**The Budgetary Review and Recommendation Report of the Portfolio Committee on Science and Technology, dated 22 October 2013**

The Portfolio Committee on Science and Technology, having considered the performance of the Department of Science and Technology, reports as follows:

**1. Introduction**

**1.1. Purpose of the Budgetary Review and Recommendation Report**

The Money Bills Amendment Procedure and Related Matters Act (Act 9 of 2009) provides Parliament with the legislative mandate to make recommendations to the Minister of Finance to amend the budget of a national department. In October of each year, portfolio committees must compile Budgetary Review and Recommendation Reports (BRRRs) that assess service delivery performance given available resources; evaluate the effective and efficient use and forward allocation of resources; and may make recommendations on forward use of resources. The BRRRs are also source documents for the Standing/Select Committees on Appropriations/Finance when they make recommendations to the Houses of Parliament on the Medium-Term Budget Policy Statement (MTBPS). Hence, the BRRR provides a summary of past performance (2012/13 financial year), current performance (first quarter of the 2013/14 financial year), and casts its gaze forward to the 2014/15 financial year.

**1.2. Mandate of the Portfolio Committee on Science and Technology**

The mandate of the Portfolio Committee on Science and Technology (the Committee) is to process legislation, conduct oversight of the Department of Science and Technology (the Department) and the science councils and agencies that report to the Department, promote public participation, facilitate international agreements and review matters of public interest in relation to the Department.

**1.3. Method to develop the BRRR**

With reference to the performance reporting for the 2012/13 financial year, the Committee considered the Department’s budget allocation and Annual Performance Plan (APP) on 18 April 2012. Thereafter, the Committee considered the APPs of all the entities that report to the Department. The Department briefed the Committee on its quarterly expenditure and performance as follows: first quarter report on 29 August 2012 and the second and third quarter reports on 6 March 2013. The Department’s fourth quarter expenditure and performance report was considered together with the 2012/13 Annual Reports of the Department and the entities from 8 to 10 October 2013. The Office of the Auditor-General provided a consolidated presentation of the 2012/13 performance of the Department and its entities to the Committee on 16 October 2013. With reference to the performance reporting for the 2013/14 financial year, the Committee considered the Department’s budget allocation and APP on 13 March 2013, and the APPs of all the entities thereafter. The Department presented its first quarter expenditure and performance report on 11 September 2013.

The Committee undertook an international visit, from 21 to 30 July 2012, to Brussels, Belgium and Sofia, Bulgaria. During the 2012/13 and 2013/14 financial years, in addition to the regular briefings on work undertaken by the Department and its entities, the Committee conducted five oversight visits. The first, from 4 to 5 September 2012, comprised visits to the iThemba **L**aboratory for **A**ccelerator- **B**ased **S**ciences (iThemba LABS), the low-cost housing project in Kleinmond and the South African National Space Agency’s Space Science Directorate. The second, from 9 to 10 October 2012, the Committee attended the Council for Scientific and Industrial Research’s biennial conference, Science Real & Relevant in Pretoria. The third, on 16 April 2013, comprised a visit to the South African Astronomical Observatory, which also hosts the International Astronomical Union’s Office of Astronomy for Development. The fourth, from 20 to 21 July 2013, the Committee attended the Science, Technology and Innovation Summit in Limpopo. The fifth, from 22 to 25 July 2013, comprised visits to the Cofimvaba Schools District Technology Project, the University of Fort Hare, the South African Institute for Aquatic Biodiversity, Rhodes University, the Uitenhage Science Centre and the KwaNobuhle Essential Oils Project.

**2. The DEPARTMENT under review**

**2.1. Description of the core functions of the Department of Science and Technology**

Central to its responsibilities, the Department must develop, co-ordinate and manage the National System of Innovation (NSI) so that it delivers highly skilled individuals, transforms the economy and provides a better life for all South Africans. Hence, the Department, with the science councils and agencies that report to it, strives to develop the innovation capacity of the NSI, enhance South Africa’s knowledge-generation capacity, develop appropriate science, technology and innovation (STI) human capital, build and maintain excellent STI infrastructure, and position South Africa as a strategic international research, development and innovation (RDI) partner and destination.

The science councils that report to the Department are the Council for Scientific and Industrial Research (CSIR), the Human Sciences Research Council (HSRC), the Africa Institute of South Africa (AISA), and the National Advisory Council on Innovation (NACI). The agencies that report to the Department are the National Research Foundation (NRF), the South African National Space Agency (SANSA), and the Technology Innovation Agency (TIA). The Academy of Science of South Africa (ASSAf) also reports to the Department.

**2.2. Overview of the relevant policy focus areas**

Science and technology are considered crucial for the creation of wealth and improving the quality of life in modern society. Hence, Governments, as they strive for equitable and sustainable development, have a duty to create an enabling policy environment to support these goals. In South Africa, the 1996 White Paper on Science and Technology introduced the concept of a NSI as an enabling framework for the development and application of science and technology in South Africa. Within this framework, Government (with the line department being the Department of Science and Technology) has the sole responsibility for, at the national level, policy formulation and resource allocation; and for regulatory policy-making.

The National Research and Development Strategy (NRDS) and the Ten Year Innovation Plan (TYIP) are the key drivers of the NSI. The TYIP, particularly, was put in place to guide the country towards a knowledge-based economy through human capital development, knowledge generation and exploitation, knowledge infrastructure and enablers to convert knowledge into socio-economic outcomes. The grand challenges outlined in the TYIP comprise the biotechnology and pharmaceutical industry, space science, energy security and global change. The idea is to have a multidisciplinary thinking amongst South African researchers to deal with these challenges in an innovative way that would bring socio-economic changes in this country as it is envisaged in both the National Development Plan (NDP) and the National Growth Path (NGP).

The NGP requires infrastructure to support it, and the Department plays a supporting role in various strategic integrated projects (SIPs) that form part of the National Infrastructure Plan. The Department is involved in three of the 18 SIPs; namely, SIP 14 (Higher Education and Infrastructure), SIP 15 (Expanding access to communication technology) and SIP 16 (Square Kilometre Array [SKA] and MeerKAT). The Department also contributes to Outcome 4 (“decent employment through inclusive economic growth”) and 5 (“a skilled and capable workforce to support an inclusive growth path”) of the governments 12 Key Outcomes.

The Department’s list of challenges that require intervention have changed in the current year to include the recommendations of the Ministerial Review Committee on the STI Landscape in South Africa and its readiness to meet the needs of the country. These changes include monitoring and evaluation of its co-ordinating role within an integrated NSI. Moreover, the need to strengthen the engagement of industry and higher education institutions in the NSI through the alignment of the NDP, the NGP and the new Industrial Policy Action Plan (IPAP2) to ensure South Africa’s regional and global competitiveness.

**3. Summary of previous key financial and performance recommendations of Committee**

**3.1. 2012/13 Committee BRRR**

The Committee made the following recommendations in its 2012/13 BRRR:

a.         The Department should make concerted efforts to correct the shortcomings of reporting as highlighted by the Auditor-General.

b.         The Department should ensure that systems and proper resources are in place to facilitate that there is complete information on performance and achievement of targets. A monitoring and evaluation plan should be in place to detect and address weaknesses on time.

c.         The Department should brief the Committee on its vacant posts and their overall Human Resource plans. Vacancies should be filled within a reasonable amount of time and the Committee should be informed of the challenges experienced in filling the posts.

d.         The Committee recommended that the Department should finalise the Bio-economy strategy as a matter of urgency. The Committee expected the Department to provide them with a brief on the completed strategy.

e.         The Committee recommended that the Department speed up initiatives to strengthen the governance relationship with their counterparts specifically in education, health, energy, agriculture and human settlements. This relationship is crucial to the success of the NSI.

Section 7(4) of the Money Bills Amendment Procedure and Related Matters Act prescribes that the Minister of Finance submit a report to Parliament at the time of the budget explaining how the Division of Revenue Bill and the national budget give effect to, or the reasons for not taking into account, the recommendations contained in, amongst others, the BRRRs. National Treasury, in response to the second recommendation of the Committee, stated that it had discussed with the Department the need to produce comprehensive annual reports that reflect the performance of its programmes. In addition, National Treasury concurred with the fifth recommendation of the Committee. Further stating that investment in science and technology is crucial to innovation and overall economic development, hence, co-operation across government is essential to maximising value-for-money.

The Minister of Science and Technology (the Minister), during his 2013 budget vote speech, stated that the Bioeconomy Strategy had been finalised and would be presented to Cabinet for its approval. Furthermore, the Minister recounted a few of the projects where the Department collaborates with other government departments and partners to ensure that it delivers on its mandate.

**3.2. 2013/14 Committee Budget Report**

The Committee recommended that the 2013/14 budget allocation to the Department be approved. However, the Committee requested that the Department remain cognisant of the following Committee observations:

a)         The Committee noted and welcomed the allocations made to the SKA project, the upgrade and maintenance of research infrastructure and to the National Intellectual Property Management Office (NIPMO). Some of these funding concerns were raised in the Committee’s budget review and recommendations report in 2012.

b)         The Committee questioned most of the entities that made presentations around how their targets were set. Entities such as the CSIR, HSRC and NRF assured the Committee that their objectives and performance indicators had been set in line with the SMART (Specific, Measurable, Achievable, Relevant and Time-bound) principle.

c)         The Committee wanted to ascertain whether these targets, especially in cases where they were all met, could not be attributed to setting targets either too low or due to limitations of the parliamentary grants and human capital to increase those targets. The Committee undertook to explore further the aforementioned submissions of the Department’s entities.

d)         The Committee acknowledged the important work done by the Department and its entities and questioned whether it was significantly communicated to the public and government departments. In some instances, and this was raised with the CSIR, the Committee found that the budget allocated for communication and outreach was insufficient. They urged the Department and its entities to accelerate efforts in effectively communicating their programmes and achievements to all South Africans.

e)         The Committee noted that the Bio-economy Strategy has taken long to be finalised. The completion of the Strategy is important in guiding the research, development and investment priorities for the programmes governed by this strategy. The Committee urged the Department to finalise the Strategy without delay.

f)          The Committee noted that certain job category challenges existed and raised the concern that the human resources targets for women and disabled persons were not necessarily on the increase but decreasing and urged the Department and its entities to work harder to achieve these targets.

g)         Throughout the proceedings, the Committee sought clarity on the issue of Government’s involvement in Sunspace. The Committee further noted the minimal progress that had been made since the 2009 Agreement around the African Resource Management Constellation (ARMC).

h)         The Committee welcomed the recommendations by the Ministerial Review Committee on the STI Landscape as to how the NSI could be strengthened going forward.

i)           The Committee plans to invite the Department to update them, particularly on the outcomes of the Internal Working Committee’s evaluation of these recommendations as well as on the public comments received on the matter.

j)           The Committee remained concerned about the possible negative effects that hydraulic fracturing (fracking) of the Karoo shale gas reserves may have on the astronomy advantage areas, should this venture proceed. The Committee urged the Department to continue to play a leading role on the task-team involved in investigating the possibilities related to fracking.

k)          The Committee views the contributory role of the Department as crucial when it comes to education. Particular concerns were raised with regard to inputs in curriculum development as part of a plan to address the low levels of science, engineering, technology and innovation students progressing through to postgraduate studies. In light of the Department’s programme alignment to the objectives of the NDP, which foresee the number of first-rate scientists doubled by 2030, science intervention in education could not be limited to financial support for students in the field.

l)           Stringent synergies should be forged with both the Departments of Higher Education and Training and Basic Education to ensure that issues of concern regarding weaknesses in mathematics and science at school level are discussed in order to produce the desired impact for the science, technology and innovation agenda of the country.

m)        Further attention by both the Department and the Departments of Education should be devoted to addressing the low rates of academic achievement in mathematics and science as well as assessing the support and impact of the Dinaledi schools.

n)         The Committee viewed intergovernmental collaborative partnerships as instrumental in ensuring the work done by the Department and its entities was used and implemented. Enhanced co-ordination is necessary at Executive as well as Parliamentary level amongst the various portfolio and select committees in instances where science and technology issues are transversal.

o)         In interacting with the public entities in the science portfolio, Members expressed their general satisfaction with the entities’ operations and plans. They acknowledged that the science councils and agencies in this portfolio have an important role to play in facilitating the development of cutting-edge science and technology capabilities in the country.

**4. Overview and assessment of financial performance**

**4.1. Overview of Vote allocation and spending (2009/10 to 2014/15)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Vote 34: Science and Technology** | | | | | | | | |
| **Programme**  **R million** | **2009/10** | **2010/11** | **2011/12** | **2012/13** | | | **2013/14** | **2014/15** |
| **Audited** | **Audited** | **Audited** | **Main** | **Adjusted** | **Audited** | **Main** | **Estimates** |
| Administration | 159.1 | 188.9 | 195.6 | 202.6 | 229.4 | 226.4 | 268.2 | 291.0 |
| Research, Development and Innovation | 1 141.4 | 802.8 | 854.9 | 1 156.4 | 1 142.8 | 1 160.4 | 1 627.1 | 1 603.9 |
| International Co-operation and Resources | 117.5 | 131.4 | 132.3 | 141.2 | 139.3 | 137.2 | 148.4 | 157.2 |
| Human Capital and Knowledge Systems | 1 591.4 | 1 754.1 | 1 956.3 | 2 035.9 | 2 064.7 | 2 057.0 | 2 476.8 | 2 683.5 |
| Socio-Economic Partnerships | 1 174.6 | 1 174.7 | 1 264.4 | 1 419.8 | 1 423.4 | 1 418.6 | 1 677.6 | 1 864.7 |
| **Total** | **4 183.9** | **4 051.9** | **4 403.5** | **4 955.9** | **4 999.6** | **4 999.6** | **6 198.2** | **6 600.2** |

For the period 2009/10 to 2014/15, spending has and will focus on funding the development of human capital and the generation and exploration of knowledge, investing in research and development infrastructure and encouraging South African innovation. Approximately 92 per cent of the Department’s annual budgetary allocation is spent on transfers and subsidies. In the Administration programme, the increased expenditure since 2009/10 was because of the expansion of executive support in 2010/11, the procurement of a Performance Information Management System (PIMS) in 2011/12, the establishment of a Ministerial Public Participation Programme, and the establishment of the Ministerial Review Committee on the STI Landscape in South Africa. The increased expenditure from 2009/10 in the Research, Development and Innovation programme was due to the establishment of the TIA in 2010/11, the establishment of the SANSA in 2011/12 and the increase in funding for the SKA project. The increased expenditure from 2009/10 in the International Co-operation and Resources programme was due to the maintenance of projects aimed at strengthening bilateral and multilateral co-operation and leveraging off international resources. The main area of expenditure between 2009/10 and 2012/13 in the Human Capital and Knowledge Systems programme was to support researchers and postgraduate studies. In addition, since 2009/10, the Department invested R1 billion towards the establishment of the individual components of the Cyberinfrastructure programme. Expenditure in the Socio-Economic Partnerships programme concentrates mainly on developing intellectual property that have the potential to create new firms and industries.

The Department’s spending against its budget allocation was consistently above 98 per cent from 2009/10 to 2012/13.

**4.2. Financial performance for 2012/13**

The Department received an allocation of R4.95 billion for the 2012/13 financial year. In real terms (inflation-adjusted), the Department’s 2012/13 budget allocation increased by 6.2 per cent compared to the 2011/12 financial year’s allocation of R4.4 billion. During the budget adjustment process, the Department’s budget was increased by R43.68 million to R4.99 billion. This additional allocation compromised R30 million for the procurement of international broadband connectivity on the West Africa Cable System for the SKA project. As well as R13.68 million for higher personnel remuneration increases (in Programmes 1, 2, 4 and 5) than provided for in the main budget.

The Department transferred 92 per cent (R4.6 billion) of its total allocation. The transfers comprised R2.8 billion to its entities, R253 million to suppliers/clients, R1.4 billion to Corporations/Private Enterprises, R63.3 million to Not-for-profit organisations (of which ASSAf received R17.58 million) and R153.6 million to Universities and Universities of Technology.

The allocations to Programmes included; 4.6 per cent to Administration, 22.9 per cent to Research, Development and Innovation, 2.8 per cent to International Co-operation and Resources, 41.3 per cent to Human Capital and Knowledge Systems and 28.5 per cent to Socio-Economic Partnerships.

During the 2012/13 financial year, the Department shifted funds (Virements) totalling R37 million. Virements of R17 million were approved within the Administration programme due to the reclassification of items. While Virements amounting to R20 million included R10 million for communication services in the Administration programme, R8 million for titanium development in the Research, Development and Innovation programme and R2 million for goods and services in the International Co-operation and Resources programme. These amounts were reclassified and were used for the same purposes as was intended.

During the first quarter of the 2012/13 financial year, the Department had spent R1.3 billion (25.8 per cent) of its total budget. The Department had planned to spend R1.7 billion (34.4 per cent); hence, the Department was behind on total spending by R425.6 million. This was mainly due to slow spending on transfer payments as the Department was finalising the contracts with the recipients of the transfer payments. For the same reason, this spending trend is evident in the previous years.

By the end of the second quarter of the 2012/13 financial year, the Department had spent R3.1 billion (62.8 per cent) of its total budget, underspending on its planned expenditure by R4.6 million (0.1 per cent). This was mainly due to contracts not being signed as foreseen.

By the end of the third quarter of the 2012/13 financial year, the Department had spent R4 billion (80.5 per cent) of its total budget. The Department had planned to spend R4.3 billion (86.3 per cent) and was, therefore, behind on total spending by R287.4 million. This was mainly due to slow spending on transfer payments in the Human Capital and Knowledge Systems programme, specifically to Indigenous Knowledge Systems and Research and Development Infrastructure.

By the end of the fourth quarter of the 2012/13 financial year, the Department had spent R5 billion (99.5 per cent) of its total budget. Underspending on the total budget amounted to R26.3 million. This was mainly due to slow spending on transfer payments in the Human Capital and Knowledge Systems programme, specifically to Research and Development Infrastructure for the recapitalisation of the Centre of Proteomic and Genomic Research.

The Auditor-General gave the Department an unqualified audit opinion. However, the Auditor-General did report that certain employees were appointed without following the prescribed process to verify the claims made in their applications. The Committee requested an explanation of this finding. The Department responded that they contract a private company to conduct the verifications required. However, when the contract expired, its renewal was delayed when uncertainties regarding the foreign-ownership of the company arose. Once the uncertainties were resolved, the contract was renewed. In addition, all employee appointment letters stated that the appointments were being made subject to a verification and security clearance process being finalised. The Department assured the Committee that all the outstanding verifications that gave rise to this finding had been completed.

The Department incurred irregular expenditure amounting to R569 000 due to non-compliance with procurement processes. Of this amount, R483 000 related to goods and services that were procured without obtaining Standard Bidding Declaration (SBD4) forms for declaration of interests; and R86 000 related to a bid that was not awarded to the lowest quote and the lack of evidence that the specification was sent to all suppliers. Although, National Treasury condoned both amounts in this financial year resulting in a zero balance for irregular expenditure, the incidences are still being investigated. Material losses amounting to R22 000 were incurred. These related to damages to both hired and official motor vehicles, as well as bursary debt.

**4.3. Financial performance for 2013/14**

The Department was allocated R6.2 billion for the 2013/14 financial year, which represents a nominal increase of R1.2 billion (24 per cent) from 2012/13. Transfers and Subsidies account for R5.7 billion (92 per cent) of the available budget. During the first quarter of the 2013/14 financial year, the Department had spent R1.44 billion (23.2 per cent) of its total budget. The Department had planned to spend 24.2 per cent of its budget by the end of the first quarter. The Department spent R98.1 million on operational expenditure; R56.1 million in the Administration programme and R42 million in the remaining programmes. At the end of the first quarter, the Department had transferred R1.3 billion of the total available budget for transfers. The total amount spent is approximately R158 million more than the amount spent during the first quarter of the previous financial year, with the growth being in transfers to Public Corporations and Private Enterprises.

**4.4. 2014/15 Medium-Term Expenditure Framework financial allocations**

Over the next medium-term expenditure framework (MTEF), 2014/15 to 2016/17, the Department has submitted to the National Treasury, a request for an additional R2.7 billion. This request comprises R1.5 billion for infrastructure (excluding the SKA project, which entails a separate negotiation process with the National Treasury) and R1.2 billion for human capital development and institution building. The funding request for the 2014/15 financial year comprises R622.7 million for infrastructure and R385.3 million for human capital development and institution building. Hence, the total funding allocation requested by the Department for the 2014/15 financial year is approximately R7.2 billion (excluding the SKA project).

**5. Overview and assessment of service delivery performance**

**5.1. Service delivery performance for 2012/13**

Overall, the Department achieved 47 of its 66 performance targets (71 per cent), which is an improvement of 4 per cent from the previous financial year. Fourteen targets (21 per cent) were partly achieved and five targets (8 per cent) were not achieved. The Human Capital and Knowledge Systems programme includes all the targets that were not achieved. The final expenditure for the Department’s five programmes was all in excess of 99 per cent.

The entities that report to the Department fall within the Programme that aligns to its mandate and are accordingly, included below.

**Programme 1: Administration**

The purpose of this programme is to conduct the overall management and administration of the Department, to ensure that organisations funded by the Department comply with good governance standards and to ensure that their activities are aligned with the strategic focus of the NSI. The Department’s APP had no clear targets for this programme. However, key achievements within this programme include the completion of a governance framework for the entities; the completion of the Performance Information Management System (PIMS); the implementation, together with the South African Broadcasting Corporation, of a science communication programme; the development of a marketing and communication strategy for the SKA and the drafting of three Bills. The Programme had not managed, however, to attain its employment targets regarding women in senior positions and disabled people. The NACI achieved three of its six objectives and successfully implemented its new project team approach to conducting its policy studies.

**Programme 2: Research, Development and Innovation**

The purpose of the programme is to facilitate knowledge generation and exploitation through research and development in key priority areas, namely space science, biotechnology, health and energy. The Programme also facilitates the development of innovative products and services, and their commercialisation where appropriate. The Programme achieved 12 of its 15 targets and partly achieved three targets. Notable achievements include the creation of 354 construction jobs under the SKA project, which was 154 more jobs than was planned and supporting 58 technology-based solutions, against a target of eight. Three of these have been commercialised.

The TIA achieved 28 of its 33 targets (85 per cent). The targets that were not achieved included not opening a new regional office and developing three, instead of five, new technology-based enterprises. The SANSA achieved 90 per cent of its targets, with the targets that were not achieved all related to training and internships not being delivered to the numbers that were planned.

**Programme 3: International Co-operation and Resources**

This Programme is responsible for positioning the Department and South Africa as a strategic international partner with respect to STI co-operation. The Programme achieved its four targets. A notable achievement includes the signing of four agreements between the Department and the Netherlands Organisation for Scientific Research in areas relating to astronomy, industrial biotechnology and chemistry.

The AISA achieved 31 of its 47 targets (66 per cent). The AISA is being incorporated into the HSRC since the HSRC already has the internal controls necessary to ensure proper management of its functions and outputs. It is hoped that AISA will benefit from a better internal control system once incorporated.

**Programme 4: Human Capital and Knowledge Systems**

This Programme provides leadership in ensuring that South Africa’s research base is maintained, strengthened and grown so that it may contribute to the modernisation and development of a knowledge-based economy. The Programme had 32 targets; it achieved 19, partly achieved eight and did not achieve five targets. The major achievement of this programme was South Africa winning the bid to host the largest part of the SKA Radio Telescope. Additional achievements include the awarding of bursaries to 8 379 postgraduate students, which was 2 279 more than was planned; and awarding 476 more researchers with grants through the NRF than was planned. The five targets that were not achieved included the following. The first stated that the Minister would approve an implementation plan for the Strategy for Human Capital Development for Research, Innovation and Scholarship. However, the implementation plan could not be developed because the Strategy was not finalised. The second target related to the development of a draft Science, Technology, Engineering, Mathematics and Innovation (STEMI) Promotion and Engagement Strategy. Progress on the strategy was delayed due to a new approach taken to conceptualise the strategy. The third target that was not achieved related to the number (250) of researchers that access research infrastructure. No researchers could access the research infrastructure because the grants that had to be awarded for the infrastructure to be developed were awarded late in the financial year. No reason explaining why the grants were awarded late was provided. The fourth target that was not achieved was the development of a draft Antarctic Research Strategy because the Department had decided to develop a broader framework for the holistic development of research in the Southern Oceans and Antarctica. The fifth target that was not achieved was the development of a cabinet memorandum on the draft legislation for the protection and promotion of Indigenous Knowledge Systems.

The NRF achieved 32 of its 46 (63 per cent) targets, and showed good progress against the achievements of its Vision 2015 goals. The entity is currently implementing a number or recommendations stemming from a 2010 review to improve the service it delivers to its clients.

The ASSAf had a productive year despite many changes to its governance structure. For the first time, the South African Young Academy of Sciences (SAYAS) and the South African Academy of Engineering (SAAE) activities were included in the ASSAf Annual Report. The ASSAf selected 27 new members in the year under review and now have 394 members (of these 23 per cent are women and 28 per cent are black).

**Programme 5: Socio-Economic Partnerships**

This Programme enhances the growth and development priorities of government through targeted science and technology interventions and the development of strategic partnerships with other government departments, industry, research institutions and communities. The Programme achieved 12 of its 15 targets and partly achieved three targets. Notable achievements included increasing the number of PhD students co-funded by the Department through the NRF, finalising the Information and Communication Technology (ICT) RDI Implementation Roadmap, implementing the Wireless Mesh Network technology demonstrator in selected rural district municipalities and implementing the new amendments to the Research and Development Tax Incentive Programme that seeks to promote investment into research and development.

The HSRC achieved 48 of its 59 (81 per cent) targets. Some of the achievements that were exceeded include producing 39 book chapters instead of 13, publishing 1.77 peer-reviewed publications per researcher instead of 1.66 and signing 27 Memoranda of Understanding with other research institutions instead of 12. The targets that were not achieved included not producing any of the five planned reports on the health of educators in public schools and Further Education and Training (FET) institutions, nor the report on land reform and urbanisation.

The CSIR achieved 13 of its 16 (81 percent) targets, and exceeded approximately 50 per cent of its targets. The targets that were not achieved included having 503 peer-reviewed publications instead of 575, having less than the planned number of staff with doctoral degrees and exceeding its energy efficiency target.

**Auditor General’s Report:**

The Auditor-General reported that the Department could not provide sufficient evidence in support of the information presented regarding the number of Small and Medium Enterprises (SMEs) provided with technology support, and the number of masters and doctoral students funded or co-funded in designated niche areas. In addition, material audit adjustments in the annual performance report were identified during the audit. The Auditor-General states that the abovementioned findings were due to a lack of monitoring to ensure that valid, accurate and complete information was reported. In response to the findings of the Auditor-General, the Department has requested its Internal Audit to conduct an audit on the SMEs records kept by the TIA. The Department also stated that, in future, all targets would be set in consultation with the relevant entities. The Department verified the information pertaining to the numbers of students funded during the first quarter of the 2013/14 financial year. The Department assured the Committee that it is committed to achieving a minimum of 80 per cent of its planned targets.

The overall outcome of the audits conducted by the Auditor-General and independent auditors on the Department and its entities show that the science and technology portfolio has remained relatively unchanged. The NRF, the CSIR and the HSRC received unqualified opinions with no findings on predetermined objectives and compliance. The DST and AISA received unqualified opinions with findings on compliance and predetermined objectives.

The AISA recorded instances of non-compliance as material adjustments were made to the annual financial statements and a finding on predetermined objectives as the performance targets were not specific and time bound. The Department managed to resolve its finding of the prior year on the usefulness of predetermined objectives, but had new findings relating to the unreliability of the performance information reported. The Department also had findings relating to non-compliance with laws and regulations. The SANSA and TIA had findings on predetermined objectives where the indicators were not well defined. However, there was an overall improvement in compliance with laws and regulations.

Concerning the TIA, the Auditor-General noted that the TIA’s accounting authority initiated an investigation into allegations of nepotism related to appointments and the procurement of goods and services, intimidation, gross violation of the investment decision process, failure of the corporate governance structure and mismanagement of funds and assets. The investigation was still ongoing at the date of the audit report and the potential impact on the financial statements could not be determined.

**5.2. Service delivery performance for 2013/14**

Overall, the Department have 62 performance targets for the 2013/14 financial year. By the end of the first quarter of the current financial year, three targets (5 per cent) had been achieved. In the previous year, 10 per cent of the targets were achieved during the first quarter. Targets that are on course to be achieved, equal 35 (56 per cent) while 18 targets may need intervention. Five (5) targets were not reported on; as they are biannual and annual targets meaning that one target needs remedial action. The target that needs remedial action is the development of the Antarctica Research Strategy; there is no draft strategy as was planned to be achieved by 30 June 2013. The Deputy Director-General (DDG) for the Human Capital and Knowledge Systems programme has directed that the NRF appoint contractors to develop this strategy.

**6. Finance and Service delivery performance assessment**

The Department is not a service delivery department, per se, and setting targets that appropriately reflect the nature of scientific endeavour are not always easy. However, in contributing to the improvement of the livelihoods of South Africans, work done by the Department includes:

a)         The development of a candidate malaria drug that shows potential against multiple points in the malaria parasite’s life cycle.

b)         The creation of 354 construction jobs within the SKA project.

c)         The discovery of potent antibodies that can kill 88 per cent of human immunodeficiency virus (HIV) strains found throughout the world. This represents a significant contribution to the research towards the development of a HIV vaccine.

d)         The development of a National Nanoscience Postgraduate Teaching and Training Platform, believed to be the first of its kind in the world.

e)         The development of a digital laser, another world first, that has the potential to revolutionise various sectors including nuclear medicine for the treatment of cancer.

The Department has consistently demonstrated that it can spend, to a great degree, its budget allocation according to spending targets. However, even though the Department has proven that it can spend its budget; this is not quite matched in achievement of its performance targets. The three priority domains of the Department are research and development, human capital development, and infrastructure. In all these domains the Department and its entities has shown steady progress. However, given its resources, the rate of progress within these priority domains may not be at the desired level. Furthermore, the biggest threat to the objectives of the Department is the poor mathematics and science performance by South African scholars and the low throughput rate to postgraduate study. In response to the latter, the NRF has commissioned an investigation into why fewer black students continue through to postgraduate level. The results of which will hopefully inform future policy geared to transforming the science and technology sector of South Africa.

The recent Management Performance Assessment Tool (MPAT) report of the Department of Performance Monitoring and Evaluation in the Presidency identified the Department as being one of the best managed national departments. Furthermore, the Department’s Performance Information Management System (PIMS) will be used as a case study of best practice for use and implementation by other government departments.

The Committee is satisfied, therefore, with the performance of the Department and is of the view that greater impact can be achieved with the allocation of additional resources, particularly for human capital development, research and development to increase the knowledge generation capacity of the system and for the provision and maintenance of research infrastructure.

**7. COMMITTEE Observations**

The Committee, having assessed the work of the Department, commended it for attaining an unqualified audit opinion for the 2012/13 financial year, and for spending 99.5 per cent of its budget. The Committee, furthermore, wishes to make the following observations:

a.         The Committee acknowledged and commended the Department on their achievements for the year under review.

b.         The Committee noted that reporting on issues of transformation within the entities and their programmes was generally lacking in the annual reports. The Department stated that this information is available, therefore, the Committee resolved to have a briefing on the matter.

c.         The Committee noted the continued weakness in co-ordination across government. Examples of this within the science and technology sector related to the delay in finalising the Bioeconomy, Antarctica, Human Capital Development for STI and the Indigenous Knowledge Systems strategies.

d.         The Committee welcomed the idea of the close working relationship developed between NACI and ASSAf especially concerning the development of a National Innovation Framework. They encourage the effective collaboration of entities to avoid the duplication of effort.

e.         The Committee noted the recent decision concerning hydraulic fracturing of shale gas in the Karoo. In response to these developments, the Committee will evaluate the progress of implementing the Astronomy Geographic Advantage Act, and request that the Department provide an update on its role and work within the interdepartmental task team on hydraulic fracturing.

f.          The Committee noted the challenges stemming from the TIA review and subsequent forensic investigations and resolved to monitor the implementation of the recommendations and follow up on the outcome of the forensic review.

g.         The Committee found that the 8 per cent vacancy rate in the Department is too high. The Committee welcomes the Director-General’s commitment to reduce the vacancy rate to 5 per cent.

The following Committee observations emanate from its oversight visits:

h.         The Committee noted that the European Union-South Africa science and technology agreement, which affords South African researchers the opportunity to participate in the European Union’s Framework Programme for Research and Technology Development, is one of South Africa’s most important and strategic partnerships in science and technology co-operation.

i.           The Committee encourages the Department to explore even greater involvement for South African researchers in the European Union’s Framework Programme, so that the country can benefit in securing more research funds, researchers and research outputs.

j.           In relation to the visit to Bulgaria, the Committee noted the absence of a science and technology agreement with Bulgaria. The Committee resolved to support any efforts by the Department to explore the possibility of an international co-operation agreement whereby scientists from both countries could collaborate on certain projects of mutual interest and benefit.

k.          A number of similarities in terms of the functions and operation of the Bulgarian Academy of Science and the Academy of Science of South Africa were noted and possible areas of co-operation through the Department could be explored.

l.           A visit to Kleinmond to inspect the 440 pilot units that were built according to the specifications of the CSIR-developed low-income demonstration house proved that this technology might be an alternative to the current poor standard of government-subsidised housing.

m.        The Committee hopes that through effective inter-governmental partnerships, this model could be promoted and replicated to address effectively the challenges experienced in the provision of decent housing.

n.         The Committee is pleased that the Department has commissioned the CSIR to monitor and evaluate how these houses perform when built at scale. It looks forward to a report on the matter.

o.         The Committee visited the University of Fort Hare where the Department’s Community–University Partnership Programme (CUPP) is currently piloted. The project focuses on how Universities can be more responsive to and inclusive of community issues, by sharing knowledge and expertise.

p.         The CUPP is currently piloted at four rural-based universities, and the Committee hopes to see this initiative expanded to other universities around the country.

q.         The Department listed the launch of the Cofimvaba Rural Education Initiative as one of its performance highlights for the year under review. The Committee visited the Cofimvaba Schools District Technology Project to witness how the introduction of new and tested technologies contributes to the improvement of the quality of teaching and learning in rural schools. The training of teachers to teach with technology and thus contributing to the improvement of rural education through technology-led innovation is commendable. The Committee would like to see the Department of Basic Education build on and implement the successes of this programme at national scale.

r.          The committee commended the Department and the CSIR for the KwaNobuhle Essential Oils Project. Through this project, science and technology is used to alleviate poverty, the availability of this high-quality rose geranium oil from South Africa could positively contribute to the growth of the sector, and a successful rose geranium business at KwaNobuhle may encourage landowners in the district to transform their land into productive farming units.

s.         The Committee was, however, concerned about the conflict that exists between the trustees, management and some of the beneficiaries of the farm as well as the minimal salaries the farm workers received. The Committee urged the CSIR and the Department to attend to these challenges.

t.          Another aspect of the Eastern Cape visit focussed on science centres, which the Committee views as an important mechanism to generate awareness and understanding of science and technology amongst learners and adults. The Department should continue to seek partnerships with business, as this is crucial for the sustainability of these centres.

u.         The Committee attended two conferences for the year under review, namely the CSIR biennial conference and the Department’s STI Summit. The Committee found that both meetings were meaningful because the CSIR conference illustrated the research and development work of the CSIR in response to national priorities. The STI Summit provided key stakeholders with the opportunity to discuss and explore ways of strengthening the NSI in line with the objectives of the NDP, the NGP and the IPAP2.

**8. COMMITTEE Recommendations**

Informed by its deliberations, the Committee recommends that the House request that:

a.         The Department and entities ensure that they obtain unqualified audits with no material findings.

b.         The Department should ensure that performance targets are formulated according to the standards defined by National Treasury and that the necessary communication between the Department and its entities occurs to ensure that targets are aligned.

c.         The Department’s commitment to the 5 per cent vacancy rate should have a timeline attached.

d.         The Department should finalise the Southern Oceans and Antarctica Framework as a matter of urgency. The Committee expects the Department to provide it with a brief on the completed strategies.

e.         The Department should strengthen its relationship with other government departments where there are cross cutting or overlapping mandates to ensure effective implementation of intergovernmental programmes and policies. These relationships are crucial to the success of the NSI.

f.          The Department is granted the additional funds it requests, to ensure that continued progress is made against its objectives.

**9. Appreciation**

The Committee expressed their sincere appreciation to the Department and the entities for providing Parliament with clear, detailed information regarding their performance.

Report to be considered.