**Report of the Portfolio Committee on Higher Education, Science and Innovation on its Oversight visit to the Northern Cape, Dated 25 March 2022**

The Portfolio Committee on Higher Education, Science and Innovation (hereafter referred to as the Committee), having conducted an oversight visit to the Northern Cape from 24 to 28 January 2022, reports as follows:

1. **DELEGATION LIST**
	1. **Members of the Committee**

Ms NT Mkhatshwa: Chairperson (ANC), Ms D Mahlatsi (ANC), Ms JS Mananiso (ANC), Mr T Letsie (ANC), Ms D Sibiya (ANC), Mr BS Yabo (ANC), Ms C King (DA), Ms N Tarabella-Marchesi\* (DA) and Dr W Boshoff (FFP).

* 1. **Support staff**

Mr A Kabingesi: Committee Secretary, Ms S Isaacs: Committee Secretary, Dr R Osborne-Mullins: Content Advisor, Ms M Modiba: Content Advisor, Dr A Arendse: Researcher, Mr S Maputi: Parliamentary Communications Officer (PCO) and Mr T Bottoman: Committee Assistant.

1. **INTRODUCTION**

The Constitution of the Republic of South Africa, 1996 and the Rules of Parliament mandate the Committee to exercise oversight over the Executive for the purposes of promoting good governance and accountability. In line with this constitutional mandate, the Committee resolved to undertake an oversight and monitoring visit to the rural and geographically vast province of the Northern Cape. The oversight visit was twofold, the first part being dedicated to the Department of Higher Education and Training (DHET) and its entities, and the second part to the Department of Science and Innovation (DSI) and its entities.

* 1. **Purpose of the Oversight Visit**
		1. **Post-School Education and Training**

The main focus of the first part of the oversight visit was to interact with the Department of Higher Education and Training (DHET) to assess the readiness of the post-school education and training (PSET) institutions for the 2022 academic year, and for the National Student Financial Aid Scheme (NSFAS) to provide an overview of the 2021 disbursement process; progress on close-out project and the preparedness for 2022. The Committee visited the Sol Plaatje University (SPU) and the Northern Cape Rural Technical and Vocational Education and Training (TVET) college (De Aar Campus) where it interacted with the Council, management, institutional forum (IF), student leadership, and labour unions on the overview of the respective institutions governance, teaching and learning, administration and related matters. The Committee also interacted with the Northern Cape Community Education and Training (CET) college management and also visited Kareeville Community Learning Centre (CLC) located in De Aar.

The oversight and monitoring visit was also aimed at conducting on-site visits to the student residences and other related infrastructure projects that have been funded by DHET through the capital infrastructure efficiency grant (CIEG). This grant was created specifically for expansion and maintenance of student housing, teaching and learning facilities and information communication technology infrastructure at institutions of higher learning and TVET colleges. Thus, institutions are obliged to develop plans in relation to their infrastructure requirements to make teaching and learning environment suitable, and the Committee has a responsibility of overseeing that funds appropriated by Parliament are utilised effectively and efficiently in expanding new infrastructure and refurbishing and maintenance of the existing infrastructure.

The Committee was accompanied by:

* Dr Nkosinathi Sishi – Director-General DHET
* Dr Thandi Lewin – Acting Deputy Director-General for Programme 3: University Education
* Mr Sam Zungu - Deputy Director-General for Programme 4: Technical and Vocational Education and Training (TVET)
* Ms Thembisa Futshane – Deputy Director-General for Programme 6: Community Education and Training (CET)
* Mr Ernest Khosa – Chairperson of the Board for National Student Financial Aid Scheme (NSFAS)
* Mr Andile Nongogo – Chief Executive Officer for NSFAS
	+ 1. **Science and Innovation**

The second part of the oversight visit focused on the implementation of the National Strategy for Multi-Wavelength Astronomy. Hence, the Committee visited the national research facilities responsible for optical and radio astronomy. The purpose of the visit was for the Committee to gain first-hand insight into the physical nature of the facilities, the work of scientists, engineers, technologists and artisans at these facilities and to assess the impact on community development and job creation in the areas surrounding these facilities.

The development of astronomy in South Africa has grown significantly over the past number of years. South African astronomy is at the forefront of many significant initiatives and discoveries. Projects such as the Southern African Large Telescope (SALT) and the Square Kilometre Array (SKA) radio telescope are huge projects that form part of international consortiums with a strong developmental agenda that promotes the benefits of science and astronomy to humanity. Targeted investments in these high-level astronomy infrastructures are already, and will continue to deliver benefits that will grow as these projects develop. The benefits include the development of skilled knowledge workers, increased business opportunities to local communities and the concomitant spin-offs within the industrial sector. These achievements further underpin the value of astronomy and its potential contribution in the drive towards a knowledge-based economy. Under the auspices of the South African Radio Astronomy Observatory (SARAO) and the South African Astronomical Observatory (SAAO) respectively, these mega research facilities are located in the National Research Foundation (NRF), which operates under the Department of Science and Innovation (Department or DSI).

The Committee’s oversight visit to these facilities comprised actual site visits to view the infrastructure and research operations and included short onsite briefings.

During these visits, the Committee was accompanied by:

* Dr Nelwamondo – NRF Chief Executive Officer (CEO);
* Dr Clifford Nxomani – NRF Deputy CEO for National Research Infrastructure Platforms;
* Dr Yonah Seleti – DSI Deputy Director-General for Programme 4: Research, Development and Support (RDS);
* Mr Takalani Nemaumgani – DSI Chief Director RDS;
* Mr Hubert Mathebula – DSI Deputy Director Radio Astronomy; and
* Mr Mere Kgampe - Director of the Astronomy Management Authority.
1. **POST-SCHOOL EDUCATION AND TRAINING**
	1. **Sol Plaatje University (SPU)**

The SPU Vice-Chancellor (VC) Prof. A Crouch, welcomed the delegations from the Committee, Department of Higher Education and Training (DHET), National Student Financial Aid Scheme, University stakeholders and all other guests present at the meeting. The VC introduced the University delegation and also gave a brief introduction of the University and handed over to Ms Mkhatshwa, the Chairperson of the Committee who introduced and explained the purpose of the oversight and the expected outcomes. Following the welcome and introduction session, the Committee, including the delegation from the DHET, NSFAS and the University conducted site visits to the facilities.

* + 1. **Site visit**

The Committee conducted site visits to the various facilities on the SPU South Campus, which is a sports and residential campus and the Central Campus, which is teaching and learning Campus as follows:

* + - 1. **South Campus**
				1. **Staff and Recreational Facility**

The facility was previously a Community Hall and was built in 1956. It was one of the buildings that were on the land which the University purchased from the previous owner, Transnet. The University refurbished the Community Hall and turned it into a Staff and Recreational Facility. The Facility is used for staff conferences, graduations, theatre productions and also serves as a recreational facility for the administration and support staff of the University. The Facility included a full kitchen serving a dining hall/restaurant with indoors and outdoors eating area, which spills out into a shared courtyard with the Hall. Additionally, it has conference facilities in the form of various seminar rooms, two lounges overlooking the sports fields, an open plan and closed office. The Facility is also made accessible for the utilisation by community members outside the University.

* + - * 1. **Sports Field**

The sport field was still under construction during the site visit of the Committee. The University reported that the National Lottery donated R25 million for the construction of the facility, and was allocated in three tranches. The sport field was made of fully synthetic grass, a first in the country, and an alternative solution to the drought stricken province of the Northern Cape. The sport field was designed to cater for multiple sport codes such as soccer, rugby, cricket and netball. The land on which the sport facility was constructed was previously owned by Transnet. It was reported that the land had few sports facilities such as netball and tennis courts, however, they were dilapidated. The land was available but underutilised. The University also purchased the Tafel Lager Park, which was previously the home ground stadium for the Griqualand West Rugby Team. The donation from the National Lottery was used for the synthetic grass, markings, irrigation and drainage system and part of it will be used for netball and tennis courts.

The Committee was also shown the Eco Centre, which is a warehouse and maintenance facility, which also serves as a nursery for plants and flowers to be grown on Campus. The University reported that work would commence soon with the construction of the spectator viewing area, fencing of the sports ground and pathways. The University had a joint venture with the Griquas Rugby Team on the sport field.

* + - * 1. **Umnandi and Hannetjie Student Residences**

Umnandi and Hannetjie Students Residences are the newly constructed block residences. The Residences are split into four blocks with three storeys each. The residences provide double and single student rooms and communal facilities that support a residential facility. This included a shared kitchenette with micro-oven, a fridge, a sink and washing machine, lounges, bathrooms and ablution facilities, as well as communal study rooms. The student residences housed 736 beds for students, six wardens’ apartments and eight seminar rooms. The residences also comprised eight blocks with three floors. Each block is divided into four housing units, with seven students per housing unit in either one of the three double or a single rooms. The rooms are very spacious and have beds, study desks and study lamps and wardrobe.

The residences were recently completed and would accommodate mostly, the first-year undergraduate students in the 2022 academic year and going forward. The University made an arrangement for each unit to have a senior student living with the first-year undergraduate students. The residences were designed to provide a vibrant learning and living spaces which contribute significantly to the academic success of students.

The University informed the Committee that the names of the residences have a historical significance as they the names of the women in Sol Plaatje’ s book. The University also indicated that the different colours of the bricks used to construct the facilities were chosen deliberately as they are the colours used by the Khoisan community.

* + - * 1. **Tauwana Hall of Residence**

The Committee requested to be shown the old student residence, which was not part of the selected facilities for the site visit. The Committee argued that it wanted to assess whether the old student residence provides student friendly environment. The University reported that the residence was a former nursing college facility and had 150 rooms. The facility was one of those that were on the land purchased by the University from Transnet. The University refurbished and remodelled the facility into student residence and it currently has 250 rooms, which house senior students from third-year. The residence block has a dining hall, formal lounge with TV screens, security office and warden’s office. The residence provides single rooms and the spacious corner rooms were occupied by floor managers and house committee members. The residence housed both male and female students. The residence provides catering services to students, consequently, students are not allowed to cook in their rooms. The residence provided a conducive living environment for students.

* + - * 1. **Bulk Service Building**

The Bulk Service Building facility is a multi-purpose building with various functions and it is also called the engine of the University’s South Campus. The building houses services for the Campus, for example, water storage (180 000 litres) and treatment, pump rooms for (potable, non-potable irrigation booster pumps) IT requirements distribution room and network cabinets Tabs chiller and electrical infrastructure. The building also houses the stand-by generator

The building facility was constructed primarily to provide back-up to the University in case of water-shedding by the municipality. The Northern Cape is a dry province, and the municipality implements water-shedding in certain instances. The facility can provide back-up water services for up to four-days. The water to the building is pumped from the Sol Plaatje Municipality Newton Reservoir.

* + - 1. **Central Campus**
				1. **Library and Resource Centre**

The facility has won many awards for its exceptional architectural design which makes it a remarkable hallmark of the institution. The library was designed as a space to provide both students and staff an environment to discover and share knowledge. The facility consists of: an exhibition space with a help-desk and coffee counter; 250-seater informal auditorium; a 60 seater lecture room with computer service related space; two offices with an open plan office / processing space for staff and a staff room; two tutorial rooms with additional semi-screened flexible work spaces; conference room; open computer station and study floor on third floor.

The committee also conducted a site visit to the lecture rooms and auditoriums. The lecture rooms have modern technological devices for teaching, such as interactive boards.

* + 1. **Summary of the presentations**
			1. **DHET**

Dr N Sishi: Director-General began the presentation by giving reflections of the 2020 and 2021 academic years, including several meetings with the Committee. He said emergency measures had to be put in place during the early part of the COVID-19 pandemic, to ensure that the teaching and learning could continue and the academic year could be completed. The delays in the completion of the 2020 academic year impacted the commencement of the 2021 academic year. All universities established COVID-19 Task Teams to manage the return to campus process and ongoing health and safety initiatives.

The DG noted that the support provided by the Department included: a COVID Responsive Grant; supporting emergency teaching activities; disaster directions in terms of the National Disaster Regulations; working closely with major network operators to provide data bundles for students; NSFAS funding for laptops as part of the learning material allowance; and a framework for tuition and accommodation fees.

In relation to the enrolment planning process, the DG indicated that the Department negotiates enrolment targets with universities in cycles, and the Ministerial Statement on Student Enrolment Planning 2020 – 2025 for Universities indicates targets for the system and individual institutions. The overall total enrolments within the public university have been projected to be 1 110 361 for the 2022 academic year. The first-time entering (FTEN) enrolments have been projected at 208 299 nationally, and 69 069 of these new entrants would be in scarce skills areas.

The DG indicated that the Department launched the Central Applications Clearing House (CACH), which is meant for students who have applied for a space at a university and have been declined. The system is designed to assist students to find suitable spaces at other universities and TVET colleges or to provide advice through referral to career development services. A prospective student signs-up on CACH and thereafter receives an SMS informing them of the outcome of their sign-up. Institution logon to CACH to retrieve a list of prospective students who meet criteria of available spaces and will them make offers to the selected prospective students. The system provided students with a maximum of three offers from institutions from which the student must choose one. In relation to student funding, the DG noted that the 2022 NSFAS Bursary Guidelines could not be finalised until the NSFAS funding shortfall was addressed and submissions had been made through the medium-term budget policy statement (MTBPS) process outlining the funding requirements of the NSFAS.

In relation to the TVET sector, Mr S Zungu: Deputy Director-General (DDG) TVET said the Department implemented the standard operating procedures (SOP) on enrolment with seven sub-processes at colleges in the 2021-2022 enrolment cycle. The purpose of the SOP is to standardise the enrolment practices across colleges and campuses and steer colleges towards online application and registration in the previous academic year to diminish walk-ins and late applicants at the beginning of the year, and also enable classes to commence as per the academic calendar.

The DDG indicated that there had been successes and challenges with enrolment and registration. The successes included: significant uptake of online applications; improvement in the approved college admission policies with selection criteria; an increase in new applicants and systems in place to report enrolment. The challenges included: most colleges did not have online systems in place, closing date of 30 September for applications was not adhered to; as well as late registrations.

In relation to the CET sector, Ms T Futshane; DDG CET indicated that the Department has a responsibility to ensure that the academic calendar is available to assist the CET colleges to plan accordingly, because majority of the centres operate in schools. Thus, the CET academic calendar must always be aligned to that of the Department of Basic Education (DBE). The inland CET colleges commenced the academic programme from 12 January 2022 whilst coastal colleges started on 19 January 2022, respectively. An amount of R70 million was put aside in the 2021 budget to procure learning and teaching support materials (LTSM) for the 2022 academic year. In relation to programme offerings, the DDG noted that all nine CET colleges offer the following programmes:

* Literacy Programmes (Adult Education and Training Levels 1, 2, and 3).
* General Education and Training Certificate (GETC): ABET (National Qualifications Framework Level 1)
* Senior Certificate (NQF Level 4).
* Occupational Skills Programmes.
* Non-Formal Programmes.

In relation to enrolment targets for 2022 academic year, the DDG indicated that the nine CET colleges targeted to have 259 812 learners. In as far as funding is concerned, the 2022 final budget would be communicated to CET colleges in March 2022, once the final allocation letter is received from the Office of the Chief Financial Officer (CFO). The Department identified an amount of R45.7 million, which would be transferred to CET colleges during 2021/22 financial year for procuring cleaning services for learning sites. A further R54.5 million would be allocated in 2022/23 for the same purpose. The National Treasury also approved the transfer of R10 million to Higher Health to provide psycho-social support for CET colleges. The Health and Welfare Sector Education and Training Authority (HWSETA) provided an additional R8.9 million to Higher Health for CET programmes.

* + - 1. **NSFAS**

Mr E Khosa: Chairperson of the Board made opening remarks. He said the scheme was the biggest funder of higher education in Africa, funding approximately 1.1 million students, and the only entity in the world that funded all eligible students. As part of strengthening collaboration and stakeholder relations in the PSET sector, the Chairperson reported that members of the NSFAS Board accompanied by senior management personnel visited several universities in 2021, in particular, the historically disadvantaged institutions (HDIs), which experienced most of the NSFAS funding related queries. The Chairperson added that the NSFAS team met the Vice-Chancellors and SRCs with a view of finding amicable solutions to the NSFAS funding related queries. He concluded that engagements and outreach programmes were successful in reaching out to the stakeholders in the PSET sector, and if there would be protest in the 2022 academic year, it should not be due to a lack of NSFAS engagement with stakeholders.

Mr A Nongogo: Chief Executive Officer (CEO), indicated that the scheme would no longer allocate upfront payments to Universities and TVET colleges in the 2022 academic year. The disbursements to institutions would only occur at the beginning of the new financial year in April, when NSFAS receives its allocation from Treasury. Furthermore, the scheme had not finalised decisions for new and continuing students for the 2022 academic year, until clarity is given in relation to the scheme’s funding needs for the 2022 academic year.

The CEO indicated that the Guidelines for the DHET Bursary Scheme were awaiting the Minister’s concurrence before they could be published. He reiterated that the scheme had consulted broadly with stakeholders in the PSET sector in respect of the Guidelines. In relation to disbursements, the CEO said the process was reviewed in the 2020/21 financial year, and improved to ensure that the scheme pays the right amount, to the right student and institution, at the right time. Furthermore, the scheme would continue to improve its disbursement process. However, the shortfall in the administration budget (0.9 percent of the total income) of the scheme, hindered its ability to effectively execute the mandate. The CEO reported that the inadequate administrative budget almost impacted the entity’s ability to pay staff salaries for January 2022.

In relation to overall 2021 disbursement overview, the CEO said the scheme disbursed R83.7 billion or 99.2 percent of the total budget and a dedicated team was working on resolving outstanding payments, especially in the TVET sector. The CEO reported that 44 of 50 TVET colleges were on the wallet payment system, and at times students change their cellphone numbers or forget passwords, which results in students being unable to retrieve their funds. For SPU, the scheme paid R150 million to NSFAS qualifying students in 2021 and there were 175 late applications. The scheme also paid R39.2 million to students at the NCR TVET college, and R39.5 million at the NC Urban TVET college.

* + - 1. **SPU**
				1. **Management and Council**

Prof A Crouch: Vice-Chancellor led the presentation. He began the presentation by providing an overview of the vision, mission, values and goals of SPU. He also gave an update regarding the state of SPU as it relates to: enrolment plan 2020 – 2025; Strategic Plan 2020 – 2024; APP; academic programme offered; expanding staff complement and student numbers including infrastructure. In relation to the readiness for 2022 academic year, the VC indicated that the University’s strategic retreats took place in June and November/December 2021 to plan for the 2022 academic year. Some of the work undertaken included the revision of the Enrolment Plan; the roll-out of a targeted Recruitment Strategy for new students; the finalisation of the framework for Student Support and Sustainability Plan to raise between R25 – 30 million for the third stream income for the University, as part of the Decade campaign.

In relation to governance, the VC explained the role of the Council as per the Higher Education Act, 1997 (Act No. 101 of 1997) and the University’s Institutional Statute. He also mentioned that the Council comprised of both internal and external members with various Council sub-committees that provide reports on their work at Council’s quarterly meetings.

In relation to 2022 registration, the VC indicated that the University transitioned from paper-based to online applications. Registration for returning students took place from 17 January to 18 February 2022, and new students 7 February to 11 February 2022. The University did not charge upfront registration fee to students and laptops were allocated to first-time entrants. The 2022 enrolment projection for undergraduate students is estimated at 2 803 and 432 postgraduate students, making a total of 3 235 new entrants for the 2022 academic year.

With regard to the draft budget for 2022, the VC indicated that the total estimated income of the University amounted to R631 million, with an estimated expenditure of R650 million, and interest income amounting to R18 million, and capital expenditure amounting to R14 million. The VC added that employee costs estimated at R200 million were the main cost drivers and make up to 57 percent of the total expenditure. The expenditure on employee costs was still within the national threshold. The University experienced a revenue growth of 17 percent versus the increase in expenditure of 25 percent. The VC stressed the importance of the University’s financial sustainability and the need to increase its revenue sources.

In respect to the academic project, the VC indicted that the University had four schools, namely, Education, Economic and Management Sciences, Humanities and, Natural and Applied Science. The total academic staff as at 31 July 2021 was 146, with male staff being the majority 89 and 57 females. The total average pass rates of the University in 2021 was 85 percent. The postgraduate average pass rate was 75 percent. The average throughput rate was 76 percent.

In relation to student affairs, the VC noted that the University provided student wellness programmes and services, in particular, to students with disabilities. Student with disabilities were also provided with academic accommodation in line with their needs. Additional disability support was provided through online sign language sessions; assertive technologies and devices; workshop for students and, reviewing and monitoring the support services.

On student accommodation, the VC noted that the University had a total of 1 016 University owned and contracted beds in 2021 and this was expected to increase to 1 752 in 2022. The majority of students residing in the residences were NSFAS funded.

* + - * 1. **Institutional Forum (IF)**

Mr N Gumede: Chairperson of the IF made the presentation. He noted that the IF advises the Council on many issues affecting the University, including but not limited to; transformation and all other critical matters the Council is faced with. The IF advised Council on the appointment of senior management personnel such as the Chief Operations Officer (COO), the Dean of Students and Registrar. The management sourced the assistance of an external provider to assist the IF with surveys on: Graduate Employability; Organisational Culture Survey and Staff Wellness Survey.

Mr Gumede said the IF supported other institutional initiatives such as: wellness campaigns; anti gender-based violence (GBV) campaigns; clear Campus Drive to improve immediate environment; talent pipeline project; VC’s excellence awards. In relation to academic issues and students, the IF supports: transformation and empowerment of the workforce, quality appointments and development of staff and students as well as women empowerment.

* + - * 1. **Student Representative Council (SRC)**

Mr R Mosiane: President of the SRC led the presentation. He noted that the SRC at SPU was the highest decision-making body on student matters on campus, and comprised of 10 portfolios. The SRC was the voice of the student population at the University and represented the students at various governance structures of the University: Council, Senior and Executive Management, Task Teams, Committees and Forums.

Mr Mosiane indicated that the SRC played an integral role in echoing the student voice on a plethora of issues in enhancing the representation of student matters in governance and management within the University precinct. The SRC sat within the Division of Student Affairs and the Student Governance Officer (SGO) oversees it. The SGO provides administrative support, inclusive of strategic advice on various matters affecting students.

In relation to the governance of the SRC, Mr Mosiane said the SRC is governed by policies and frameworks, which ensure that sound governance is observed in-line with the University rules, regulations and statutes. These include: SRC Constitution; SRC Code of Conduct; Electoral Rules and Procedures for general meetings; and, Guidelines for portfolios and functions.

Mr Mosiane highlighted the challenges faced by students on campus, which included but not limited to:

* Applications: A number of students have not been attended to in terms of application feedback due to staff challenges / shortages which needs to be addressed urgently.
* Registration: students were not able to register online due to data and connectivity issues within their homes and financial constraints - The SRC proposed that registration website be zero-rated to allow students without data to register.
* Intake numbers for courses offered were inadequate - The SRC proposed that the staff complement be increased in line with the growth trajectory of student intake.
* Mandatory vaccination for the returning and first year students - The SRC proposed that those who do not want to be vaccinated be catered for accordingly.
* Data be allocated to students who prefer online learning and they should be given the option of hybrid and blended learning.
* Financial exclusion for registration of returning students - The SRC proposed a registration waiver for those with historic debt to allow them to register so that they could complete their qualifications.
* The residence catering was not up to standard - The SRC proposed a menu review with the current service provider, increased portion sizes and better cutlery and crockery.
	+ - * 1. **Unions**

Mr K Mongale: Shop Steward representing workers belonging to the National Education, Health and Allied Workers Union (NEHAWU) led the presentation. He began the presentation by appreciating the quarterly engagement meetings between the union and the VC, including the establishment of the Task Team by the VC to deal with operational issues. He further commended management for the following: staff development programmes aimed at improving the qualifications of non-academic staff; allowing NEHAWU to have a full-time shop steward and dedicated office; willingness to subsidise medical aid and pension fund; the policy on staff dependents; reduction of service providers; and, participation of black owned enterprises in the University’s projects.

In relation to challenges faced by workers, Mr Mongale highlighted the following: inadequate human resource (HR) remuneration policy; decision on salaries taken without proper consultation; security personnel not receiving their night shift allowance; internal candidates overlooked in the recruitment processes; the appointment of certain employees without following the relevant HR processes; irregular appointment of candidates who did not meet the job requirements as per the job advert, in particular white people; irregular promotions of some employees; exorbitant remuneration packages for senior management; employment of HR advisors who were mostly white males; the appointment of foreign nationals, which the Department of Labour cautioned the University against; Employment Equity policy not finalised; and, an alleged romantic relationship between the Chief Financial Officer (CFO) and Director of Finance..

In conclusion, Mr Mongale indicated that the University has established an Employment Equity Committee. Also, Mr Mongale proposed the following: the speedy finalisation of the disciplinary case against the former Secretary of NEHAWU who was paid while sitting at home; NEHAWU to serve as an observer in the Council and Senate; the position for the Director of Legal Unit be advertised; and, an engagement be convened in relation to mandatory vaccination for students and workers.

* 1. **NCR TVET College**
		1. **Site visit**
			1. **Entrepreneurship Rapid Incubation Centre**

The facility serves to assist start-ups to quicken the process of business growth and development, especially developing a minimum value proposition to test the market. The facility is also designed to transform youth from job-seekers to job-creators and close the inequality chasm between the few top earners and the majority low income earners and producing a better society that thrives for all.

The Small Enterprise Development Agency (SEDA) in partnership with the Department of Trade and Industry, the Provincial Department of Roads and Public Works sponsored the facility. The facility was in existence for four years and primarily served the needs of the residences in the Pixley Ka-Seme District.

* + - 1. **Administration Building**

The Admin Building provided spaces for students to register on COLTECH and attend to other education needs or queries. The building also housed teaching and learning rooms, offices for the college support staff, a hybrid supporting boardroom, computer laboratories and other related facilities. The teaching classrooms were old and resembled primary/secondary school classrooms. The classrooms did not have projectors and air-conditioners to provide for suitable teaching and learning environment. The Campus also had mobile classrooms, due to shortage of teaching and learning facilities. The building had a cafeteria and restrooms, which were not in a conducive condition. The Campus had commenced with lectures.

* + - 1. **Skills Centre**

The Skills Centre was funded and constructed by the college to provide students with training and practicals in the civil and construction engineering fields. The facility had 15 learners that were part of the National Home Builders Registration Council (NHBRC). The college struggled to attract students with interest in the technical and vocational programmes given the low interest of such programme in the De Aar area. The Skills Centre received provisional accreditation and it is also in the final stages to get trade test accreditation.

* + 1. **Summary of the presentations**
			1. **Management and Council**

Mr P Sago: Principal led the presentation. He noted that the college consists of five campuses (Upington, Kathu, Kuruman, Namaqualand and De Aar) and one central office, which is located in Upington. The campuses are located in each of the five districts of the province. In relation to current developments at the college, the Principal said the college is planning for a possible construction of a Campus Building in Kuruman given the demand for training and skills development in the John Taolo Gaetsewe District.

With regard to the readiness of the college for the 2022 academic year, the Principal affirmed that the college would reach its end of January 2022 enrolment targets. He added that the college implemented an online enrolment process to enable seamless registration of students for the 2022 academic year, and that lecturing staff were ready for classes to commence according to planned targets. In relation to readiness for the start of the 2022 academic year, the principal expressed the following challenges: the commencement of classes was extended by one week due to the outstanding National Certificate Vocational NC(V) examination results; the social distancing measures compared to classroom capacity and the staggered approach timetable.

In relation to the college’s governance and management, the Principal noted that the College Council met regularly as required to execute its statutory functions. The Council, as the governing body is mandated by law to convene four meetings annually. Additionally, the Council convenes special meetings to deal with specific matters and the meetings occur before the full Council meeting in order to provide input to the Council meeting. The College comprised of 16 members, that included internal and external members in accordance with the Continuing Education and Training (CET) Act, 2006 (Act No. 16 of 2006). Mr Sago noted that 54 percent of the College Council’s members were females and 46 percent males. The SRC was functional and guided by its Constitution, and the senior management team comprised of the Principal, Deputy Principals (DPs) Finance, Academic and Corporate.

In relation to staff and student demographics, the Principal indicated that the college had a 245 employees with females being in the majority at 125, compared to 120 males. The college had 6 834 students with African females being the majority at 2 379, followed by Coloured females at 1 705.

In as far as student housing and infrastructure is concerned, the Principal noted that the college did not have sufficient student accommodation for its students. Consequently, the college utilised the services of privately owned accommodation for students, and the construction of a new college owned student residence is underway at Kathu Campus.

In relation to programmes offered and student performance, the Principal indicated that the college offered the NATED/Report 191 and NCV programme. He acknowledged that the college experienced a challenge in student drop-out rates, which was 56 percent for Vocational Studies and 41 percent for NATED Business Studies. He added that the college used a staggered approach for teaching during COVID-19 period, where NATED/Report 191 and NCV students attended three days per week, respectively. Students also received notes from lecturers for when there are non-contact sessions and to prepare for the next contact session.

With regard to the financial overview, the Principal indicated that the college’s total income for 2020 amounted to R185 million with a total expenditure amounting to R208.3 million leaving the college with a deficit of R16.5 million. He added that the biggest contributing factor impacting the financial performance of the college was high employment costs, which amounted to R87 million in 2020. The college has also been getting unqualified audit opinions for the past seven consecutive years. The college’s audit improvement plan was at 85 percent complete and it would address the 28 audit findings from the 2020 financial year. In relation to NSFAS funding, the Principal said the college was allocated R25.7 million for 2020/21 and claimed 64 percent of the total allocation or R17.1 million.

The Principal concluded by highlighting some of the college’s key challenges, which included but not limited to that: slow paying student debtors; large dependence on generation of third stream funding to fund operational requirements of the college; large employment cost bill and large operational overhead costs.

* + - 1. **Student Representative Council (SRC)**

Mr X Julies: President submitted an apology on behalf of the SRC Secretary-General (SG) who was not present at the meeting. He gave a brief overview of the SRC pledge, which is aimed at building unity amongst students and management of the college for the benefit of students.

In relation to student challenges at the college, Mr Julies highlighted the following:

* NSFAS: the late payment of the NSFAS funding and allowances to students contributed to the high student drop-out at the college. Most students were NSFAS funded, and came from disadvantaged background, and late payments of allowances affects their participation in teaching and learning activities. The closure of the NSFAS application period excluded some students from applying for NSFAS funding for the 2022 academic year. Students were not able to access their online learning material from the laptops distributed by NSFAS to them. Some students who were funded by NSFAS were blocked on the system and unable to register since they owed tuition fees that were supposed to be paid for by NSFAS. The application period as prescribed in the guidelines should be extended to allow more student opportunity to apply for NSFAS funding.
* DHET Bursary Guidelines: The DHET Bursary Guidelines were inconsistent and did not consider the experiences of students at rural-based institutions.
* Capacity-building: The capacity-building workshops aimed at empowering the SRC members were non-existent at the college. The absence of these capacity-building workshops affects the SRC leaders to execute their mandate and to provide much needed services to the student populace.
* Wi-Fi: Some of the campuses of the college did not have Wi-Fi and this affects students in accessing online learning material for their academic activities.
	+ - 1. **Unions**

Mr A Titus from the Public Service Association (PSA) led the consolidated presentation on behalf of the labour unions of the college. He highlighted the employees’ concerns as it relates to the Post Provisioning Norms (PPN) as follows:

* The transfer of the first cohort- employees were already disadvantaged for not being on the required scales.
* There was no timeframe provided for the full-fledged appointments in the prospective positions / posts and scales. The equal work for equal pay rule should apply in all respects.
* The college was required to get approval by means of an application to DHET to advertise and fill funded posts on the already approved college organogram.
* The DHET further delayed finalising the appointment after the college HR processes is completed and submitted to them.
* The college used 100 percent of its paid subsidy on salaries and allowed no room for financial flexibility.

In relation to the NSFAS funding for students, Mr Titus highlighted the following:

* The NSFAS funding guidelines for rural and urban student transport and accommodation fee was of concern. The remoteness and vastness of communities from the college played a significant role in the affordability and ultimately the enrolment and attendance of students.
* The NSFAS funding guidelines made no provision for traveling beyond 40 kilometres (km) and the geographical span of communities away from the college, which was on average between 60-70 km.
* The timeframe for the NSFAS applications should be in congruence with the publication of college results and consider the release of the NC(V) and matric results.
* The college fees should be removed and a national system was needed to address funding for the “missing middle” students.
	1. **Northern Cape (NC) Community Education and Training (CET) College**
		1. **Summary of the presentations**

Mr R Phillips: CEO and Principal of the NC CET led the presentation. He gave a brief overview and background of the Northern Cape, which consists of five District Municipalities, namely, Francis Baard, John Taolo Gaetsewe, Namakwa, Pixley Ka Seme and ZF Mgcawu. He indicated that the province had an overall unemployment level of 32.4 percent and youth unemployment of 42 percent, which is the largest nationally, and a population estimated at 2.2 million.

In relation to the NC CET College, Mr Phillips said it consisted of seven (7) Community Learning Centres (CLCs) and 80 satellites, which were located in 83 of the 280 settlement areas which include the city, both rural and urban towns, villages and farms in the Northern Cape. The 2021 student enrolment was 3 094 and registration for the 2022 academic year would close on 31 January 2022. The province also had five Pilot Centres and seven CLCs, and the college managed to get accreditation from the Quality Council for Trades and Occupations (QCTO) for three of the five Pilot Centres. The administrative hub of the NC CET College was situated in Kimberley and the furthest distance between the CLC and the college ranged between 500 km to 800 km. Mr Phillips reported that 90 percent of the CLCs operate from schools whilst others use privately owned premises.

In relation to the challenges, Mr Phillips highlighted the following challenges of the college:

* The lack of physical infrastructure at the CLCs and its respective satellite centres, which were either located at hosting schools, and or private facilities, none which were owned by the college.
* Ninety percent of the CLCs were located at hosting schools, and 70 percent of the classrooms were not used for programme delivery.
* The college’s budget allocation did not accommodate the upkeep of the buildings where the CLCs were hosted.
* The qualifications of lectures make it difficult to address the economic needs of the communities through education and training.
* Insufficient budget allocation for the college, CLCs and satellite centres.
* The vastness in terms of distances between the CLCs and their satellite centre, make the effective management of staff extremely difficult as the long distance between the Central office and CLCs widens the span of control.
* The college did not have its own transport and relied on staff members to use their personal vehicles to travel.
* The standardisation process, which took place in 2021 has had a negative impact on the working hours of staff.
* The college did not have sufficient tables and chairs to accommodate/achieve the enrolment targets as stated in the strategic plan, and yearly targets in terms of its annual performance plan.
* The Finance Unit did not have the human resource capacity to deliver in terms of its mandates.
* Inadequate administrative staff, only eight permanent staff located at the central office and expected to deliver quality administrative support to seven CLCs and 80 satellite centres across the Province.

Mr Phillips concluded the presentation by providing an overview of the Pixley Ka Seme District Municipality and the Kareeville CLC. He noted that the District had one CLC, Kareeville with 16 Satellite Centres. The budget of the Kareeville CLC and its 16 Satellite Centres amounted to R496 000.

* + 1. **Site visit**
			1. **Kareeville Community Learning Centre**

The Kareeville CLC is one of the seven CLCs in the Northern Cape, which catered for the needs of the youth and adults out of schools in De Aar and surrounding areas. The centre had 90 learners and offered the National Senior Certificate (NSC) and the General Education and Training Certificate (GETC) qualifications. The centre was housed at the Kareeville Primary School and allocated specific classrooms for teaching and learning. The centre had insufficient office space for its administration activities.

1. **SCIENCE AND INNOVATION**
	1. **South African Radio Astronomy Observatory (SARAO) - Square Kilometre Array (SKA) /MeerKAT site**

On arrival at the SKA Losberg Complex (SKA onsite engineering and operations) situated 90 km outside of Carnarvon, the Committee was welcomed by Dr Seleti and then briefed on the site’s safety regulations and radio frequency interference measures. Ms Mkhatshwa introduced the Committee and conveyed the Committee’s long-standing resolution to visit the astronomy facilities so that the Committee would have first-hand understanding of how these projects operate. The Committee would then have, when it advocates for greater resources for science and innovation, greater insight and understanding of these facilities and how they contribute to socio-economic development in the surrounding communities and country at large. Thereafter, Dr Rob Adam, Managing Director of SARAO, led the presentation to the Committee, which provided the following broad overview of the work undertaken by SARAO within the domain of radio astronomy.

The South African Radio Astronomy Observatory is responsible for supporting and implementing South Africa’s strategic investments in radio astronomy. This includes the MeerKAT and SKA radio telescope projects. The MeerKAT radio telescope was inaugurated in 2018 and is ramping up to full scientific operation. The SKA Observatory Council, in the middle of 2021, gave approval for the start of construction of SKA Phase 1. Current developments with regard to the MeerKAT, which comprises 80% local content, include the addition of 16 dishes that will be funded by South Africa and Germany each contributing R400 million and Italy with a contribution of approximately €5 million. The MeerKAT radio telescope will be integrated into SKA Phase 1 around 2026 and will be credited as a South African contribution to the overall SKA radio telescope. The South African construction industry and SARAO have, so far, secured R190 million, of a potential €150 million, in construction contracts from the SKA Observatory for the construction of SKA Phase 1. Furthermore, the core area of the SKA comprising approximately 130 000 hectares has been declared a national park under the management of SANParks.

The South African SKA Steering Committee, chaired by the Director-General of DSI, guides SARAO’s strategic direction. Its mission is to establish South Africa as a global leader in radio astronomy, associated technologies and disciplines. This can be done by successfully hosting, and participating in the design and construction of the SKA telescope and other radio astronomy and geodesy facilities.

The South African Radio Astronomy Observatory operates offices and research infrastructure in Gauteng, the Karoo, and the Western Cape, comprising approximately 400 staff members split across six divisions. Its primary research platforms include the MeerKAT radio telescope and the Hartebeesthoek Radio Astronomy Observatory, while also hosting (and, in many instances, co-developing) a large number of international scientific instruments and facilities such as the Hydrogen Epoch of Re-ionisation Array (HERA) – an international collaboration between SARAO together with universities and organisations in the United Kingdom (UK) and United States of America (USA). The HERA project, with a construction cost of approximately $20 million, sourced the majority of its materials from local (Karoo) suppliers and trained a large team of local (Karoo) technicians and artisans to construct the telescope. Another key engineering programme, aimed at establishing radio astronomy capacity and capability with the SKA’s partners on the African Continent, is the African Very Long Baseline Interferometry Network (AVN). In this regard, SARAO has supported the conversion of obsolete telecommunications dishes for radio astronomy purposes.

The South African Radio Astronomy Observatory’s strategic objectives include:

* Optimising South Africa’s contribution to, and benefit from, the international SKA Project;
* Establishing and sustaining globally competitive and transformed radio astronomy and space geodesy research and infrastructure in South Africa, and abroad, where appropriate;
* Optimising the associated national socio-economic benefit from radio astronomy and space geodesy activities; and
* Promoting radio astronomy and space geodesy capacity in Africa.

Strategic programmes that have been implemented and are critical to achieving its mission include human capital development, commercialisation and stakeholder management. Through its commercialisation programme, and its commitment to promote innovation, the emphasis is on: developing competencies using MeerKAT to produce technologies for potential market opportunities; developing suitable mechanisms and an innovation environment; supporting staff members to commercialise their ideas and exploiting opportunities arising from the competencies within SARAO.

The South African Radio Astronomy Observatory views itself as a technology and scientific innovator with an existing intellectual property (IP) portfolio of patents and registrations, which have resulted in substantial cost savings in the deployment of high technology, compute products and systems. SARAO has deployed its locally developed, high capacity data storage and computing systems for the South African National Space Agency (SANSA) and actively looks for industry partners to exploit and commercialise its own expertise. One example is that of COMRAD – a passive radar system that has been developed in partnership with a local technology company, Tellumat. SARAO is actively exploring the best model of industry partnerships going forward. The South African Radio Astronomy Observatory also stated that they are well positioned to respond to national priorities, such as the COVID-19 pandemic where SARAO project managed the requirements setting, production execution and delivery of 20 000 ventilators to government for distribution to relevant health centres nationally (National Ventilator Project).

* + 1. **Socio-economic Impact**

A number of initiatives are aimed at ensuring that benefit is realised within the local communities of the Karoo. These include the positioning of local and emerging contractors to be able to take advantage of procurement opportunities for the MeerKAT and SKA projects. For this purpose, supplier and small, medium and micro enterprises (SMME) development training programmes, as well as local artisan training and skills development initiatives had to be undertaken. Various educational initiatives, community and social development programmes and projects were also embarked upon. In this regard, SARAO reported that to date approximately 8 800 local job opportunities have been created, as well as 400 permanent jobs at SARAO, where 90% of staff is from the local communities. Furthermore, R4.7 million has been invested in community development initiatives and R2.5 million has been invested in training for the local communities.

* + 1. **Human Capital Development**

The SARAO Human Capital Development programme is targeted at developing a diverse and sustainable research community in astronomy and its related engineering disciplines (including technical capacity, artisans and technicians). A comprehensive support programme that extends from school level (focused primarily on Karoo schools) through to post-doctoral fellowships and research chairs within universities was put in place. This pipeline of skilled people is aimed at ensuring the sustainability of the community and SARAO. The Human Capital Development programme also collaborates with other international organisations and is, in some instances, co-funded by the DSI. Substantial training and development of African students across the continent has also taken place. To date, 1 357 grants and scholarships have been awarded. Furthermore, with regard to postgraduate students supported by its Human Capital Development programme, 59 are employed at SARAO, 86 are employed at universities and national facilities and 68 are employed within South Africa’s high-tech industry.

* + 1. **Financial Resources**

On the funding side, SARAO is responsible for implementing South Africa’s responsibilities for hosting the SKA radio telescope. The up-front costs of the responsibilities, which include South Africa’s financial commitment to the SKA Construction and Operations Funding Schedule (for the construction and operation of the SKA telescope) as well as the provisioning of hosting infrastructure, has resulted in a short-term funding deficit of R2 billion up to the 2023/24 financial year. These costs will be recouped over the long term, as hosting infrastructure will be leased to the SKA Observatory for the full lifetime of the SKA project, while investments in construction and operations will be returned to the national fiscus through various construction and operations contracts. The NRF and SARAO are working with the DSI and National Treasury to resolve the funding deficit. Furthermore, the Committee was informed that the additional key risks to the SKA project include the attraction and retention of skilled talent, especially engineers and data scientists, as well as the process of migrating the research platform from an engineering to data production facility under the auspices of the SKA Observatory. To mitigate the loss of engineering staff, the NRF is currently trying to get approval for longer-term contracts for the engineers that are currently employed.

* + 1. **Site Visits**
			1. **SKA Losberg Complex**

The Losberg Complex tour included viewing the SKA1 prototype dish, the MeerKAT radio telescope, the HERA radio telescope, the Karoo Array Processing Building (KAPB) and the Karoo Data Rack Area (KDRA). During the MeerKAT viewing, Dr Adrian Tiplady, SARAO’s Deputy Managing Director and Mr Clifford Gumede, SKA Head of Operations, demonstrated how the dishes were remotely operated from Cape Town. They also explained some of the technical intricacies of operating and maintaining the telescope. The Committee then viewed the HERA radio telescope, where the differences in the structure and construction were explained, as well as the key science objective of the project. The KAPB and KDRA house the largest supercomputer in Africa. From here the data collected by the MeerKAT and the other supported instruments is transferred to the High Performance Computing Centre in Cape Town from where it is made available to scientists in South Africa and globally.

* + - 1. **SKA Klerefontein Support Base**

The Committee toured the Klerefontein Support Base, from which the engineering activities and operations are managed. The Klerefontein Support Base also houses the Artisan Training Centre, which facilitates skills development for electricians, fitters and turners, in instrumentation, diesel mechanics, boiler making, carpentry, plumbing, welding and bricklaying. The Committee was given a practical demonstration of how training for electricians was supported.

* + - 1. **Carnarvon High School**

The Committee visited Carnarvon High School where SARAO, through its Schools Programme, provides bursaries to primary school learners that have shown an aptitude for mathematics and science to continue their high school careers at Carnarvon High School. The bursary covers the costs of learning, board and lodging and includes a stipend. Through SARAO’s support, Carnarvon High School has appointed three educators to teach mathematics and science and developed a coding and robotics programme, where learners have represented the school at international Robot Olympiads and won top honours. Another initiative within SARAO’s Schools Programme is the provision of grants to schools surrounding the SKA site. These grants support the purchase of laboratory equipment, computing infrastructure and equipment, and the refurbishment of classrooms.

The Committee was introduced to the current cohort of SARAO bursary holders and given a demonstration of the school’s robotics programme. Mr Odwa Magabuko, SARAO’s Programme Coordinator for Schools, explained the requirements that learners needed to fulfil when competing within the Robotics Olympiads. Mr Magabuko concluded the presentation by informing the Committee that SARAO was currently evaluating the requests for grants by schools in the area.

* + - 1. **Williston Sheep Lot Co-operative**

The Committee visited the Williston Sheep Lot Co-operative that is partially supported by SARAO. The Co-operative primarily seeks to mitigate the effects of an eight-year drought in the area by assisting farmers to feed and raise their sheep for the wool and meat market and providing some farmworkers with continued employment. Here, the Committee was informed of the effect of the SKA on farming and some of the negative sentiments farmers have toward the SKA project. Specific concerns include the lack of predator management within the MeerKAT National Park and the resultant stock losses suffered by farmers in the areas bordering the Park, and the future implementation and cost of the alternative telecommunications technologies that will be needed to reduce radio frequency interference with the telescope. Another concern was the reduction of income derived from those along the farming value chain, for example, livestock transporters and marketers. The Committee was then informed that SARAO needs R65 million to fence the Park and that the request for this funding was being negotiated with National Treasury. Furthermore, the land acquired for the SKA constitutes less than 1% of sheep farming land and that the eight-year drought has had a greater effect on farming in the area than the SKA. In addition, SARAO has employed all the farmworkers that lost their jobs when SARAO bought the farms they worked on.

* 1. **South African Astronomical Observatory (SAAO) – Sutherland**

On arrival at the SAAO’s Sutherland Observatory, Dr Petri Vaisanen, SAAO’s Managing Director and Dr Nelwamondo welcomed the Committee. Ms Mkhatshwa introduced the Committee and stated that having visited the SKA/MeerKAT radio telescope and SARAO’s community initiatives in Carnarvon and Williston, the Committee is keen to ensure that inclusivity, transformation and intersectionality are key foci within the astronomy programme. Dr Nelwamondo stated that the astronomy value chain supports interdisciplinary research and innovation, develops science for socio-economic impact, drives curiosity and awareness of science and promotes regional development. The newly elected mayor of the Karoo Hoogland Municipal District, Mr Anthony Mietas, a former employee of SAAO, also welcomed the Committee. He asserted that science and innovation facilities like SAAO must have tangible connections to the communities in which they are based. He further stated that he looks forward to the day when a person from Sutherland manages the SAAO. Thereafter, Dr Vaisanen led the presentation to the Committee, which provided the following broad overview of the work undertaken by SAAO within the domain of optical and infrared astronomy.

The South African Astronomical Observatory has its headquarters in the suburb of Observatory in Cape Town, and a dedicated research and observation station with several telescopes (including the Southern African Large Telescope - SALT) outside the Karoo town of Sutherland in the Northern Cape. Founded in 1820, the SAAO is the national centre for optical and infrared astronomy in South Africa and the premier facility for optical astronomy on the African continent. Its primary role is to: provide modern ground-based observational facilities for astronomers across South Africa and the world; conduct world-class astronomical research; contribute to the development and transformation of human capital; and, develop new and innovative technology for astronomy instrumentation. The South African Astronomical Observatory has the responsibility to operate four major telescopes; namely, SALT, which is the largest optical telescope in the southern hemisphere; Lesedi; the 1.0 m and 1.9 m telescopes. The South African Astronomical Observatory also hosts a number of international optical and infrared facilities at the Sutherland site, which includes telescopes of various sizes and forms, some owned by SAAO and many hosted for international research institutes, including ones from Japan, the USA, the UK, Germany, Poland, Korea and Russia. These give astronomers in South Africa and all over the world access to the exceptionally dark skies over Sutherland. The site is also ideally positioned in longitude between the other large optical observatories of the southern hemisphere located in Chile and Australia. This allows for continuous coverage across the southern hemisphere of time-critical observations.

A key vision for the SAAO is the transitioning of the entire Sutherland Observatory into an *Intelligent Observatory* where all the telescopes are networked and remotely operable. In 2020/21, these developments enabled the SALT to be operated remotely from Cape Town throughout the COVID-19 pandemic. The second key vision is to be a world leader in the development of high-tech instrumentation in support of astronomical research. A great testament to the technical and engineering skills resident at SAAO is that in 2020/21, these skills enabled the SAAO/SALT operations to be remotely run from Cape Town throughout the COVID-19 pandemic, as well as SAAO manufacturing the oxygen blenders needed by the National Ventilator Project.

* + 1. **Southern African Large Telescope**

The flagship facility of the South African Astronomical Observatory is SALT, which SAAO is contracted to operate on behalf of the international SALT Consortium. The SALT Consortium currently includes partner institutions from the USA, the UK, Poland, India and South Africa, who is the largest consortium shareholder. The Southern African Large Telescope is the most cost effective large telescope in the world, both in terms of its construction costs and in terms of its annual operations costs. It also produces more scientific publications per unit operating cost than any other large telescope.

Within SAAO, SALT constitutes more than 40% of its operations. Hence, the success and future of SAAO is closely linked to the sustainable and competitive future of the SALT, and vice versa. To give full expression to South Africa’s Multi-wavelength Astronomy Strategy, SALT (optical) is being used together with the MeerKAT (radio) and MeerLICHT (optical) telescopes to simultaneously study astronomical objects.

* + 1. **Human Capital Development**

Dr Vaisanen explained that the tools used in astronomy equip those trained in the discipline with a wide range of high-tech skills that are applicable across a range of industries. When the construction of SALT was completed, the lack of South African astronomers, and particularly black astronomers was identified as one of the biggest challenges for SALT and for any new astronomy projects. Hence, The National Astrophysics and Space Science Programme (NASSP) was introduced in 2005/6 to address this challenge. For 2022, NASSP has been allocated R21 million, which will support 140 students comprising 50 honours (86% black) and 90 masters (76% black) students.

The South African Astronomical Observatory offers students the opportunity to work with leading researchers on innovative astronomy and instrumentation projects. Many projects involve combining and analysing data from different wavelengths, e.g. optical data from SAAO/SALT with radio data from MeerKAT and/or X-ray measurements from spacecraft. There are also numerous opportunities for collaboration with national and international partners. In addition, SAAO also trains apprentices and interns in electronics, mechanical, software, financial, and information technologies, including exposing staff and students to state-of-the-art skills in machine learning and artificial intelligence through innovative high-tech projects. The Cape Town site hosts state-of-the art workshops for technological development.

Dr Vaisanen informed members that the human capital development programme has recorded a number of successes. For example, in 2005, the majority of staff at SALT were foreigners and male. Now, the majority of staff is South African and half are women. Researchers with doctoral degrees working at SAAO comprises of 50% women and 30% black individuals. In addition, the management of SAAO comprises of 24% women and 48% black individuals. However, Dr Vaisanen acknowledged that a great deal more needed to be done to ensure that parity is reached within the demographic and geographic profile of students, technicians, engineers and scientists with the astronomy domain.

* + 1. **Socio-economic Impact – Education and Science Outreach Activities**

Mr Sivuyile Manxoyi, Manager of the SALT Collateral Benefits Programme, informed the Committee that science engagement and outreach is an important part of the SAAO’s objectives, not only to highlight its work but also as a tool to promote the importance of science. The SALT Collateral Benefits Programme focuses strongly on education in mathematics, science, engineering and technology; science communication and awareness; socio-economic development and public engagement. The South African Astronomical Observatory hosts a range of activities for learners, teachers and the public. These include open nights, Sutherland and Cape Town site tours, astronomy-based competitions, teacher training, the development of teaching material, career expos, support and development workshops, learner enrichment programmes, national and international exhibitions, public lectures and public stargazing activities. Starting from 2021, SALT has been fully funding a mathematics teacher to assist at the two schools in Sutherland.

The South African Astronomical Observatory also promotes and engages in astro-tourism. The establishment of SALT, in particular, has resulted in an exponential increase in the number of visitors to Sutherland annually, which has led to a significant increase in the number of bed and breakfast establishments. This has provided much-needed economic stimulus to both the town and the region. With the increase in tourism, over 300 direct jobs and a number of indirect jobs have been created. In this regard, the SAAO/SALT has trained and employed eight Sutherland youths as tour guides and administrative staff and a further three youths who are employed in the hospitality industry in neighbouring towns.

Through the SAAO and SALT, a community centre was established, the local clinic received medical consumables and two specialized trauma beds; the old age home’s geyser system was revamped; and several other such initiatives are continuing. During the COVID-19 pandemic, SAAO worked with the Office of Astronomy for Development, Gift of the Givers and the municipality to identify indigent families in Sutherland, who then received food packages during the worst of the pandemic and hard lock-down. In addition, the SALT Collateral Benefits Programme, with support from the Department of Arts and Culture, has trained a number of youths in entrepreneurship and has supported local arts-based businesses and informal craft markets. Through this project and working with “Africa meets Africa”, the Programme created opportunities for local actors and youth to feature in a movie called “My room at the centre of the Universe”, an astronomy movie based on a boy inspired by SALT and the Sutherland dark skies. A second movie, produced with the Khomani San in the Kgalagadi Transfrontier Park, explores the connection between astronomy and the San Peoples.

Mr Manxoyi concluded his part of the presentation by informing the Committee that a new project is underway to communicate the science and astronomy knowledge of a range of different indigenous communities. These stories, framed within the language of the different indigenous communities, aims to support and promote the intrinsic connection that exists, and has existed for millennia, between these communities and science.

The South African Astronomical Observatory is the single biggest employer in the town of Sutherland. However, efforts to grow and enhance the impact of current initiatives are hampered by limited funding; the poor condition of access roads to facilitate astro-tourism; the social challenges (teenage pregnancy, substance abuse, low skills levels and unemployment) prevalent in the province; the poor retention of mathematics and science educators in the area; and the lack of technical skills that hamper locals from fully benefitting from projects like the SALT and the SKA.

* + 1. **Office of Astronomy for Development**

Dr Kevin Govender, Director of the Office of Astronomy for Development, presented the next part of the presentation to the Committee.

The South African Astronomical Observatory hosts the International Astronomical Union’s (IAU) Office of Astronomy for Development (OAD). The OAD coordinates projects across the globe to improve people’s lives through astronomy and is jointly funded by the IAU and the DSI. The OAD was established in 2011 to fulfil the IAU’s 10-year strategic plan in realising the global developmental benefits of astronomy in relation to skills development, economic growth and diplomacy, all centred on the Sustainable Development Goals. The OAD has established 11 Regional Offices and Language Centres around the world who share the OAD’s vision but focus their activities within a geographic, cultural or language region. Since 2013, the OAD has funded 200 projects spread across more than 100 countries and has disbursed approximately €1 million in grant funding. Dr Govender stressed that this concept of science for development is being led by South Africa and has not been replicated elsewhere or in any other discipline.

Dr Govender informed the Committee that South Africa, through the SAAO, has won the bid to host the 2024 IAU General Assembly, the largest professional body for astronomers. Importantly, this will be the first time in the 105-year history of the IAU that the General Assembly will be held on the African continent. Recently, in 2021, all its stakeholders agreed upon the continuation of the OAD at the SAAO. In addition, the SAAO hosts the secretariat of the African Astronomical Society (AfAS) and is actively engaged in developing professional astronomy on the continent.

Dr Vaisanen concluded the presentation by reiterating SAAO’s plans in relation to maintaining and strengthening its technology development focus. This included its plans for the development of the *Intelligent Observatory*; its intention to forge stronger links with historically black universities and resurrect its international and strategic doctoral and post-doctoral training placements; and the intention to expand its continental and global footprint.

Dr Nelwamondo stated that the Committee had now visited two of the five National Research Facilities managed by the NRF and extended an invitation for the Committee to visit the others. Dr Nelwamondo stressed the importance of the National Research Facilities for knowledge production and student training, but asserted that these Facilities and the NSI as a whole was severely underfunded. He appealed to the Committee to explore every avenue at its disposal to advocate for greater resources for the NSI.

The Committee was then guided through the SAAO’s Stargazing Experience, one of the science outreach initiatives that it hosts for learners and visitors to the Sutherland Observatory. Dr Ramotholo Sefako, SAAO’s Head of Telescope Operations, guided the Committee in identifying key constellations that were visible at the time and explained how these were used for navigation. Participants could also view these constellations through the telescopes at the Stargazing Centre. By experiencing the clear, dark skies of Sutherland first-hand, the Committee received an appreciation for why Sutherland was a strategic and sought-after site for astronomical observation. In addition, the Committee saw how such an activity could encourage curiosity, stimulate interest in science and technology, as well as contribute to broader issues of development. For example, the Stargazing experience induced a sense of serenity and contemplative mood among participants, which suggested that such an experience could aid programmes related to mental health, rehabilitation, wellbeing and healing.

* + 1. **Site Visits**
			1. **Sutherland Community Development Centre**

Mr Manxoyi, Mr Jeremy Stuurman, the Deputy Manager of the SALT Collateral Benefits Programme and Dr Govender briefed the Committee at the Sutherland Community Development Centre.

The Sutherland Community Development Centre was established in consultation with the local community and chiefly funded by the DSI and various partners. At the Centre, learners can use computers with internet access to complete homework assignments and receive additional in-person tutoring and online instructional resources in a safe and welcoming environment. The members of the community have access to the internet for services such as online banking, they can search and apply for jobs and for many, this is the only source of internet connectivity. The Centre provides childcare to allow young mothers the opportunity to use its resources. The Centre runs several cultural, artistic, sports and social events throughout the year to enhance the life of the community. The Centre also serves as a platform for various non-governmental organisations and government departments (e.g. Departments of Labour and Social Services) to facilitate community empowerment programmes. Programmes on HIV, Drug Abuse and Alcohol Foetal Syndrome have been implemented by the Department of Social Services. Training on social media, internet and email usage and curriculum vitae writing have all been offered to the youth of Sutherland. The Sutherland Community Development Centre serves as another example of how science can be used for development and community empowerment.

* + - 1. **Roggeveld Primary School and Sutherland High School**

The South African Astronomical Observatory and the NRF refurbished laboratories at both Roggeveld Primary School and Sutherland High School and supplied the schools with physics, chemistry and life sciences apparatus and utensils, desks and scientific calculators for Grade 10 learners. Most recently, the SALT has fully funded the employment of a mathematics teacher for the two schools in Sutherland.

The Committee visited the science laboratory at Roggeveld Primary School that the SAAO and NRF had refurbished. However, the Committee found the classroom run-down and dirty and so too the storage room for the laboratory utensils and apparatus. The utensils and apparatus had been used but not cleaned. The classroom showed no sign (posters, books and models) that it was a science laboratory. The Committee did not have the opportunity to interact with any of the staff from the school and; therefore, could not ascertain why the laboratory was in such a poor state.

At Sutherland High School, the Principal guided the Committee through the science laboratory and hostel that had been refurbished. Learners residing in other towns who wish to pursue mathematics and science at high school are supported by an NRF bursary and accommodated in the hostel. The Committee had the opportunity to interact with the resident science teacher in the refurbished classroom and meet the new mathematics teacher. The classroom had all the characteristics of a school science laboratory and was clearly being used and taken care of. The Principal and Teachers shared some of their challenges with the Committee (excessive teaching and administrative load, difficulties in acquiring chemicals for experiments, etc.) and expressed sincere gratitude for the assistance offered by the SAAO/SALT/NRF. The mathematics teacher indicated that since his arrival in mid-2021, he could already see an improvement in the Grade 9 mathematics outcomes. The key challenge for these educators was that learners that had been promoted to high school did not have the requisite foundation phase knowledge in mathematics and science. These educators then had to address this deficiency while having to teach these learners the high school curriculum. As one of only two high schools in the district that offer mathematics, science and other technical subjects, the other being in the town of Calvinia, Sutherland High School considered phasing out mathematics and science from its curriculum due to poor learner performance. However, this was not approved by the district head of education despite the school receiving insufficient support from the Province to improve the teaching of mathematics and science.

The South African Astronomical Observatory funds an undergraduate bursary for students from the Northern Cape Province to study science, engineering and tourism to fulfil the goal of hiring skilled locals for the posts at the SAAO. However, achievement against this goal is hampered by the social challenges plaguing the area, which further exacerbate poor educational outcomes.

* + - 1. **Sutherland Observing Plateau**

The Committee then toured the SALT and 1.9 m optical telescope on the Sutherland Observing Plateau. Dr Sefako explained some of the technical intricacies of operating and maintaining these telescopes. The Committee saw one of the 91 hexagonal mirror segments, which constitute the SALT’s primary mirror, being replaced. The Committee also interacted with the technical and mechanical crew that were monitoring SALT operations. At the 1.9 m optical telescope, which is approximately 80 years old, Dr Sefako explained that the telescope needed a new camera, which would cost approximately R100 000 since it would need to be sourced from the original manufacturer who was based in the UK.

The Committee concluded the oversight visit on the Sutherland Observing Plateau. Here, the Committee reflected how seeing the national research facilities and interacting with the staff and the community had provided a deeper understanding of what the astronomy programme entailed. This would certainly heighten future deliberations with the Department.

1. **SUMMARY**
	1. **Post-School Education and Training**

The last two academic years, 2020 and 2021, respectively have been extremely difficult for the PSET sector due to the impact of COVID-19 pandemic. The pandemic has forced the sector to revise its teaching and learning methodologies as well as providing access to all students and to ensure that no one is left behind. The Department has been providing the necessary support to the PSET sector to ensure that both academic years and lives were saved, and this objective was achieved. Similarly, the Committee has been playing a crucial oversight and monitoring role over the Department and institutions in assessing their response to the pandemic and ensuring that teaching and learning is not compromised. The Committee noted that the pandemic has lifted the socio-economic inequities in the PSET sector.

The oversight visit to the Northern Cape has long been part of the Committee’s programme, and it was aimed at visiting some of the PSET institutions in the province and to gain first-hand insight into some of the DSI-funded projects, in particular the world-renowned SKA/MeerKAT project and SALT.

In relation to the PSET institutions, the Committee was pleased to interact with the leadership of SPU, including stakeholders, and viewed the University as a beacon of hope not just for the people of the Northern Cape but the country at large. The University is one of the first two universities to be established in a free democratic South Africa and it is a model of a contemporary institution of higher learning, which could be a model for the envisaged expansion of higher education in the country. The Committee also noted that the University exists to create new opportunities to revive a once thriving diamond mining town of Kimberley into a University town and its surrounding mining and agricultural intensive areas. This also placed a responsibility on the University to improve its marketing strategy and pay closer attention to the education and training requirements of its nearby communities and increase access to its programme offerings.

The Committee also visited the Northern Cape Rural TVET and CET colleges as part of the oversight visit. TVET and CET colleges form an integral part of the PSET system given their broad mandate of offering technical and vocational skills needed to access the economy and to the second chance opportunities to education for out of school youth and adults. However, the sectors have been negatively affected by the negative growth in the economy, which has resulted in fiscal constraints. The ramifications of the fiscal constraints were evident when the Committee visited the facilities of the colleges, which did not reflect an ideal teaching and learning environment. The Committee has long been advocating the prioritisation of the TVET and CET sectors so that they can also become institutions of choice for many young people and adults.

* 1. **Science and Innovation**

The Committee concluded these visits by thanking their hosts for an engaging and educational experience. Ms Mkhatshwa stressed that despite South Africa having these wonderful facilities and cohort of world-class scientists, engineers, innovators and technologists, the true value of these will only be realised when it positively influences the daily lived realities of all South Africans.

The Committee stressed the importance of transformation and inclusion, in all dimensions of science and innovation and urged that local communities find meaning and value in facilities such as these. The Committee further stressed that they will continue to advocate for increased funding for science and innovation and will ensure that the Committee’s programme accommodates more such visits.

1. **OBSERVATIONS**

The Portfolio Committee on Higher Education, Science and Innovation, having undertaken an oversight visit to the Northern Cape, made the following observations:

* 1. **DHET**
		1. The decision by certain universities to move towards mandatory COVID-19 vaccination for the 2022 academic year was noted as a concern. It was noted that government has not yet taken a policy decision on mandatory vaccination for citizens. The Committee is of the view that consultations with the students and workers will be critical in averting potential disruption to the start of the 2022 academic year.
		2. The Committee welcomed engagement between the Department and the relevant stakeholders in the PSET sector in preparing for the 2022 academic year. The Committee hoped that the 2022 academic year will be a better year in terms of the stability of the institutions.
		3. The Committee noted the impact of the NSFAS funding shortfall on the approval by the Minister and publishing of the 2022 Bursary Guidelines. Additionally, the Committee noted and welcomed the report by the Department that the funding shortfall matter was placed before and was receiving the necessary attention by the Cabinet.
		4. The underfunding of the PSET sector has a detrimental effect on the ability of the Department to fulfil its mandate. The Department will not be able to make further reprioritisation within its programmes budget to assist the NSFAS with its funding shortfall and to support critical programmes such as TVET and CET with adequate funding.
		5. The Committee commended the Department for the funding allocated towards establishing of SPU. It was further noted that the University has constructed world class, environmentally friendly and sustainable facilities.
	2. **NSFAS**
		1. The Committee applauded the entity for embarking on advocacy and outreach programmes around the country to educate learners and members of the public about the bursary scheme; as well as to troubleshoot challenges faced by applicants. The Committee welcomed the efforts by the entity to engage the University stakeholders on NSFAS-related matters.
		2. The Committee welcome the extension of the 2022 application period to 21 January 2022, including the improvement in the NSFAS portal, which can provide real time response to eligible applicants.
		3. The inability of the entity to make financial decisions due to the current budget shortfall was noted as a concern.
		4. The reported inadequate 0.9 percent administration budget of the entity limits its ability to expand its footprint, decreases its human capacity and hinders its ICT related interventions towards improving the disbursement process.
		5. The Committee expressed a concern about the potential negative impact of the decision by the Entity to stop allocating upfront payments to institutions due to inadequate funding and post funding reconciliation challenges.
		6. The delays in the finalisation of the close-out project was noted as a concern. It was noted that certain institutions owed funds to NSFAS due to outstanding historical data reconciliation challenges.
	3. **SPU**
		1. The Committee applauded the leadership of the University for the good management of the massive infrastructure development projects which were a model of a contemporary University, which serves the needs and interest of young people in the Northern Cape and surrounding areas. It was noted that the University offers good practices that the country may mirror towards expanding access to higher education through the planned establishment of two new universities in Ekurhuleni and Hammanskraal
		2. The Committee was pleased that the University acquired some old buildings belonging to government, municipalities and other state owned entities (SOEs) and repurposed them for teaching and learning, as well as residences. This should serve as a best model for the white elephant buildings owned by the state, which can be repurposed for education and training or student residences. Even more pleasing to the Committee was that University made its premises available for utilisation by the surrounding communities. The Committee further commended the University for winning awards for their buildings.
		3. The Committee appreciated the open nature of the University as it creates a university town, where the institution is located within the community. This plan could further allow for the creation of an education precinct such as the Imbali Education and Innovation Precinct in which different institutions could co-exist and support one other’s academic programmes as envisioned in the White Paper for PSET.
		4. The Committee stressed the importance of developing and implementing a good marketing strategy to attract more South Africans to further their learning at SPU.
		5. The Committee cautioned the students and workers against any potential vandalism or destruction of the University property as a form of expression of their grievances to the management. It was noted that the University stakeholders, working in collaboration with the management has a responsibility of preserving the legacy of Sol Plaatje University for the future generation.
		6. The Committee stressed the importance of communication and ongoing stakeholder forum so that disputes can be resolved amicably.
		7. The Committee noted with concern an allegation that the Chief Financial Officer (CFO) had a romantic relationship with the Director of Finance who was recently employed by the University in December 2021. The Committee noted that the delays in instituting an investigation in the matter further entrenched the mistrust on the appointment process.
		8. The Committee commended the University’s transition from paper-based to online registration of students. However, the Committee also expressed concerns regarding the pure online registration given connectivity challenges experienced by some students.
		9. The Committee emphasised the importance of the University having partnerships with TVET colleges in the surrounding areas of the Northern Cape to enable seamless articulation of TVET graduates into University programmes and TVET lecturer development.
		10. The Committee noted with concern the inadequate numbers of Matriculants who obtain good scores in mathematics and sciences to enrol in science, technology, engineering, and mathematics (STEM) programmes in institutions of higher learning.
		11. The Committee noted the recommendation by the CGE that the University fences the campuses to ensure safety and security. However, the Committee is of the view that fencing is not a solution, especially when the vision of the University is to build a University town. It was further noted that the University ought to have partnership with the local police and relevant stakeholders to ensure safety on campus and surrounding areas.
		12. The audit finding that the University could not provide audit evidence to support the reported performance was noted with concern.
	4. **NCR TVET college**
		1. The Committee expressed a concern regarding the financial sustainability of the college given its high employee costs, which amounted to R97.5 million compared to R185 million total income in 2020. The college also had a deficit amounting to R16 million in 2020.
		2. The college spent 120 percent of its budget for 2020. However, it achieved only 30 percent of its targets and this was noted as a serious concern.
		3. The Committee noted a concern regarding the financial management capacity of the college. The college received unqualified audit opinion with significant by the Auditor-General (AG), in particular, the weaknesses in its internal controls.
		4. The Committee noted with concern the state of the teaching facilities at the De Aar Campus, which were not sufficiently conducive to teaching and learning.
		5. The college’s drop-out rate which stood at 56 percent for the NC(V) and 41 percent for the NATED Business Studies, respectively, were noted as a concern. It was noted that better student support services were needed to improve the retention of students and improve the throughput rates.
		6. The college served largely rural and disadvantaged communities and it experienced challenges in relation to student debt repayments.
		7. The distances between the college campuses made it difficult to render certain services to campuses.
		8. The college was commended for its awareness campaigns on GBVF and vaccination for students and workers.
		9. The Committee stressed a need for the college to offer relevant programmes to address the economic needs of the communities the De Aar and other surrounding communities within the provinces.
		10. The Committee was concerned about the non-return of textbooks by students who have completed their studies, which impacts on the college’s ability to ensure that textbooks are available for every student. Additionally, the Committee noted that textbooks are part of the assets of the colleges and dedicated efforts should be employed to ensure they are returned to the college.
	5. **NC CET college**
		1. The Committee commended the College Principal for the passion he had for the CET sector and for being its advocate.
		2. The Committee welcomed the gender transformation at the Council level and urged the college to expedite the filling of the vacant posts.
		3. The accreditation of some of the Community Learning Centres by the Quality Council for Trades and Occupations to offer occupational skills is commendable.
		4. The Committee was concerned about low enrolments rates and the challenge of underqualified lecturers.
		5. The inadequate human resource at the Central Office of the college to support 80 satellites was noted with concern.
		6. The committee noted with concern the capacity challenges related to infrastructure and funding at the Kareeville Community Learning Centre.
	6. **South African Radio Astronomy Observatory**
		1. The Committee commended the NRF and SARAO for their achievements to date and for ensuring that South Africa is recognised as a global leader in radio astronomy.
		2. The Committee raised the loss and retention of skills, especially engineers, as an area of concern. The plans and programmes to attract high quality engineers, the vision for engineering research and the ongoing engagements with the NRF to address these concerns was noted by the Committee.
		3. The Committee noted that once the SKA radio telescope was built, the project would transition from being a mega-engineering undertaking to a mega-datacentre. The SKA would then be a regional science data centre and its skills requirements would be different.
		4. The Committee stressed that skills succession plans must include individuals from the local community, especially young, black women. These plans must also ensure the inclusion of locals and women in the management echelon.
		5. The Committee asked about the commercialisation programme, the production of new technologies and how the IP was protected in this regard.
		6. The Committee asked about the different categories of bursary SARAO offered to learners and students, as well who the bursary beneficiaries were. So too, the demographics of the individuals who had been granted internships.
		7. The Committee enquired about the procurement processes followed for the SKA, especially now that the project is under the management of the SKA Observatory, which is an intergovernmental organisation.
		8. With regard to procurement and the construction contracts secured from the SKA Observatory, the Committee enquired as to the degree of local content with regard to sourcing the material needed; who would construct the different components and whether the local community would benefit from these.
		9. The Committee noted that through the SKA land acquisition programme, 40 portions of land were acquired comprising approximately 135 250 hectares. This area now constitutes the MeerKAT National Park, which is a protected area under the management of a Land Management Authority (SANParks). The Committee asked what the economic benefits and implications of these acquisitions were and when SANParks would start managing the area.
		10. The Committee expressed concern regarding the R2 billion funding shortfall and asked how this would affect the operations of the project. They also asked how these effects would be mitigated.
		11. The Committee noted the explanation to their suggestion to incorporate indigenous knowledge in the astronomy programmes. They welcomed the collaborative work with the Australian astronomy community and indigenous Australians in this regard.
	7. **Williston Sheep Lot Co-operative**
		1. The Committee welcomed the assistance provided by SARAO to the sheep lot, which aims to mitigate some of the devastating effects of the eight-year drought in the area on sheep farming.
		2. The Committee was keen to know what the Northern Cape Province and district municipality were doing to assist farmers and farmworkers during the drought.
		3. The Committee noted the concern regarding the lack of fencing around the MeerKAT National Park and the impact of this on sheep farmers bordering the park in relation to stock loss due to predators. They further noted that SARAO needs R65 million to fence the park and that negotiations with National Treasury for this funding requirement was underway.
		4. The Committee noted the concerns around the economic impact of the SKA on sheep farming in the area; the impact of the deployment of alternative telecommunications technologies to reduce radio frequency interference; the consultation processes followed and the land acquisition issues, which were raised by an affected farmer.
		5. The Committee appreciated that a wide-ranging economic impact study and environmental impact study had been undertaken.
	8. **South African Astronomical Observatory**
		1. The Committee expressed their appreciation for the work being done by the NRF and SAAO and applauded their efforts to ensure the local development and inclusion of the community surrounding the Sutherland Observatory.
		2. The Committee enquired whether the SAAO’s human capital development programme could be expanded to benefit more individuals and how the graduate placement programmes worked.
		3. The Committee encouraged that relationships be explored and established with historically disadvantaged institutions, especially with the technical and vocational education and training (TVET) colleges and Sol Plaatjie University in the province. This could assist with skills development in the province and the potential absorption of locals in astronomy projects.
		4. The Committee noted the low number of individuals who pursue studies in astronomy and encouraged that this be examined to improve these numbers.
		5. The Committee acknowledged the challenges with regard to mathematics and low number of learners choosing and succeeding in this subject. They encouraged that programmes be put in place whereby potential learners are identified at an early stage and nurtured through special programmes to excel in maths and science.
		6. The Committee encouraged that more attention should be given to astro-tourism in the area and that discussions with relevant stakeholders and provincial government take place to enhance this initiative
		7. The Committee emphasised that science communication and public awareness was crucial and should be pursued and enhanced at all times.
		8. The Committee perceived that cooperation and support from all spheres of governance, both in the province and nationally, with regard to science and innovation and its potential positive impact on socio-economic development, was lacking.
		9. The Committee considered the funding for studies in astronomy as minimal and encouraged that efforts to increase the available funding should be explored.
		10. The Committee noted that the SAAO is generally underfunded.
		11. The Committee commended the SAAO and OAD for securing the hosting of the International Astronomical Union’s 2024 General Assembly in Cape Town.
		12. The Committee conceded that the NRF and its astronomy entities could not be responsible for and support all socio-economic issues in the province. Responsible stakeholders, be it the district and/or the province, need to ensure they remain responsible for the key developmental issues that need to be addressed in the province.
		13. The committee further noted with concern institutions that do not nurture investments made by the NRF.
1. **RECOMMENDATIONS**

The Portfolio Committee on Higher Education, Science and Innovation having undertaken an oversight visit to the Northern Cape recommends:

* 1. **SPU**
		1. The Council expedites the filling of vacant posts.
		2. The expedient finalisation of outstanding institutional policies by the University Council and management.
		3. The University expedites the investigation into the alleged romantic relationship between the University’s CFO and the Director of Finance and a copy of the report be shared with the Committee.
		4. The University develops a comprehensive maintenance plan by the University, which will assist the institution to protect its infrastructure from dilapidating.
		5. The University develops its alumnus programme so that former students can contribute in shaping the future of the institution.
		6. The University explores the possibility of incorporating the VUT Upington Satellite Campus into SPU to expand access to higher education in the Northern Cape Province, considering that the Vaal University of Technology (VUT) is planning to disestablish its Upington Satellite Campus.
		7. The consultative engagement between the University, students and workers on the institutions COVID-19 vaccination policies.
		8. The consideration by the University on the possibility of offering engineering and astronomy related programmes in the future, which would assist in supporting the mining and astronomy activities in the province.
	2. **DHET**
		1. The Department ensures that the DHET Bursary Guidelines Scheme for students at Universities and TVET colleges are finalised at the end of each academic year to enable institutions and students time to prepare for the following academic year.
		2. Additional funding should be considered for the Department to ensure that institutions are able to execute their mandate. The Department should provide the Committee with a report on the engagement between the Minister and National Treasury regarding the funding of the sector. The TVET and CET sectors be assisted to develop and expand so that they become institutions of choice for young people seeking education and training opportunities.
		3. The Department strengthens its oversight over institutions that are experiencing challenges with their readiness for the 2022 academic year.
	3. **NSFAS**
		1. The Entity prioritises the finalisation of the close-out project to ensure that students who were not funded for the previous academic years are assisted. Furthermore, the reconciliation of records between the Entity and institutions should be expedited to determine the amount of funds owed by institutions to the NSFAS.
		2. The overall improvement of the ICT systems of the Entity be expedited to improve the disbursement of funding and allowances to eligible students.
		3. The entity be allocated requisite funding to cover its funding shortfall estimated at R10 billion for the 2022 academic year.
		4. The NSFAS administration funding threshold of 0.9 percent on its total budget be reviewed.
		5. The entity engages with the publishers to ensure that the laptops that are distributed to students contain the relevant reading material for students.
	4. **NCR TVET college**
		1. The college develops a detailed audit action plan with clear timeframes aimed at addressing the findings raised by the AG in its 2020 Annual Report. The copy of the audit action plan should be shared with the Committee. Quarterly progress reports be submitted to the Committee, within three months of the adoption of this Report by the National Assembly
		2. The college working in collaboration with the Department reviews its organisational structure and rectify the challenge of high employee costs.
		3. The Department assists the college in improving its financial management capacity.
		4. The college utilises the services of its students who are enrolled in civil and construction programmes to participate in the maintenance of its facilities.
		5. The college considers the formation of partnerships with the local schools to encourage learners to participate in scare and critical skills programme that are needed by the economy and to support the needs of their communities.
		6. The Department reviews the current campus model of the College to ascertain its sustainability, given the distances between the Central Office of the college and campuses.
		7. The college develops and implements a policy on the return of textbooks by student who drop out and those who complete their studies.
	5. **NC CET college**
		1. The Department develops and implements capacity development programmes to upskill the underqualified CET lecturers.
		2. The Department reviews the organogram of the CET colleges to ensure adequate capacity to support the satellite centres.
		3. The CET colleges consider recruiting unemployed self-funded qualified educators who cannot be placed in schools because they are Funza Lushaka funded teachers.
		4. The Department continues to engage Treasury to increase funding for the CET sector.
	6. **Science and Innovation**
		1. The Minister and National Treasury try to secure the R65 million needed to fence the MeerKAT National Park. This would certainly assist the relationship between SKA and the farmers bordering the park.
		2. The Minister and National Treasury submit a plan as to how the R2 billion shortfall in funding for the SKA will be mitigated and/or secured.
		3. The Minister secures additional funding for the SAAO, especially for its technical operations and human capital development programme.
		4. The Minister continues to pursue the enhancement and strengthening of intergovernmental relationships to garner support for science and innovation, for both governance and funding.
		5. The Minister enhances the support given to Basic education to help improve learner outcomes in mathematics and science.
		6. The Department and its entities forge stronger ties with the post-school education and training sector to influence and ensure that available curricula support its strategies and programmes.
		7. The NRF, SARAO and SAAO ensure that their succession plans include individuals from the local community, especially young, black women. These plans must also ensure the inclusion of locals and women in the management echelon.
		8. The NRF and SAAO provide a report on the status of the support and facilities provided to Roggeveld Primary School and Sutherland High School. The report should also detail the future sustainability of the programmes and infrastructure provided to the schools and community in Sutherland.
		9. The farmers in the region of the SKA make a submission detailing their experiences and concerns; including the programmes, they had instituted to empower the farmworkers.
		10. The NRF and SARAO submit a report on the consultation process with farmers regarding the SKA land acquisition programme, the economic impact study and the environmental impact study that were conducted.

Report to be considered