatement is practicable.

22. Events after the reporting date

Events after the reporting date that are classified as adjusting events are accounted for in the Financial Statements, if such events occur. The events after the reporting date that are classified as non-adjusting events after the reporting date are disclosed in the Notes to the Financial Statements, if such events occur.

23. Agent-principal arrangements

The Department is party to a principal-agent arrangement with the Department of Justice and Constitutional Development. In terms of the arrangement of a principal-agent, all related revenues, expenditures, assets and liabilities must be recognised or recorded in terms of the relevant policies listed herein. Additional disclosures must be provided in the Notes to the Financial Statements where appropriate.

24. Departures from the MCS requirements

Management has concluded that the financial statements fairly present the Department's primary and secondary information, that the Department complied with the Modified Cash Standard, and that there was no departure from any particular requirement to achieve fair presentation.

SCIENCE AND INNOVATION - VOTE 35

Accounting Policies
for the year ended 31 March 2023**25. Capitalisation reserve**

The capitalisation reserve comprises financial assets and/or liabilities originating in a prior reporting period, but which are recognised in the Statement of Financial Position for the first time in the current reporting period. Amounts are recognised in the capitalisation reserves when identified in the current period and are transferred to the National Revenue Fund when the underlying asset is disposed, and the related funds are received.

26. Recoverable revenues

Amounts are recognised as recoverable revenue when a payment made in a previous financial year becomes recoverable from a debtor in the current financial year. Amounts are either transferred to the National Revenue Fund when recovered or are transferred to the Statement of Financial Performance when written off.

27. Related party transactions

A related party transaction is a transfer of resources, services or obligations between the reporting entity and a related party. Related party transactions within the Minister's portfolio are recorded in the Notes to the Financial Statements when the transaction is not at arm's length.

Key management personnel are those persons having the authority and responsibility for planning, directing and controlling the activities of the Department. The number of individuals and their full compensation is recorded in the Notes to the Financial Statements.

28. Inventories

At the date of acquisition, inventories are recorded at cost price in the statement of financial performance. Where inventories are acquired as part of a non-exchange transaction, the cost of inventory is its fair value at the date of acquisition. Inventories are subsequently measured at the lower of cost and net realisable value or the lower of cost and current replacement value (the factors that could lead to the revaluation of inventory include but are not limited to obsolescence, defects, over-supply, and major price declines).

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Subsequent measurement of the cost of inventory is determined on the weighted average basis. The Department is not an inventory institution, and the note on inventory is therefore not applicable.

29. Public-private partnerships

Public-private partnerships (PPP) are accounted for based on the nature and/or the substance of the partnership. The transaction is accounted for in accordance with the relevant accounting policies. The summary of the significant terms of the PPP agreement, the parties to the agreement, and the date of commencement thereof, together with the description and nature of the concession fees received, the unitary fees paid, and the rights and obligations of the Department, are recorded in the Notes to the Financial Statements. The Department is not a party to any PPP.

30. Employee benefits

The value of each major class of employee benefit obligation (accruals, payables not recognised and provisions) is disclosed in the employee benefits note.

Accruals and payables not recognised for the employee benefits are measured at cost or fair value at the reporting date.

The provisions for employee benefits are measured as the best estimate of the funds required to settle the present obligation at the reporting date.

31. Transfer of functions

Transfer of functions are accounted for by the acquirer by recognising or recording assets acquired and liabilities assumed at their carrying amounts at the date of transfer.

Transfer of functions are accounted for by the transferor by derecognising or removing assets and liabilities at their carrying amounts at the date of transfers.

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32. Mergers

Mergers are accounted for by the combined Department by recognised or recording assets acquired and liabilities assumed at their carrying amounts at the date of the merger.

Mergers are accounted for by the combining Departments by derecognising or removing assets and liabilities at their carrying amounts at the date of the merger.

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Notes to the Annual Financial Statements
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1. Annual appropriation

1.1 Annual appropriation

Funds appropriated in terms of the Appropriation Act (and the Adjustments Appropriation Act) for National Departments (voted funds) are included.

| | Final appropriation 2022/23 | Actual funds received 2022/23 | Funds not requested/ not received 2022/23 | Final appropriation 2021/22 | Actual funds received 2021/22 | Funds not requested/ not received 2021/22 |
|---|-----------------------------------|-------------------------------------|--|-----------------------------------|-------------------------------------|---|
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 |
| Administration | 343,174 | 343,174 | - | 334,724 | 334,724 | - |
| Technology Innovation | 1,897,725 | 1,897,725 | - | 1,705,289 | 1,705,289 | - |
| International Cooperation and Resources | 165,687 | 165,687 | - | 144,416 | 144,416 | - |
| Research Development and Support | 4,983,052 | 4,983,052 | - | 4,995,632 | 4,995,632 | - |
| Socio-Economic Innovation Partnerships | 1,755,624 | 1,755,624 | - | 1,825,577 | 1,825,577 | - |
| Total | 9,145,262 | 9,145,262 | - | 9,005,638 | 9,005,638 | - |

The Final Appropriation amount disclosed is based on the approved adjusted budget.

2. Departmental revenue

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|---|-------------|------------------|------------------|
| Sales of goods and services other than capital assets | <u>2.1</u> | 74 | 73 |
| Interest, dividends and rent on land | <u>2.2</u> | 63 | 37 |
| Sale of capital assets | <u>2.3</u> | - | 235 |
| Transactions in financial assets and liabilities | <u>2.4</u> | 551 | 745 |
| Departmental revenue collected | | 688 | 1,090 |

The Department did not dispose of any capital assets and there was a reduction in the surpluses received from completed projects, hence the significant decrease in revenue collected.

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Notes to the Annual Financial Statements
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3.2 Analysis of balance by source

| | | | |
|--------------------------------|-------------|---------------|--------------|
| | <i>Note</i> | | |
| Aid assistance from RDP | <u>3</u> | | - |
| RDP Fund | | 18,004 | 9,867 |
| Closing balance | | 18,004 | 9,867 |

3.3 Analysis of balance

| | | | |
|--------------------------|-------------|---------------|--------------|
| | <i>Note</i> | | |
| | <u>3</u> | | |
| Aid assistance repayable | | 18,004 | 9,867 |
| Closing balance | | 18,004 | 9,867 |

3.4 Aid assistance expenditure per economic classification

| | | | |
|-------------------------|-------------|---------------|---------------|
| | <i>Note</i> | | |
| | <u>3</u> | | |
| Current | | - | 1,527 |
| Capital | | - | - |
| Transfers and subsidies | | 77,480 | 58,428 |
| Closing balance | | 77,480 | 59,955 |

The analysis on sub-note 3.4 was introduced in 2020/21 to indicate the allocation of donor funds expenditure during the financial year.

4. Compensation of employees**4.1 Salaries and wages**

| | | | |
|----------------------------------|-------------|----------------|----------------|
| | <i>Note</i> | 2022/23 | 2021/22 |
| | <u>4</u> | R'000 | R'000 |
| Basic salary | | 224,135 | 216,060 |
| Performance award | | 45 | 3,527 |
| Service-based | | 360 | 510 |
| Compensative/circumstantial | | 5,802 | 4,162 |
| Periodic payments | | - | - |
| Other non-pensionable allowances | | 74,199 | 73,800 |
| Total | | 304,541 | 298,059 |

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4.2 Social contributions

| | Note | 2022/23 | 2021/22 |
|--|----------|----------------|----------------|
| | <u>4</u> | R'000 | R'000 |
| Employer contributions | | | |
| Pension | | 28,336 | 27,421 |
| Medical | | 7,534 | 7,230 |
| Bargaining council | | 67 | 41 |
| Total | | 35,937 | 34,692 |
| Total compensation of employees | | 340,478 | 332,751 |
| Average number of employees | | 378 | 374 |

5. Goods and services

| | Note | 2022/23 | 2021/22 |
|---|------------|----------------|----------------|
| | | R'000 | R'000 |
| Administrative fees | | 777 | 230 |
| Advertising | | 23,494 | 21,341 |
| Minor assets | <u>5.1</u> | 369 | 41 |
| Bursaries (employees) | | 1,209 | 1,397 |
| Catering | | 526 | 111 |
| Communication | | 13,600 | 10,929 |
| Computer services | <u>5.2</u> | 28,325 | 28,621 |
| Consultants: Business and advisory services | | 19,483 | 13,945 |
| Legal services | | 3 | 720 |
| Contractors | | 2,213 | 982 |
| Agency and support/outsourced services | | 16,045 | 14,239 |
| Entertainment | | 62 | 40 |
| Audit cost – external | <u>5.3</u> | 5,254 | 5,380 |
| Fleet services | | 1,560 | 987 |
| Consumables | <u>5.4</u> | 3,510 | 3,404 |
| Operating leases | | 3,477 | 3,681 |
| Property payments | <u>5.5</u> | 13,369 | 16,226 |
| Rental and hiring | | 1,742 | 516 |
| Travel and subsistence | <u>5.6</u> | 60,222 | 16,317 |
| Venues and facilities | | 17,525 | 2,308 |
| Training and development | | 2,643 | 1,489 |
| Other operating expenditure | <u>5.7</u> | 3,778 | 9,928 |
| Total | | 219,186 | 152,832 |

The significant spending under goods and service is due to the lifting of travel and Covid-19 restrictions that resulted in increased travel. Among other events, the Department hosted the

World Science Forum, National Science Week and Innovation Bridge meetings. The other increase is attributed to the spending under consultants regarding the DSI building project.

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Notes to the Annual Financial Statements
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5.1 Minor assets

| | Note <u>5</u> | 2022/23 R'000 | 2021/22 R'000 |
|--------------------------|------------------|------------------|------------------|
| Tangible assets | | | |
| Machinery and equipment | | 369 | 41 |
| Intangible assets | | | |
| Total | | 369 | 41 |

The increase under the item is due to the purchase of monitors and laptop bags.

5.2 Computer services

| | Note <u>5</u> | 2022/23 R'000 | 2021/22 R'000 |
|-------------------------------------|------------------|------------------|------------------|
| SITA computer services | | 19,663 | 14,132 |
| External computer service providers | | 8,662 | 14,489 |
| Total | | 28,325 | 28,621 |

5.3 Audit cost – External

| | Note <u>5</u> | 2022/23 R'000 | 2021/22 R'000 |
|-------------------|------------------|------------------|------------------|
| Regularity audits | | 5,254 | 5,380 |
| Total | | 5,254 | 5,380 |

5.4 Consumables

| | Note <u>5</u> | 2022/23 R'000 | 2021/22 R'000 |
|---|------------------|------------------|------------------|
| Consumables supplies | | 815 | 1,834 |
| Uniform and clothing | | 176 | 32 |
| Household supplies | | 102 | 246 |
| Communication accessories | | 352 | 1,402 |
| IT consumables | | 119 | 131 |
| Other consumables | | 66 | 23 |
| Stationery, printing, and office supplies | | 2,695 | 1,570 |
| Total | | 3,510 | 3,404 |

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Notes to the Annual Financial Statements

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5.5 Property payments

| | Note | 2022/23 | 2021/22 |
|--------------------------|----------|---------------|---------------|
| | <u>5</u> | R'000 | R'000 |
| Municipal services | | 2,297 | 5,617 |
| Property management fees | | 3,080 | 2,394 |
| Other | | 7,992 | 8,215 |
| Total | | 13,369 | 16,226 |

5.6 Travel and subsistence

| | Note | 2022/23 | 2021/22 |
|--------------|----------|---------------|---------------|
| | <u>5</u> | R'000 | R'000 |
| Local | | 50,640 | 13,446 |
| Foreign | | 9,582 | 2,871 |
| Total | | 60,222 | 16,317 |

The increase in travel expenditure was due to the lifting of Covid-19 travel restrictions that resulted in increased travel to events. Among other events, the Department hosted the World Science Forum, National Science Week and Innovation Bridge meetings.

5.7 Other operating expenditure

| | Note | 2022/23 | 2021/22 |
|--|----------|--------------|--------------|
| | <u>5</u> | R'000 | R'000 |
| Professional bodies, membership, and subscription fees | | 1,555 | 6,427 |
| Resettlement costs | | 144 | 707 |
| Other | | 2,079 | 2,794 |
| Total | | 3,778 | 9,928 |

5.8 Remuneration of members of a commission or committee (included in Consultants: Business and advisory services)

(Treasury Regulation 20.2.4)

| Name of commission/committee | 2022/23 | 2021/22 |
|---|---------|---------|
| | R'000 | R'000 |
| Audit Committee | 254 | 343 |
| Bio-economy Audit Committee | 16 | 54 |
| Energy Storage Committee | 300 | 154 |
| Enterprise Risk Management Committee | 403 | 509 |
| Industrialisation through Innovation Committee | 170 | 160 |
| Information Technology Steering Committee | 188 | 55 |
| Mainstreaming Innovation in the Public Sector | 215 | 12 |
| Mathematics and Science Education in Schools Committee | 62 | 86 |
| Ministerial Review into the Effectiveness of the Technology Innovation Agency | 871 | 174 |
| NACI Council and Executive Committee (ExCo) | 289 | 317 |

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Notes to the Annual Financial Statements
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| | | |
|---|--------------|--------------|
| NACI TVET Reference Group Committee | 295 | 46 |
| NIPMO Full Cost Committee | 67 | 55 |
| Upgrade of the National Science, Technology and Innovation Information Portal Task Team | - | 4 |
| Retaining Local Patents Committee | 154 | 167 |
| Review of Draft Report on Research Capacity | - | 25 |
| Review of STEM ASA PhD Output Report | - | 21 |
| State of Imported Technology | - | 25 |
| STI Indicators Committee | 521 | 661 |
| STI Renewable Energy Committee | 8 | 27 |
| The Role of NSI in Implementing the NHI Committee | 243 | 51 |
| Peer Review: Implementation and Impact Evaluation of the National Equipment Programme | 10 | - |
| Examine the role of STI in relation to SA's development as a middle-income country | 93 | - |
| Transformation in the NSI Committee | 125 | 82 |
| Analysis of the Persistent Decline of Business Investment in R&D in South Africa | 89 | - |
| | 4,373 | 3,028 |

The sub-note was introduced in the 2021/22 financial year as per Treasury Regulation 20.2.4 in the Modified Cash Standard.

6. Payments for financial assets

| | <i>Note</i> | 2022/23 | 2021/22 |
|-----------------------------------|-------------|----------------|----------------|
| | | R'000 | R'000 |
| Other material losses written off | <u>6.1</u> | 7 | 92 |
| Debts written off | <u>6.2</u> | - | - |
| Total | | 7 | 92 |

The number of damage and loss cases have decreased significantly, leading to the decrease in the number of cases written off.

6.1 Other material losses written off.

| | <i>Note</i> | 2022/23 | 2021/22 |
|--|-------------|----------------|----------------|
| | <u>6</u> | R'000 | R'000 |
| Nature of losses | | | |
| Losses in respect of damaged vehicle written off | | 7 | 92 |
| Total | | 7 | 92 |

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Notes to the Annual Financial Statements

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6.2 Debts written off

| | Note <u>6</u> | 2022/23 R'000 | 2021/22 R'000 |
|---------------------------------|------------------|------------------|------------------|
| Nature of losses | | | |
| Irrecoverable debts written off | | - | - |
| Total | | <u>-</u> | <u>-</u> |

7. Transfers and subsidies

| | Note | 2022/23 R'000 | 2021/22 R'000 |
|---|-----------------|-------------------------|-------------------------|
| Departmental agencies and accounts | <i>Annex 1B</i> | 5,919,853 | 6,017,023 |
| Higher education institutions | <i>Annex 1C</i> | 255,827 | 240,526 |
| Foreign governments and international organisations | <i>Annex 1E</i> | - | 2,000 |
| Public corporations and private enterprises | <i>Annex 1D</i> | 2,143,320 | 1,957,502 |
| Non-profit institutions | <i>Annex 1F</i> | 229,936 | 249,246 |
| Households, gifts, donations and sponsorships | <i>Annex 1G</i> | 1,086 | 1,130 |
| Total | | <u>8,550,022</u> | <u>8,467,427</u> |

7.1 Donations made in kind (not included in the main note)

The sub-note was introduced in the 2022/23 financial year. The Department did not incur any expenditure on donations made in kind in the current year.

8. Expenditure for capital assets

| | Note | 2022/23 R'000 | 2021/22 R'000 |
|---|------------|----------------------|---------------------|
| Tangible assets | | | |
| Machinery and equipment | <u>8.1</u> | <u>11,162</u> | <u>8,941</u> |
| Intangible assets | | | |
| Software | <u>8.1</u> | - | - |
| Patents, licences, copyright, brand names, trademarks | | - | - |
| Total | | <u>11,162</u> | <u>8,941</u> |

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The increase was due to the purchase of new laptops to replace obsolete ones.

8.1 Analysis of funds used to acquire capital assets – 2022/23

| | Voted funds R'000 | Aid assistance R'000 | Total R'000 |
|-------------------------|----------------------|----------------------------|----------------|
| Tangible assets | | - | |
| Machinery and equipment | 11,162 | - | 11,162 |
| Total | 11,162 | - | 11,162 |

8.2 Analysis of funds used to acquire capital assets – 2021/22

| | Voted funds R'000 | Aid assistance R'000 | Total R'000 |
|------------------------------|----------------------|----------------------------|----------------|
| Machinery and equipment | 8,941 | - | 8,941 |
| Total assets acquired | 8,941 | - | 8,941 |
| Total | 8,941 | - | 8,941 |

8.3 Finance lease expenditure included in expenditure for capital assets

| | <i>Note</i> 2022/23 R'000 | 2021/22 R'000 |
|-------------------------|---------------------------------|------------------|
| Tangible assets | | |
| Machinery and equipment | 3,871 | 3,769 |
| Total | 3,871 | 3,769 |

9. Cash and cash equivalents

| | <i>Note</i> 2022/23 R'000 | 2021/22 R'000 |
|--|---------------------------------|------------------|
| Consolidated Paymaster-General Account | 29,917 | 41,746 |
| Disbursements | - | - |
| Cash on hand | 33 | 33 |
| Total | 29,950 | 41,779 |

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Notes to the Annual Financial Statements

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10. Prepayments and advances

| | <i>Note</i> | 2022/23 | 2021/22 |
|---|-------------|---------------|---------------|
| | | R'000 | R'000 |
| Travel and subsistence | | 368 | 124 |
| Advances paid | | 10,746 | 10,014 |
| Total | | 11,114 | 10,138 |
| Analysis of total prepayments and advances | | | |
| | | R'000 | R'000 |
| Current prepayments and advances | | 9,057 | 10,138 |
| Non-current prepayments and advances | | 2,057 | - |
| Total | | 11,114 | 10,138 |

The sub-note was introduced in the 2022/23 financial year as per the Modified Cash Standard. However, the Department did not have non-current prepayments and advances in the prior year.

10.1 Advances paid (not expensed)

| | Amount as of 1 April 2022 | Less: Amount expensed in current year | Add/less: Other | Add: Current year advances | Balance as at 31 March 2023 |
|------------------------|------------------------------|---|--------------------|----------------------------------|-----------------------------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| National departments | 10,014 | (7,957) | - | 8,689 | 10,746 |
| Provincial departments | - | - | - | - | - |
| Closing balance | 10,014 | (7,957) | - | 8,689 | 10,746 |
| | Amount as at 1 April 2021 | Less: Amount expensed in current year | Add/less: Other | Add: Current year advances | Balance as at 31 March 2022 |
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| National departments | 6,000 | (4,420) | - | 8,434 | 10,014 |
| Provincial departments | - | - | - | - | - |
| Closing balance | 6,000 | (4,420) | - | 8,434 | 10,014 |

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Notes to the Annual Financial Statements
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11. Receivables

| | Note | 2022/23 | | | 2021/22 | | |
|-------------------------|-------------|------------------|--------------------------|----------------|------------------|--------------------------|----------------|
| | | Current R'000 | Non- current R'000 | Total R'000 | Current R'000 | Non- current R'000 | Total R'000 |
| Claims recoverable | <u>11.1</u> | 215 | 1,251 | 1,466 | 1,400 | 44 | 1,444 |
| Recoverable expenditure | <u>11.2</u> | 46 | - | 46 | 8 | 53 | 61 |
| Staff debt | <u>11.3</u> | 98 | 390 | 488 | 499 | 97 | 596 |
| Total | | 359 | 1,641 | 2,000 | 1,907 | 194 | 2,101 |

11.1 Claims recoverable

| | Note | 2022/23 R'000 | 2021/22 R'000 |
|--|-----------|------------------|------------------|
| National departments | <u>11</u> | 80 | - |
| Households and non-profit institutions | | 1,386 | 1,444 |
| Total | | 1,466 | 1,444 |

11.2 Recoverable expenditure (disallowance accounts)

| | Note | 2022/23 R'000 | 2021/22 R'000 |
|-------------------------------|-----------|------------------|------------------|
| Income tax debt | <u>11</u> | - | - |
| Persal salaries and stoppages | | - | - |
| Damages to vehicles | | 46 | 61 |
| VAT clearing account | | - | - |
| Total | | 46 | 61 |

11.3 Staff debt

| | Note | 2022/23 R'000 | 2021/22 R'000 |
|---------------------|-----------|------------------|------------------|
| Salary overpayment | <u>11</u> | 10 | 11 |
| Cell phone debts | | 11 | 13 |
| Income tax debt | | 4 | 4 |
| Travel related debt | | 76 | 76 |
| Bursary debt | | 387 | 492 |
| Total | | 488 | 596 |

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Notes to the Annual Financial Statements

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12. Investments

The Department acquired a 35% shareholding of the Biological and Vaccines Institute of South Africa (Biovac) valued at R95,038 million (calculated as percentage of retained earnings of Biovac as at 31 December 2021) from the Department of Health at no cost. The value of the shares could not be disclosed in the Statement of Financial Position because they were transferred at no cost. At the time the DSI Annual Financial Statements were finalised, the audit of Biovac had not yet been concluded.

13. Voted funds to be surrendered to the Revenue Fund

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|--|-------------|--------------------------------|--------------------------------|
| Opening balance | | 43,595 | 113,022 |
| Prior period error | | | |
| As restated | | 43,595 | 113,022 |
| Transfer from statement of financial performance | | 24,407 | 43,595 |
| Voted funds not requested/not received | 1.1 | | - |
| Paid during the year | | (43,595) | (113,022) |
| Closing balance | | 24,407 | 43,595 |

14. Departmental revenue to be surrendered to the Revenue Fund

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|--|-------------|--------------------------------|--------------------------------|
| Opening balance | | 15 | 27 |
| Prior period error | | - | - |
| As restated | | 15 | 27 |
| Transfer from Statement of Financial Performance | | 688 | 1,090 |
| Paid during the year | | (697) | (1,102) |
| Closing balance | | 6 | 15 |

15. Payables – current

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|-------------------|-------------|--------------------------------|--------------------------------|
| Clearing accounts | 15.1 | 99 | 65 |
| Other payables | 15.2 | 158 | - |
| Total | | 257 | 65 |

The increase in payables was due to interest received on donor funds.

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Notes to the Annual Financial Statements
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15.1 Clearing accounts

| | <i>Note</i> | 2022/23 | 2021/22 |
|------------------------------|-------------|----------------|----------------|
| | 15 | R'000 | R'000 |
| Sal: GEHS refund control: CL | | 56 | - |
| Sal: Income tax: CL | | 40 | 42 |
| Sal: Pension Fund: CL | | 3 | 23 |
| Total | | 99 | 65 |

15.2 Other payables

| | <i>Note</i> | 2022/23 | 2021/22 |
|--|-------------|----------------|----------------|
| | 15 | R'000 | R'000 |
| Interest on donor funds and surplus on project | | 144 | - |
| Other payables | | 14 | - |
| | | - | - |
| Total | | 158 | - |

16. Net cash flow available from operating activities

| | <i>Note</i> | 2022/23 | 2021/22 |
|--|-------------|----------------|-----------------|
| | | R'000 | R'000 |
| Net surplus as per Statement of Financial Performance | | 43,099 | 54,552 |
| Add back non-cash/cash movements not deemed operating activities | | (42,233) | (109,344) |
| (Increase)/Decrease in receivables – current | | 1,548 | 604 |
| (Increase)/Decrease in prepayments and advances | | (976) | (4,138) |
| Increase/(Decrease) in payables – current | | 192 | 29 |
| Proceeds from sale of capital assets | | - | (235) |
| Expenditure on capital assets | | 11,162 | 8,941 |
| Surrenders to Revenue Fund | 13 | (44,292) | (114,124) |
| Surrenders to Donor Fund | | (9,867) | (421) |
| Voted funds not requested/not received | | - | - |
| Net cash flow generated by operating activities | | 866 | (54,792) |

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Notes to the Annual Financial Statements

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17. Reconciliation of cash and cash equivalents for cash flow purposes

| | <i>Note</i> | 2022/23 | 2021/22 |
|--|-------------|----------------------|----------------------|
| | | R'000 | R'000 |
| Consolidated Paymaster-General Account | | 29,917 | 41,746 |
| Disbursements | | - | - |
| Cash on hand | | 33 | 33 |
| Total | | <u>29,950</u> | <u>41,779</u> |

18. Contingent liabilities and contingent assets

18.1 Contingent liabilities

| | <i>Note</i> | 2022/23 | 2021/22 |
|-------------------------------|--------------|-------------------|-------------------|
| | | R'000 | R'000 |
| Liable to | | | |
| Claims against the Department | <i>Annex</i> | 401 | 401 |
| | <i>3B</i> | | |
| Total | | <u>401</u> | <u>401</u> |

- The Department received a claim at the end of the 2018/19 reporting period. A former manager of science centre alleged unfair treatment and financial loss, and therefore claimed restitution fees. On 20 June 2019, management received a legal opinion that indicated that the claim was frivolous and vexatious and should therefore be dismissed with costs, and furthermore the amount of the claim was not a reliable estimate, and it could therefore not be disclosed. For the purpose of disclosure for the 2021/22 financial year, the Department requested a legal opinion to ascertain whether the status of the claim had changed and the legal opinion indicated that the status remained unchanged.
- The contingent liability of R401 000 has been disclosed since 2013/14 financial year. The matter has been dormant for some time, but can only be removed from the Annual Financial Statements when the matter has been withdrawn from the court roll.

18.2 Contingent assets

The Department claimed an amount R3 491 786.00 from Charisma Bredenkamp for damages suffered and R330 for the bill of costs. The Department is uncertain, given the amount that has been claimed from Ms Bredenkamp, whether it will be able to recover it. She was served with a summons, however she did not comply with summons. The Department and the State Attorney's Office are therefore processing a warrant of arrest for Ms Bredenkamp.

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19. Commitments

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|----------------------------|-------------|--------------------------------|--------------------------------|
| Capital commitments | | - | 1,229 |
| Total commitments | | - | 1,229 |

The disclosure is limited to Capital Asset disclosure only. The disclosure for goods and services commitment was discontinued in the 2020/21 financial year. The Department did not have any capital asset commitments in the year under review.

20.1 Accruals and payables not recognised**20.1 Accruals**

| | | | 2022/23 R'000 | 2021/22 R'000 |
|--|----------------|-----------------|--------------------------------|--------------------------------|
| Listed by economic classification | 30 days | 30+ days | Total | Total |
| Goods and services | 22,395 | - | 22,395 | 6,471 |
| Capital assets | 1,978 | - | 1,978 | 242 |
| Total | 24,373 | - | 24,373 | 6,713 |

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|--|-------------|--------------------------------|--------------------------------|
| Listed by Programme | | | |
| Programme 1: Administration | | 17,980 | 5,007 |
| Programme 2: Technology Innovation | | 749 | 583 |
| Programme 3: International Cooperation and Resources | | 4,599 | 472 |
| Programme 4: Research Development and Support | | 656 | 441 |
| Programme 5: Socio-Economic Innovation Partnerships | | 389 | 210 |
| Total | | 24,373 | 6,713 |

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20.2 Payables not recognised

| | | 2022/23 R'000 | 2021/22 R'000 |
|--|----------------|--------------------------|--------------------------|
| Listed by economic classification | | | |
| | 30 days | 30+ days | Total |
| Goods and services | 12,042 | 3,406 | 15,448 |
| | <i>Note</i> | 2022/23 | 2021/22 |
| Capital assets | - | - | - |
| Total | 12,042 | 3,406 | 15,448 |
| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
| Listed by Programme | | | |
| Programme 1: Administration | | 8,895 | 10 |
| Programme 2: Technology Innovation | | 331 | - |
| Programme 3: International Cooperation and Resources | | 4,288 | - |
| Programme 4: Research Development and Support | | 959 | - |
| Programme 5: Socio-Economic Innovation Partnerships | | 975 | - |
| Total | | 15,448 | 10 |
| Confirmed balances with other departments | <i>Annex 5</i> | 2,264 | 203 |
| Confirmed balances with other government entities | | - | - |
| Total | | 2,264 | 203 |

The Department has a significant increase on accruals due to invoices for events and travel that were received after year end.

21. Employee benefits

| | <i>Note</i> | 2022/23 R'000 | 2021/22 R'000 |
|-----------------------------|-------------|------------------|------------------|
| Leave entitlement* | | 23,850 | 19,079 |
| Service bonus (13th cheque) | | 7,512 | 7,218 |
| Performance awards | | - | - |
| Capped leave commitments | | 2,830 | 2,938 |
| Other (long-service awards) | | 44 | 11 |
| Total | | 34,236 | 29,246 |

*A negative amount of R17,044.33 was offset against leave entitlement. The amount was because of a pro rata calculation of leave taken by employees as at 31 March 2023. In terms of the pro rata calculation, employees are entitled to 5.49 or 7.50 days leave from 1 January to 31 March depending on the length of service of an official. If an employee takes more, this results in a negative number for leave taken in the three-month period. The situation will be automatically rectified later in the leave period.

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22. Lease commitments

22.1 Operating leases expenditure

| | Land R'000 | Buildings and other fixed structures R'000 | Machinery and equipment R'000 | Total R'000 |
|---|---------------|--|--|----------------|
| 2022/23 | | | | |
| Not later than 1 year | - | 969 | 22 | 991 |
| Later than 1 year and not later than 5 years | - | - | - | - |
| Total lease commitments | - | 969 | 22 | 991 |

| | Land R'000 | Buildings and other fixed structures R'000 | Machinery and equipment R'000 | Total R'000 |
|---|---------------|--|--|----------------|
| 2021/22 | | | | |
| Not later than 1 year | - | 875 | 754 | 1,629 |
| Later than 1 year and not later than 5 years | - | - | - | - |
| Total lease commitments | - | 875 | 754 | 1,629 |

22.2 Finance leases expenditure

| | Land R'000 | Buildings and other fixed structures R'000 | Machinery and equipment R'000 | Total R'000 |
|---|---------------|--|--|----------------|
| 2022/23 | | | | |
| Not later than 1 year | - | - | 7,615 | 7,615 |
| Later than 1 year and not later than 5 years | - | - | 5,498 | 5,498 |
| Total lease commitments | - | - | 13,113 | 13,113 |

| | Land R'000 | Buildings and other fixed structures R'000 | Machinery and equipment R'000 | Total R'000 |
|---|---------------|--|--|----------------|
| 2021/22 | | | | |
| Not later than 1 year | - | - | 2,779 | 2,779 |
| Later than 1 year and not later than 5 years | - | - | - | - |
| Total lease commitments | - | - | 2,779 | 2,779 |

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23. Accrued departmental revenue

| | Note | 2022/23 | 2021/22 |
|--------------------------------------|------|----------|--------------|
| | | R'000 | R'000 |
| Fines, court order | | - | 330 |
| Interest, dividends and rent on land | | - | 172 |
| Other | | - | 1,112 |
| Total | | <u>-</u> | <u>1,614</u> |

23.1 Analysis for accrued departmental revenue

| | Note | 2022/23 | 2021/22 |
|---|------|----------|--------------|
| | | R'000 | R'000 |
| Opening balance | | 1,614 | - |
| Less: Amounts received | | 172 | - |
| Add: Amounts recognised | | - | 1,614 |
| Less: Amounts written off/reversed as irrecoverable | | (1,442) | - |
| Total | | <u>-</u> | <u>1,614</u> |

The Department did not raise any accrued departmental revenue in the year under review.

24. Unauthorised, Irregular, Fruitless and wasteful expenditure

| | Note | 2022/23 | 2021/22 |
|------------------------------------|------|----------|----------|
| | | R'000 | R'000 |
| Unauthorised expenditure | | - | - |
| Irregular expenditure | | - | - |
| Fruitless and wasteful expenditure | | - | - |
| Total | | <u>-</u> | <u>-</u> |

The note was changed as per the PFMA Compliance and Reporting Framework issued by the National Treasury in the 2022/23 financial year. The details of unauthorised, irregular, and fruitless and wasteful expenditure are now reported in the annual report. The Department did not incur any unauthorised, irregular, or fruitless and wasteful expenditure in the period under review.

25. Events after the reporting date

There were no significant events after the reporting period.

26. Related party transactions**26.1 Related party transactions**

| | 2022/23 | 2021/22 |
|--------------------|----------|----------|
| | R'000 | R'000 |
| Payments made | | |
| Goods and services | - | - |
| Total | <u>-</u> | <u>-</u> |

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26.2 Public entities under ownership control of the Department of Science and Innovation

The following entities are under the ownership control of the Department in terms of Chapter 1 of the Public Finance Management Act, 1999, and report to the Minister of Higher Education Science and Innovation, and as such are related parties to the Department:

Schedule 3A – National public entities

- Human Sciences Research Council
- National Research Foundation
- South African National Space Agency
- Technology Innovation Agency

Schedule 3B – National government business enterprises

- Council for Scientific and Industrial Research

The Department transactions with these entities are limited to transfer and subsidy payments. Annexure 1C and 1E to the Annual Financial Statements reflect payments to these public entities. Where transactions other than these occur, they occur within a normal supplier/client relationship in terms of the procurement procedures of the Department and the Public Finance Management Act, 1999.

26.3 DSI public entities under ownership control of the Department of Higher Education and Training

Schedule 3A – National public entities

Council on Higher Education and Training
 National Student Financial Aid Scheme
 South African Qualification Authority
 Quality Council for Trades and Occupations
 National Skills Fund

Sector Education and Training Authorities (SETAs)

Agriculture SETA
 Banking SETA

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Chemical Industries Education and Training Authority Construction SETA
Culture, Arts, Tourism, Hospitality and Sports SETA
Education, Training and Development Practices SETA
Energy and Water SETA
Fibre, Processing and Manufacturing SETA
Financial and Accounting Services SETA
Food and Beverages SETA
Health and Welfare SETA
Insurance SETA
Local Government SETA
Manufacturing, Engineering and Related Services SETA
Media, Information and Communication Technologies SETA
Mining Qualifications Authority
Public Services SETA
Safety and Security SETA
Services SETA
Transport Education and Training Authority
Wholesale and Retail SETA

Technical and vocational education and training colleges

Buffalo City College; East Cape Midlands College; Ikhala College; Ingwe College; King Hintsa College; King Sabata Dalindyebo College; Lovedale College; Port Elizabeth College; Flavius Mareka College; Goldfields College; Maluti College; Motheo College; Central Johannesburg College; Ekurhuleni East College; Ekurhuleni West College; Sedibeng College; South West College; Tshwane North College; Tshwane South College; Western College; Coastal College; Elangeni College; Esayidi College; Majuba College; Mnambithi College; Mthashana College; Thekwini College; Umfolozi College; Umgungundlovu College; Capricorn College; Lephalale College; Letaba College; Mopani College; Sekhukhune College; Vhembe College; Waterberg College; Ehlanzeni College; Gert Sibande College; Nkangala College; Rural College; Urban College; Orbit College; Taletso College; Vuselela College; Boland College; Cape Town College; False Bay College; Northlink College; South Cape College; West Coast College

Community education and training colleges

Eastern Cape College; Free State College; Gauteng College; KwaZulu-Natal College; Limpopo College; Mpumalanga College; Northern Cape College; North West College; Western Cape College

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26.4 Related party relationships with other departments

All government departments and public entities in the same sphere of government are related parties to the Department of Higher Education and Training and the Department of Science and Innovation (DSI); however, the DSI has a related party relationship with the Department of Public Works and Infrastructure that provides office accommodation free of charge to the DSI. The Department of Public Works and Infrastructure claims maintenance fees only. The DSI has a relationship with the Academy of Science of South Africa that is funding its operations. All the transactions the DSI has with these entities are at arm's length. The Department did not have transactions with these entities that required disclosure in terms of the Modified Cash Standard.

27. Key management personnel

| | 2022/23 | 2021/22 |
|---|----------------------|----------------------|
| | R'000 | R'000 |
| Political office bearers (provide detail below) | 4,639 | 4,379 |
| Officials: | - | - |
| Level 15 to 16 | 17,899 | 17,706 |
| Level 14 (incl. CFO if at a lower level) | 33,445 | 30,842 |
| Total | <u>55,983</u> | <u>52,927</u> |

The key management personnel do not qualify for any remuneration other than the approved remuneration structures for the different classes of key management personnel (political office bearers and officials).

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28. Movable tangible capital assets

MOVEMENT IN MOVABLE TANGIBLE CAPITAL ASSETS PER ASSET REGISTER FOR THE YEAR ENDED 31 March 2023

| | Opening balance | Value adjustme nts | Additions | Disposals | Closing balance |
|--|--------------------|--------------------------|---------------|-----------|--------------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| MACHINERY AND EQUIPMENT | 104,094 | - | 11,462 | - | 115,556 |
| Transport assets | 8,035 | - | 2,036 | - | 10,071 |
| Computer equipment | 49,016 | - | 5,459 | - | 54,475 |
| Furniture and office equipment | 21,108 | - | 32 | - | 21,140 |
| Other machinery and equipment | 25,935 | - | 3,935 | - | 29,870 |
| TOTAL MOVABLE TANGIBLE CAPITAL ASSETS | 104,094 | - | 11,462 | - | 115,556 |

Included in the additions are non-cash capital assets amounting to R299,860.59 that were transferred from other departments to the DSI.

28.1 Movement for 2021/22

MOVEMENT IN MOVABLE TANGIBLE CAPITAL ASSETS PER ASSET REGISTER FOR THE YEAR ENDED 31 MARCH 2022

| | Opening balance | Prior period errors | Additions | Disposals | Closing balance |
|--|--------------------|---------------------------|--------------|---------------|--------------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| MACHINERY AND EQUIPMENT | 113,279 | - | 9,183 | 18,368 | 104,094 |
| Transport assets | 7,801 | - | 1,530 | 1,296 | 8,035 |
| Computer equipment | 61,356 | - | 2,218 | 14,558 | 49,016 |
| Furniture and office equipment | 21,669 | - | 1,135 | 1,696 | 21,108 |
| Other machinery and equipment | 22,453 | - | 4,300 | 818 | 25,935 |
| TOTAL MOVABLE TANGIBLE CAPITAL ASSETS | 113,279 | - | 9,183 | 18,368 | 104,094 |

28.1.1 Prior period errors

Nature of prior error

2021/22
R'000

Total

-

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28.2 Minor assets**MINOR ASSETS OF THE DEPARTMENT FOR THE YEAR ENDED 31 March 2023**

| | Intangible assets | Heritage assets | Machinery and equipment | Biological assets | Total |
|---------------------------|----------------------|--------------------|-------------------------------|----------------------|--------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| Opening balance | - | - | 7,414 | - | 7,414 |
| Value adjustments | - | - | - | - | - |
| Additions | - | - | 395 | - | 395 |
| Disposals | - | - | - | - | - |
| TOTAL MINOR ASSETS | - | - | 7,809 | - | 7,809 |

| | Intangible assets | Heritage assets | Machinery and equipment | Biological assets | Total |
|--------------------------------|----------------------|--------------------|-------------------------------|----------------------|--------------|
| Number of R1 minor assets | - | - | 5,117 | - | 5,117 |
| Number of minor assets at cost | - | - | 4,685 | - | 4,685 |
| Total | - | - | 9,802 | - | 9,802 |

Included in the additions are non-cash minor assets amounting to R25,963.55 that were transferred from other departments to the DSI.

Minor assets**MINOR ASSETS OF THE DEPARTMENT FOR THE YEAR ENDED 31 MARCH 2022**

| | Intangible assets | Heritage assets | Machinery and equipment | Biological assets | Total |
|--------------------|----------------------|--------------------|-------------------------------|----------------------|--------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| Opening balance | - | - | 7,610 | - | 7,610 |
| Prior period error | - | - | - | - | - |
| Additions | - | - | 41 | - | 41 |
| Disposals | - | - | 237 | - | 237 |
| Total | - | - | 7,414 | - | 7,414 |

| | Intangible assets | Heritage assets | Machinery and equipment | Biological assets | Total |
|-----------------------------------|----------------------|--------------------|----------------------------|----------------------|--------------|
| Number of R1 minor assets | - | - | 5,117 | - | 5,117 |
| Number of minor assets at cost | - | - | 4,589 | - | 4,589 |
| | - | - | 9,706 | - | 9,706 |

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Notes to the Annual Financial Statements

for the year ended 31 March 2023

28.2.1 Prior period errors

| | |
|-----------------------|------------------|
| Nature of prior error | 2021/22 R'000 |
|-----------------------|------------------|

29. Intangible capital assets

MOVEMENT IN INTANGIBLE CAPITAL ASSETS PER ASSET REGISTER FOR THE YEAR ENDED 31 MARCH 2023

| | Opening balance R'000 | Additions R'000 | Disposals R'000 | Closing balance R'000 |
|---|-----------------------------|--------------------|--------------------|-----------------------------|
| Software | 7,483 | - | - | 7,483 |
| Patents, licences, copyright, brand names, trademarks | - | - | - | - |
| TOTAL INTANGIBLE CAPITAL ASSETS | 7,483 | - | - | 7,483 |

29.1 Additions

ADDITIONS TO INTANGIBLE CAPITAL ASSETS PER ASSET REGISTER FOR THE YEAR ENDED 31 March 2023

| | Cash R'000 | Non-cash R'000 | (Development work in progress current costs) R'000 | Received current, not paid (Paid current year, received prior year) R'000 | Total R'000 |
|---|---------------|-------------------|---|---|----------------|
| Software | - | - | - | - | - |
| TOTAL ADDITIONS TO MOVABLE TANGIBLE CAPITAL ASSETS | - | - | - | - | - |

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29.2 Disposals

DISPOSALS OF INTANGIBLE CAPITAL ASSETS PER ASSET REGISTER FOR THE YEAR ENDED 31 March 2023

| | Sold for cash | Transferred out or destroyed or scrapped | Total disposals | Cash received actual |
|--|---------------|--|-----------------|----------------------|
| | R'000 | R'000 | R'000 | R'000 |
| Software | - | - | - | - |
| TOTAL DISPOSAL OF INTANGIBLE CAPITAL ASSETS | - | - | - | - |

29.3 Intangible capital assets

MOVEMENT IN INTANGIBLE CAPITAL ASSETS PER ASSET REGISTER FOR THE YEAR ENDED 31 MARCH 2022

| | Opening balance | Prior year error balances | Additions | Disposals | Closing balance |
|---|-----------------|---------------------------|-----------|-----------|-----------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| Software | 7,483 | - | - | - | 7,483 |
| Patents, licences, copyright, brand names, trademarks | - | - | - | - | - |
| TOTAL INTANGIBLE CAPITAL ASSETS | 7,483 | - | - | - | 7,483 |

| | Note | 2022/23 | 2021/22 |
|--|----------|----------|---------------|
| | ANNEXURE | R'000 | R'000 |
| 30. Covid-19 response expenditure | 11 | | |
| Goods and services | | - | 27 |
| Transfers and subsidies | | - | 41,051 |
| Total | | - | 41,078 |

The note was introduced in 2020/21 financial year to allocate expenditure relating to Covid-19. The Department did not incur any Covid-19-related expenditure in the 2022/23 financial year.

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Annexures to the Annual Financial Statements
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ANNEXURE 1B**STATEMENT OF TRANSFERS TO DEPARTMENTAL AGENCIES AND ACCOUNTS**

| DEPARTMENT/AGENCY/ACCOUNT | TRANSFER ALLOCATION | | | TRANSFER | | 2021/22 | | |
|---|----------------------------|-----------|---------------|------------------|------------------|----------------------------------|------------------|------------------|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of available funds transferred | Final budget | Actual transfer |
| | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| Agricultural Research Council | 37,000 | - | - | 37,000 | 34,949 | 94% | 40,000 | 36,948 |
| Academy of Science of South Africa | 45,000 | - | - | 45,000 | 41,539 | 92% | 33,210 | 33,210 |
| Human Sciences Research Council | 480,000 | - | - | 480,000 | 402,294 | 84% | 426,764 | 413,455 |
| Council for Geoscience | 7,000 | - | - | 7,000 | 6,000 | 86% | - | - |
| National Research Foundation | 4,477,287 | - | 17,840 | 4,495,127 | 4,057,485 | 90% | 4,458,927 | 4,024,098 |
| South African Medical Research Council | 220,000 | - | - | 220,000 | 194,181 | 88% | 243,794 | 229,216 |
| South African National Biodiversity Institute | 11,000 | - | - | 11,000 | 10,000 | 91% | 45,000 | 44,101 |
| South African National Energy Development Institute | 210,000 | - | - | 210,000 | 191,174 | 91% | 209,130 | 195,717 |
| South African National Space Agency | 282,000 | - | - | 282,000 | 272,160 | 97% | 255,132 | 250,083 |
| South African Weather Service | - | - | - | - | - | - | 1,000 | 1,000 |
| Technology Innovation Agency | 760,000 | - | - | 760,000 | 693,219 | 91% | 757,248 | 737,813 |
| Water Research Commission | 17,000 | - | - | 17,000 | 15,448 | 91% | 48,000 | 47,717 |
| Mpumalanga Tourism & Parks Board | - | - | - | - | - | - | 2,500 | 2,175 |
| National Health Laboratory Service | 1,500 | - | - | 1,500 | 1,404 | 94% | 2,000 | 1,490 |
| Total | 6,547,787 | - | 17,840 | 6,565,627 | 5,919,853 | | 6,522,705 | 6,017,023 |

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ANNEXURE 1C
STATEMENT OF TRANSFERS TO HIGHER EDUCATION INSTITUTES

| DEPARTMENT/AGENCY/ACCOUNT | TRANSFER ALLOCATION | | | | TRANSFER | | 2020/21 | | |
|---|----------------------------|-----------|-------------|-----------------|-----------------|------------------------|----------------------------------|--------------|-----------------|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | Amount not transferred | % of available funds transferred | Final budget | Actual transfer |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| Cape Peninsula University of Technology | - | - | - | - | 7,194 | (7,194) | -100% | - | 3,119 |
| Central University of Technology | - | - | - | - | 565 | (565) | -100% | - | 75 |
| Durban University of Technology | - | - | - | - | 759 | (759) | -100% | - | - |
| Mangosuthu University of Technology | - | - | - | - | 1,151 | (1,151) | -100% | - | - |
| Nelson Mandela University | - | - | - | - | 2,863 | (2,863) | -100% | - | 1,148 |
| North-West University | - | - | - | - | 39,767 | (39,767) | -100% | - | 41,717 |
| Rhodes University | - | - | - | - | 1,207 | (1,207) | -100% | - | 2,512 |
| Stellenbosch University | - | - | - | - | 27,297 | (27,297) | -100% | - | 20,320 |
| Tshwane University of Technology | - | - | - | - | 91 | (91) | -100% | - | 2,042 |
| University of Cape Town | - | - | - | - | 52,016 | (52,016) | -100% | - | 47,375 |
| University of Ford Hare | - | - | - | - | 996 | (996) | -100% | - | 1,209 |
| University of Johannesburg | - | - | - | - | 2,731 | (2,731) | -100% | - | 8,690 |
| University of KwaZulu-Natal | - | - | - | - | 42,114 | (42,114) | -100% | - | 36,040 |
| University of Limpopo | - | - | - | - | 5,261 | (5,261) | -100% | - | 3,187 |
| University of Pretoria | - | - | - | - | 4,253 | (4,253) | -100% | - | 4,640 |
| University of South Africa | - | - | - | - | 3,844 | (3,844) | -100% | - | 8,309 |
| University of the Free State | - | - | - | - | 24,113 | (24,113) | -100% | - | 21,913 |
| University of the Western Cape | - | - | - | - | 21,985 | (21,985) | -100% | - | 19,469 |

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| | | | | | | | | |
|---------------------------------|---|---|---|----------------|------------------|-------|---|----------------|
| University of the Witwatersrand | - | - | - | 11,035 | (11,035) | -100% | - | 9,185 |
| University of Venda | - | - | - | 1,799 | (1,799) | -100% | - | 4,392 |
| University of Zululand | - | - | - | 990 | (990) | -100% | - | 3,775 |
| Vaal University of Technology | - | - | - | 1,690 | (1,690) | -100% | - | - |
| Walter Sisulu University | - | - | - | 2,106 | (2,106) | -100% | - | 1,409 |
| Total | - | - | - | 255,827 | (255,827) | - | - | 240,526 |

The expenditure for higher education institutions was disclosed under Annexure 1F, as per National Treasury instruction note. In the 2020/21 financial year, expenditure was brought back to Annexure 1C as per the changes on Standard Chart of Accounts (SCOA).

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ANNEXURE 1D
STATEMENT OF TRANSFERS/SUBSIDIES TO PUBLIC CORPORATIONS AND PRIVATE ENTERPRISES

| NAME OF PUBLIC CORPORATION/PRIVATE ENTERPRISE | TRANSFER ALLOCATION | | | | EXPENDITURE | | | | 2021/22 | | |
|--|----------------------------|-----------|-----------------|------------------|------------------|----------------------------------|---------------|------------------|------------------|------------------|--|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of Available funds transferred | Capital | Current | Final Budget | Actual Transfer | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | R'000 | |
| Public corporations | | | | | | | | | | | |
| Transfers | | | | | | | | | | | |
| Council for Mineral Technology | 78,475 | - | - | 78,475 | 60,460 | 77.0% | - | 60,460 | - | 48,121 | |
| Council for Scientific and Industrial Research | 343,966 | - | (18,474) | 325,492 | 719,960 | 221.2% | 14,613 | 705,347 | 533,874 | 701,758 | |
| South African Nuclear Energy Corporation Ltd | 8,000 | - | - | 8,000 | 7,426 | 92.8% | - | 7,426 | - | 7,969 | |
| Greenfield Innovation | - | - | - | - | - | - | - | - | - | 442 | |
| Public Investment Corporation | 80,000 | - | - | 80,000 | 48,337 | 60.4% | - | - | - | 77,283 | |
| Water Lab | - | - | - | - | - | - | - | - | - | 269 | |
| Subtotal | 510,441 | - | (18,474) | 491,967 | 836,183 | 170.0% | 14,613 | 773,233 | 533,874 | 835,842 | |
| Subsidies | | | | | | | | | | | |
| Council for Scientific and Industrial Research | 1,002,269 | - | - | 1,002,269 | 1,002,269 | 100.0% | - | 1,002,269 | 978,449 | 978,449 | |
| Subtotal: Public corporations | 1,002,269 | - | - | 1,002,269 | 1,002,269 | 100.0% | - | 1,002,269 | 978,449 | 978,449 | |
| Total | 1,512,710 | - | (18,474) | 1,494,236 | 1,838,452 | 123.0% | 14,613 | 1,775,502 | 1,512,323 | 1,814,291 | |

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| NAME OF PUBLIC CORPORATION/PRIVATE ENTERPRISE | TRANSFER ALLOCATION | | | | EXPENDITURE | | | | 2021/22 | | |
|---|----------------------------|-----------|-----------------|------------------|------------------|----------------------------------|---------------|------------------|------------------|------------------|----------------|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of available funds transferred | Capital | Current | Final budget | Actual transfer | |
| | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 | R'000 | R'000 | |
| Private enterprises: | | | | | | | | | | | |
| Transfers | | | | | | | | | | | |
| Wits Health Consortium | - | - | - | - | 1,500 | - | - | - | - | - | 1,500 |
| Anza Capital (Pty) Ltd | - | - | - | - | 50,000 | - | - | - | - | - | 35,000 |
| C and M Space Investment | - | - | - | - | - | - | - | - | - | - | 977 |
| Ultramar South Africa | - | - | - | - | 610 | - | - | - | - | - | 610 |
| Wits Enterprise | - | - | - | - | - | - | - | - | - | - | 123 |
| The SA SME Fund Limited | - | - | - | - | 150,000 | - | - | - | - | - | 105,000 |
| Manufacturing Indaba | - | - | - | - | 227 | - | - | - | - | - | - |
| Greenfield Innovation | - | - | - | - | 397 | - | - | - | - | - | - |
| The Innovation Hub Management | - | - | - | - | 1,000 | - | - | - | - | - | - |
| HyPlat (Pty) Ltd | - | - | - | - | 1,134 | - | - | - | - | - | - |
| 27four Investment Managers (Pty) Ltd | - | - | - | - | 100,000 | - | - | - | - | - | - |
| Subtotal | - | - | - | - | 304,868 | - | - | - | - | - | 143,210 |
| Total | 1,512,710 | - | (18,474) | 1,494,236 | 2,143,320 | 143,4% | 14,613 | 1,775,502 | 1,512,323 | 1,957,502 | |

SCIENCE AND INNOVATION - VOTE 35
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ANNEXURE 1E
STATEMENT OF TRANSFERS TO FOREIGN GOVERNMENT AND INTERNATIONAL ORGANISATIONS

| | TRANSFER ALLOCATION | | | TRANSFER | | 2021/22 | |
|--|-------------------------------------|--------------------|----------------------|--------------------------|--------------------------|-----------------------|--------------------------|
| | Adjusted Appropriation Act R'000 | Rollovers R'000 | Adjustments R'000 | Total available R'000 | Actual transfer R'000 | Final budget R'000 | Actual transfer R'000 |
| FOREIGN GOVERNMENT / INTERNATIONAL ORGANISATION | | | | | | | |
| World Meteorological Organisation | - | - | - | - | - | - | 2,000 |
| Total | - | - | - | - | - | - | 2,000 |

SCIENCE AND INNOVATION - VOTE 35
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ANNEXURE 1F**STATEMENT OF TRANSFERS TO NON-PROFIT INSTITUTIONS**

| | TRANSFER ALLOCATION | | | | EXPENDITURE | | 2021/22 | |
|--|----------------------------|-----------|-------------|-----------------|-----------------|----------------------------------|--------------|-----------------|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of available funds transferred | Final budget | Actual transfer |
| | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| NON-PROFIT INSTITUTIONS | | | | | | | | |
| Transfers | | | | | | | | |
| African Astronomy Society | 10,000 | - | - | 10,000 | 6,735 | 67% | 6,530 | 6,530 |
| Centre for Proteomic and Genomic Research | 145,705 | - | - | 145,705 | 50,288 | 35% | 47,792 | 47,792 |
| Da Vinci TT100 Awards Programme | 10,000 | - | - | 10,000 | 4,750 | 48% | 5,000 | 5,000 |
| Duzi-Umngeni Conservation Trust | - | - | - | - | - | - | 25,301 | 25,301 |
| Federation of African Engineering Organisations | - | - | - | - | - | - | 250 | 250 |
| Fine Bubble Technologies | 500 | - | - | 500 | 207 | 41% | 414 | 414 |
| Gauteng Provincial Government | 1,000 | - | - | 1,000 | 650 | 65% | - | - |
| Greenmatter | 1,000 | - | - | 1,000 | 800 | 80% | 400 | 400 |
| Green Youth Network | 500 | - | - | 500 | 400 | 80% | - | - |
| International Atomic Energy Agency | 5,000 | - | - | 5,000 | 3,985 | 80% | 5,000 | 5,014 |
| International Centre for Genetic Engineering and Biotechnology | 30,000 | - | - | 30,000 | 18,345 | 61% | 27,500 | 27,455 |
| Mapungubwe Institute for Strategic Reflection | 1,500 | - | - | 1,500 | 900 | 60% | 1,700 | 1,708 |

SCIENCE AND INNOVATION - VOTE 35
Annexures to the Annual Financial Statements
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| | TRANSFER ALLOCATION | | | | EXPENDITURE | | 2021/22 | |
|--|----------------------------|-----------|-------------|-----------------|-----------------|----------------------------------|--------------|-----------------|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of available funds transferred | Final budget | Actual transfer |
| | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| NON-PROFIT INSTITUTIONS | | | | | | | | |
| Mobile Application Laboratory NP | 15,000 | - | - | 15,000 | 7,882 | 53% | 9,200 | 9,194 |
| Mpilonhle | 7,000 | - | - | 7,000 | 3,654 | 52% | 2,700 | 2,700 |
| Mpumalanga Tourism and Parks Agency | 1,000 | - | - | 1,000 | 700 | 70% | - | - |
| National Science and Technology Forum | 30,000 | - | - | 30,000 | 13,545 | 45% | 12,500 | 12,490 |
| National Arts Festival Grahamstown | 1,000 | - | - | 1,000 | 500 | 50% | - | - |
| Nematech | 1,000 | - | - | 1,000 | 450 | 45% | - | - |
| Nka'thuto EduPropeller | - | - | - | - | - | - | 254 | 254 |
| Nomkhubulwane Culture and Youth Development | - | - | - | - | - | - | 120 | 120 |
| Nuclear Medicine Research infrastructure | 180,000 | - | - | 180,000 | 84,800 | 47% | 94,500 | 94,500 |
| Packman Fruit Sorting Equipment | 2,000 | - | - | 2,000 | 1,575 | 79% | - | - |
| Sol Plaatje University | 1,500 | - | - | 1,500 | 840 | 56% | - | - |
| South African Chemical Institute | 500 | - | - | 500 | 200 | 40% | - | - |
| South African Innovation Summit | 500 | - | - | 500 | 483 | 97% | - | - |
| South African San Institute | 1,000 | - | - | 1,000 | 700 | 70% | 600 | 600 |
| South African Council for Natural Scientific Professions | 10,000 | - | - | 10,000 | 5,300 | 53% | 4,700 | 4,700 |

SCIENCE AND INNOVATION - VOTE 35
Annexures to the Annual Financial Statements
for the year ended 31 March 2023

| | TRANSFER ALLOCATION | | | | EXPENDITURE | | 2021/22 | |
|--|----------------------------|-----------|-------------|-----------------|-----------------|----------------------------------|----------------|-----------------|
| | Adjusted Appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of available funds transferred | Final budget | Actual transfer |
| NON-PROFIT INSTITUTIONS | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | R'000 |
| South African Institute of Physics | 3,000 | - | - | 3,000 | 1,600 | 53% | 1,670 | 1,670 |
| South African Research Innovation Management Association | 2,000 | - | - | 2,000 | 1,340 | 67% | 1,282 | 1,282 |
| South African Mathematics Foundation | - | - | - | - | - | - | 837 | 837 |
| The African Institute for Mathematical Sciences | 1,500 | - | - | 1,500 | 1,035 | 69% | 1,035 | 1,035 |
| United Nations Development Programme | 25,000 | - | - | 25,000 | 15,000 | 60% | - | - |
| University of South Africa | 1,400 | - | 634 | 2,034 | 1,272 | 63% | - | - |
| World Meteorological Organisation | 5,000 | - | - | 5,000 | 2,000 | 40% | - | - |
| Unallocated | - | - | - | - | - | - | 186,040 | - |
| | 493,605 | - | 634 | 494,239 | 229,936 | | 435,325 | 249,246 |
| | 493,605 | - | 634 | 494,239 | 229,936 | | 435,325 | 249,246 |
| Total | | | | | | | | |

SCIENCE AND INNOVATION - VOTE 35
Annexures to the Annual Financial Statements
for the year ended 31 March 2023

ANNEXURE 1G
STATEMENT OF TRANSFERS TO HOUSEHOLDS

| HOUSEHOLDS | TRANSFER ALLOCATION | | | | EXPENDITURE | | 2021/22 | |
|------------------------------|----------------------------|-----------|-------------|-----------------|-----------------|----------------------------------|--------------|-----------------|
| | Adjusted appropriation Act | Rollovers | Adjustments | Total available | Actual transfer | % of available funds transferred | Final budget | Actual transfer |
| | R'000 | R'000 | R'000 | R'000 | R'000 | % | R'000 | |
| Transfers | | | | | | | | |
| Leave gratuity: Adams D | - | - | - | - | 157 | - | - | - |
| Leave gratuity: Baloyi TM | - | - | - | - | - | - | 50 | 87 |
| Leave gratuity: Booysen Q | - | - | - | - | - | - | 10 | 10 |
| Leave gratuity: Galada N | - | - | - | - | - | - | 5 | 5 |
| Leave gratuity: Hugo V | - | - | - | - | - | - | 5 | 5 |
| Leave gratuity: January NN | - | - | - | - | - | - | 50 | 91 |
| Leave gratuity: Lebepe MM | - | - | - | 10 | 8 | 80% | - | - |
| Leave gratuity: Lekalakala L | - | 35 | - | 35 | 56 | 160% | - | - |
| Leave gratuity: Lephothe K | - | - | - | - | - | - | 12 | 12 |
| Leave gratuity: Mdaka PO | - | - | - | - | - | - | 50 | 127 |
| Leave gratuity: Magadla MA | - | - | - | - | - | - | 66 | 66 |
| Leave gratuity: Magasela TS | - | - | - | - | - | - | 32 | 32 |
| Leave gratuity: Makhoba LJ | - | - | - | - | - | - | 41 | 41 |
| Leave gratuity: Masalesa M | - | 19 | - | 19 | 28 | 147% | - | - |
| Leave gratuity: Malimabe M | - | 90 | - | 90 | 82 | 91% | - | - |
| Leave gratuity: Manyanga DE | - | - | - | - | - | - | 85 | 85 |
| Leave gratuity: Mlaba SQ | - | - | - | - | - | - | 1 | 1 |
| Leave gratuity: Mareme N | - | - | - | - | - | - | - | 34 |
| Leave gratuity: Mashigo R | - | - | - | - | - | - | 20 | 33 |

SCIENCE AND INNOVATION - VOTE 35
Annexures to the Annual Financial Statements
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| | | | | | | | | |
|----------------------------------|---|------------|---|------------|--------------|------|------------|--------------|
| Leave gratuity: Mashiane ID | - | 66 | - | 66 | 55 | 83% | - | - |
| Leave gratuity: Mokotedi ML | - | - | - | - | - | - | 50 | 160 |
| Leave gratuity: Mpolokeng OP | - | - | - | - | 61 | - | - | - |
| Leave gratuity: Mulibana L | - | - | - | - | - | - | 10 | 17 |
| Leave gratuity: Mangqangwana M | - | - | - | - | - | - | 10 | 17 |
| Leave gratuity: Neethling JA | - | 210 | - | 210 | 207 | 99% | - | - |
| Leave gratuity: Parkes JP | - | - | - | - | - | - | 20 | 67 |
| Leave gratuity: Qekema N | - | - | - | - | 30 | - | - | - |
| Leave gratuity: Radebe T | - | 200 | - | 200 | 200 | 100% | - | - |
| Leave gratuity: Ratombo MS | - | - | - | - | - | - | 50 | 169 |
| Leave gratuity: Shaku SR | - | 40 | - | 40 | 33 | 83% | - | - |
| Leave gratuity: Serero L | - | - | - | - | 40 | - | - | - |
| Leave gratuity: Tsubela SM | - | - | - | - | 90 | - | - | - |
| Leave gratuity: Van Staden LG | - | 40 | - | 40 | 39 | 98% | - | - |
| Leave gratuity: Xakashe N | - | - | - | - | - | - | 5 | 11 |
| Postdoctoral Research Conference | - | - | - | - | - | - | - | 60 |
| TOTAL | - | 710 | - | 710 | 1,086 | - | 572 | 1,130 |

SCIENCE AND INNOVATION - VOTE 35
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ANNEXURE 11

STATEMENT OF LOCAL AND FOREIGN AID ASSISTANCE RECEIVED

| NAME OF DONOR | PURPOSE | OPENING BALANCE R'000 | REVENUE R'000 | EXPENDITURE R'000 | PAID BACK ON/BY 31 MARCH R'000 | CLOSING BALANCE R'000 |
|-------------------------|--|-----------------------------|------------------|----------------------|--|-----------------------------|
| Received in cash | | | | | | |
| European Union | ESASTAP Plus: To develop a skilled and capable workforce | 82 | - | - | 82 | - |
| European Union | GBS- National System of Innovation | 9,785 | 64,693 | 46,689 | 9,785 | 18,004 |
| European Union | GBS- Green Economy for Development | - | 19,542 | 19,542 | - | - |
| European Union | GBS- Smallholder Essential Oils Value Chain Project | - | 11,249 | 11,249 | - | - |
| Subtotal | | 9,867 | 95,484 | 77,480 | 9,867 | 18,004 |
| Received in kind | | | | | | |
| Subtotal | | - | - | - | - | - |
| TOTAL | | 9,867 | 95,484 | 77,480 | 9,867 | 18,004 |

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ANNEXURE 1J

STATEMENT OF GIFTS, DONATIONS AND SPONSORSHIPS MADE AND REMISSIONS, REFUNDS AND PAYMENTS MADE AS AN ACT OF GRACE

| NATURE OF GIFT, DONATION OR SPONSORSHIP | 2022/23 | 2021/22 |
|---|-----------|---------|
| | R'000 | R'000 |
| Paid in cash | - | 60 |
| Postdoctoral Research Conference | - | 60 |
| SUBTOTAL | 60 | |
| TOTAL | 60 | |

SCIENCE AND INNOVATION - VOTE 35
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ANNEXURE 2B
STATEMENT OF INVESTMENTS IN AND AMOUNTS OWING BY/TO ENTITIES AS AT 31 March 2023

| NAME OF ENTITY | Nature of business | Cost of investment R'000 | | Net Asset value of Investment R'000 | | Amount owing to entities R'000 | | Amount owing by entities R'000 | |
|-------------------------|--|--------------------------|---------|-------------------------------------|---------------|--------------------------------|---------|--------------------------------|---------|
| | | 2022/23 | 2021/22 | 2022/23 | 2021/22 | 2022/23 | 2021/22 | 2022/23 | 2021/22 |
| Controlled entities | | | | | | | | | |
| | | - | - | - | - | - | - | - | - |
| Non-controlled entities | | | | | | | | | |
| | | - | - | - | - | - | - | - | - |
| | Pharmaceutical Industry (35% shareholding) | - | - | 95,038 | 95,038 | - | - | - | - |
| Total | | - | - | 95,038 | 95,038 | - | - | - | - |

The Department acquired a 35% shareholding of the Biological and Vaccines Institute of South Africa (Biovac) valued at R95,038 million (calculated as percentage of retained earnings of Biovac as at 31 December 2021) from the Department of Health at no cost. The value of the shares could not be disclosed in the Statement of Financial Position because they were transferred at no cost. At the time the DSI Annual Financial Statements were finalised, the audit of Biovac had not yet been concluded.

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Annexures to the Annual Financial Statements
for the year ended 31 March 2023

ANNEXURE 3B
STATEMENT OF CONTINGENT LIABILITIES AS AT 31 March 2023

| NATURE OF LIABILITY | Opening balance 1 April 2022 | Liabilities incurred during the year | Liabilities paid/cancelled/re duced during the year | Liabilities recoverable) | Closing balance 31 March 2023 |
|---|------------------------------------|--|--|-----------------------------|----------------------------------|
| | R'000 | R'000 | R'000 | R'000 | R'000 |
| The claim against the Department in respect of injuries allegedly sustained when the claimant fell in an open manhole in the Pretoria National Zoo Gardens. | 401 | - | - | - | 401 |
| Total | 401 | - | - | - | 401 |

The Department received a claim at the end of the 2018/19 reporting period. A former manager of science centre alleged unfair treatment and financial loss, and therefore claimed restitution fees. On 20 June 2019, management received a legal opinion that indicated that the claim was frivolous and vexatious and should therefore be dismissed with costs, and furthermore the amount of the claim was not a reliable estimate, and it could therefore not be disclosed. For the purpose of disclosure for the 2021/22 financial year, the Department requested a legal opinion to ascertain whether the status of the claim had changed and the legal opinion indicated that the status remained unchanged.

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ANNEXURE 4**CLAIMS RECOVERABLE**

| GOVERNMENT ENTITY | Confirmed balance outstanding | | Unconfirmed balance outstanding | | Total | |
|--|-------------------------------|----------|---------------------------------|----------|----------|-----------|
| | 31/03/23 | 31/03/22 | 31/03/23 | 31/03/22 | 31/03/23 | 31/03/22 |
| | R'000 | R'000 | R'000 | R'000 | R'000 | R'000 |
| Department | | | | | | |
| National School of Government | 48 | - | - | - | - | 48 |
| Office of the Chief Justice | 10 | - | - | - | - | 10 |
| Department of Agriculture, Land Reform and Rural Development | 18 | - | - | - | - | 18 |
| Department of Employment and Labour | 4 | - | - | - | - | 4 |
| Subtotal | 80 | - | - | - | - | 80 |
| Other government entities | | | | | | |
| | - | - | - | - | - | - |
| Subtotal | - | - | - | - | - | - |
| Total | 80 | - | - | - | - | 80 |

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ANNEXURE 5
INTERGOVERNMENT PAYABLES

| GOVERNMENT ENTITY | Confirmed balance | | Unconfirmed balance | | TOTAL | |
|---|-------------------|-------------------|---------------------|-------------------|-------------------|-------------------|
| | 31/03/23 R'000 | 31/03/22 R'000 | 31/03/23 R'000 | 31/03/22 R'000 | 31/03/23 R'000 | 31/03/22 R'000 |
| Department | | | | | | |
| Current | | | | | | |
| Department of International Relations and Cooperation | 625 | - | - | - | 625 | - |
| Department of Justice and Constitutional Development | 194 | 142 | - | - | 194 | 142 |
| Gauteng Sports Arts, Culture and Recreation | - | 61 | - | - | - | 61 |
| South African Police Service | 645 | - | - | - | 645 | - |
| Department of Minerals and Energy | 800 | - | - | - | 800 | - |
| Subtotal | 2,264 | 203 | - | - | 2,264 | 203 |
| Other government entities | | | | | | |
| Current | - | - | - | - | - | - |
| | - | - | - | - | - | - |
| Total | 2,264 | 203 | - | - | 2,264 | 203 |

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ANNEXURE 6

INVENTORY

| INVENTORY | Note | 2022/23 | | 2021/22 | |
|---|------|----------|----------|----------|----------|
| | | Quantity | R'000 | Quantity | R'000 |
| Opening balance | | - | - | - | - |
| Add/(Less): Adjustments to prior year balance | | - | - | - | - |
| Add: Additions/Purchases – Cash | | - | - | - | - |
| Add: Additions - Non-cash | | - | - | - | - |
| (Less): Disposals | | - | - | - | - |
| (Less): Issues | | - | - | - | - |
| Add/(Less): Adjustments | | - | - | - | - |
| Closing balance | | - | - | - | - |

The inventory was transferred to consumables in terms of the requirements of the Modified Cash Standard and the accounting manual for departments. In terms of the Modified Cash Standard, the disclosure for inventory is not applicable in the 2022/23 financial year.

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Annexures to the Annual Financial Statements
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ANNEXURE 8A
INTER-ENTITY ADVANCES PAID (note 17)

| | Confirmed balance | | Unconfirmed balance | | TOTAL | |
|----------------------------------|-------------------|-------------------|---------------------|-------------------|-------------------|-------------------|
| | 31/03/23 R'000 | 31/03/22 R'000 | 31/03/23 R'000 | 31/03/22 R'000 | 31/03/23 R'000 | 31/03/22 R'000 |
| GOVERNMENT ENTITY | | | | | | |
| DEPARTMENTS | | | | | | |
| Current | 3,961 | 8,117 | - | - | 3,961 | 8,117 |
| Government Communications (GCIS) | | | | | | |
| Total | 3,961 | 8,117 | - | - | 3,961 | 8,117 |

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ANNEXURE 11

COVID-19 RESPONSE EXPENDITURE

Per quarter and in total

GOODS AND SERVICES

| EXPENDITURE PER ECONOMIC CLASSIFICATION | April 2022 | May 2022 | June 2022 | Sub-total Q1 | July 2022 | Aug 2022 | Sept 2022 | Sub-total Q2 | Oct 2022 | Nov 2022 | Dec 2022 | Sub-total Q3 | Jan 2023 | Feb 2023 | Mar 2023 | Sub-total Q4 | 2022/23 Total | 2021/22 Total | |
|---|------------|----------|-----------|--------------|-----------|----------|-----------|--------------|----------|----------|----------|--------------|----------|----------|----------|--------------|---------------|---------------|-----------|
| Consumable Supplies | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27 |
| GOODS AND SERVICES | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27 |

TRANSFERS AND SUBSIDIES

| EXPENDITURE PER ECONOMIC CLASSIFICATION | April 2022 | May 2022 | June 2022 | Sub-total Q1 | July 2022 | Aug 2022 | Sept 2022 | Sub-total Q2 | Oct 2022 | Nov 2022 | Dec 2022 | Sub-total Q3 | Jan 2023 | Feb 2023 | Mar 2023 | Sub-total Q4 | 2022/23 Total | 2021/22 Total | |
|--|------------|----------|-----------|--------------|-----------|----------|-----------|--------------|----------|----------|----------|--------------|----------|----------|----------|--------------|---------------|---------------|---------------|
| Institutional Planning Support | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 500 |
| Health Innovation | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 25,000 |
| Global Science: AGR | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4,536 |
| International Resource | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2,000 |
| Global Science: AFR MULT AGR | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Global Science: Bilateral Cooperation | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 9,015 |
| TRANSFERS AND SUBSIDIES | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 41,051 |
| TOTAL COVID-19 RESPONSE EXPENDITURE | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 41,078 |

The annexure was introduced in the 2020/21 financial year in order to allocate expenditure relating to Covid-19.

SCIENCE AND INNOVATION - VOTE 35

Annexures to the Annual Financial Statements
for the year ended 31 March 2023

APPROVAL

The Annual Financial Statements for the financial year ended 31 March 2023 set out on pages 149 and 300 have been approved.



PM MJWARA
DIRECTOR GENERAL
31 JULY 2023



M Making < sure $\left(\frac{\text{it's}}{\text{possible}} \right)$

DEPARTMENT OF SCIENCE AND INNOVATION

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