

Science and Innovation

Budget summary

| R million | 2021/22 | | | | 2022/23 | 2023/24 |
|---|--|------------------|-------------------------|-----------------------------|----------------|----------------|
| | Total | Current payments | Transfers and subsidies | Payments for capital assets | Total | Total |
| MTEF allocation | | | | | | |
| Administration | 328.2 | 310.1 | 15.3 | 2.9 | 332.6 | 333.3 |
| Technology Innovation | 1 780.2 | 74.8 | 1 705.4 | – | 1 783.3 | 1 793.3 |
| International Cooperation and Resources | 146.6 | 72.1 | 74.5 | – | 149.1 | 149.5 |
| Research, Development and Support | 4 949.2 | 55.2 | 4 894.0 | – | 5 093.3 | 5 192.1 |
| Socioeconomic Innovation Partnerships | 1 729.0 | 54.2 | 1 674.8 | – | 1 769.8 | 1 776.4 |
| Total expenditure estimates | 8 933.3 | 566.5 | 8 364.0 | 2.9 | 9 128.0 | 9 244.6 |
| Executive authority | Minister of Science and Innovation | | | | | |
| Accounting officer | Director-General of Science and Innovation | | | | | |
| Website | www.dst.gov.za | | | | | |

The Estimates of National Expenditure is available at www.treasury.gov.za. Additional tables in Excel format can be found at www.treasury.gov.za and www.vulekamali.gov.za.

Vote purpose

Realise the full potential of science and technology in social and economic development by developing human resources, research and innovation.

Mandate

The Department of Science and Innovation derives its mandate from the 1996 White Paper on Science and Technology, which introduced the concept of the national system of innovation, a set of interacting organisations and policies through which South Africa creates, acquires, diffuses and puts into practice new knowledge to help achieve individual and collective goals. A coordinated and efficient national system will help the country achieve its national development priorities by promoting change through innovation. This will enable all South Africans to enjoy the economic, sociopolitical and intellectual benefits of science, technology and innovation.

Selected performance indicators

Table 35.1 Performance indicators by programme and related priority

| Indicator | Programme | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---|--|---------------------|----------------|----------------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of technology demonstrations, prototypes, products and services developed per year | Technology Innovation | Priority 2: Economic transformation and job creation | – ¹ | – ¹ | – ¹ | 1 | 1 | 7 | 5 |
| Number of commercial outputs in designated areas per year | Technology Innovation | | 5 | 7 | 11 | 4 | 4 | 5 | 5 |
| Funds invested by international partners in their own organisations and initiatives targeted at cooperation with South African partners in the areas of research, innovation, science, technology and innovation human capital development as part of cooperation initiatives implemented by the department per year | International Cooperation and Resources | Priority 7: A better Africa and world | R1.2bn | R3.3bn | R300m | R300m | R300m | R300m | R400m |

Table 35.1 Performance indicators by programme and related priority

| Indicator | Programme | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---------------------------------------|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of doctoral students awarded bursaries per year, as reflected in reports from the National Research Foundation and relevant entities | Research, Development and Support | Priority 3: Education, skills and health | 3 621 | 3 380 | 3 100 | 3 100 | 3 100 | 3 100 | 3 400 |
| Number of pipeline postgraduate students (BTech, honours and masters students) awarded bursaries per year, as reflected in reports from the National Research Foundation and relevant entities per year | Research, Development and Support | Priority 3: Education, skills and health | 10 601 | 9 774 | 10 800 | 10 800 | 10 800 | 10 800 | 10 900 |
| Number of researchers awarded research grants per year through programmes managed by the National Research Foundation, as reflected in the foundation's project reports | Research, Development and Support | | 4 707 | 4 633 | 4 500 | 4 500 | 4 500 | 4 500 | 4 600 |
| Number of knowledge and innovation products (patents, prototypes, technology demonstrators or technology transfer packages) added to the intellectual property portfolio through fully funded or co-funded research initiatives per year | Socioeconomic Innovation Partnerships | Priority 2: Economic transformation and job creation | 38 | 42 | 57 | 70 | 60 | 60 | 60 |
| Number of knowledge products on innovation for inclusive development published per year | Socioeconomic Innovation Partnerships | | 6 | 8 | 6 | 4 | 4 | 4 | 4 |

1. No historical data available.

Expenditure overview

Over the medium term, the department plans to focus on: producing new knowledge; generating and exploiting knowledge and innovation for inclusive economic development; health care innovation; developing human capital; developing infrastructure; and championing innovation in the energy sector.

To ensure that publicly funded intellectual property is protected, commercialised and used, the department plans to spend R166.5 million over the MTEF period in the *National Intellectual Property Management Office* subprogramme in the *Technology Innovation* programme. Over the same period, R622.9 million is allocated in the programme for spending on bio-innovation activities in the manufacturing, health and agricultural sectors, as well as in developing indigenous knowledge applications.

The national integrated cyberinfrastructure system is expected to enable the successful and sustainable implementation of national projects such as MeerKAT and the Square Kilometre Array, as well as other large research infrastructure that is dependent on the presence of robust cyberinfrastructure. In this regard, R3.6 billion is allocated over the medium term to the *Basic Science and Infrastructure* subprogramme in the *Research, Development and Support* programme for the Council for Scientific and Industrial Research to implement the system. The MeerKAT telescope, for example, is expected to add 20 antennae in 2021/22 to its current array of 64 at a cost of R800 million.

The national space strategy is intended to ensure that South Africa captures a reasonable share of the global space market. This involves engaging in economic activities related to manufacturing components that go into earth's orbit or beyond. To implement the strategy, R670.7 million is allocated to the *Space Science* subprogramme in the *Technology Innovation* programme over the MTEF period. Through the National Research Foundation, which is allocated R1.9 billion over the same period for human capital development, the department aims to award 9 600 and 32 500 bursaries to PhD and postgraduate students, respectively. To intensify South Africa's intellectual property portfolio, the department also aims to produce 180 innovation products such as patents, prototypes, and technology demonstrators and transfer packages. These activities will be carried out by the Technology Innovation Agency with an allocation of R138.4 million over the medium term.

Expenditure is expected to increase at an average annual rate of 8.3 per cent, from R7.3 billion in 2020/21 to R9.2 billion in 2023/24. Of the department's total expenditure over the MTEF period, 93.5 per cent (R25.6 billion) is allocated for transfers to entities for investment in key focus areas. Spending on compensation

of employees, the department's second-largest cost driver, decreases at an average annual rate of 0.3 per cent, from R362 million in 2020/21 to R358.4 million in 2023/24. This is due to budget reductions approved by Cabinet amounting to R1.7 billion over the MTEF period, effected mainly on compensation of employees by means of natural attrition and not filling vacant posts; selected goods and services items such as travel and subsistence, and venues and catering; and transfers to public entities.

Expenditure trends and estimates

Table 35.2 Vote expenditure trends and estimates by programme and economic classification

| Programmes | | | | | | | | | | | |
|---|-----------------|----------------|----------------|-----------------------------------|--|--|----------------------------------|----------------|----------------|--|--|
| 1. Administration | | | | | | | | | | | |
| 2. Technology Innovation | | | | | | | | | | | |
| 3. International Cooperation and Resources | | | | | | | | | | | |
| 4. Research, Development and Support | | | | | | | | | | | |
| 5. Socioeconomic Innovation Partnerships | | | | | | | | | | | |
| Programme | | | | | | | | | | | |
| R million | Audited outcome | | | Adjusted appropriation 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/ Total (%) 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/ Total (%) 2020/21 - 2023/24 |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Programme 1 | 357.9 | 379.5 | 352.1 | 304.1 | -5.3% | 4.5% | 328.2 | 332.6 | 333.3 | 3.1% | 3.8% |
| Programme 2 | 1 120.6 | 1 149.0 | 1 236.7 | 1 378.3 | 7.1% | 15.8% | 1 780.2 | 1 783.3 | 1 793.3 | 9.2% | 19.5% |
| Programme 3 | 136.7 | 145.2 | 136.0 | 116.8 | -5.1% | 1.7% | 146.6 | 149.1 | 149.5 | 8.6% | 1.6% |
| Programme 4 | 4 296.5 | 4 520.4 | 4 578.4 | 3 745.2 | -4.5% | 55.6% | 4 949.2 | 5 093.3 | 5 192.1 | 11.5% | 54.9% |
| Programme 5 | 1 617.0 | 1 755.2 | 1 778.2 | 1 733.8 | 2.4% | 22.3% | 1 729.0 | 1 769.8 | 1 776.4 | 0.8% | 20.3% |
| Total | 7 528.6 | 7 949.3 | 8 081.4 | 7 278.3 | -1.1% | 100.0% | 8 933.3 | 9 128.0 | 9 244.6 | 8.3% | 100.0% |
| Change to 2020 Budget estimate | | | | (1 519.1) | | | (444.5) | (553.5) | (720.1) | | |
| Economic classification | | | | | | | | | | | |
| Current payments | 552.2 | 602.0 | 558.7 | 507.0 | -2.8% | 7.2% | 566.5 | 572.3 | 573.1 | 4.2% | 6.4% |
| Compensation of employees | 345.1 | 358.8 | 336.7 | 362.0 | 1.6% | 4.5% | 358.0 | 358.4 | 358.4 | -0.3% | 4.2% |
| Goods and services ¹ | 207.1 | 243.2 | 222.1 | 145.0 | -11.2% | 2.7% | 208.5 | 213.9 | 214.7 | 14.0% | 2.3% |
| <i>of which:</i> | | | | | | | | | | | |
| Advertising | 9.3 | 25.1 | 13.2 | 13.4 | 12.8% | 0.2% | 13.2 | 13.5 | 13.6 | 0.6% | 0.2% |
| Consultants: Business and advisory services | 6.4 | 16.4 | 12.4 | 13.6 | 28.8% | 0.2% | 21.8 | 22.3 | 22.4 | 18.1% | 0.2% |
| Agency and support/outsourced services | 7.3 | 12.0 | 9.2 | 11.9 | 17.6% | 0.1% | 15.9 | 16.3 | 16.4 | 11.2% | 0.2% |
| Property payments | 12.9 | 11.8 | 42.3 | 15.1 | 5.5% | 0.3% | 14.1 | 14.5 | 14.5 | -1.3% | 0.2% |
| Travel and subsistence | 67.2 | 65.9 | 61.9 | 19.2 | -34.2% | 0.7% | 60.6 | 62.2 | 62.4 | 48.3% | 0.6% |
| Venues and facilities | 22.1 | 26.6 | 17.5 | 10.6 | -21.7% | 0.2% | 16.1 | 16.5 | 16.6 | 16.0% | 0.2% |
| Transfers and subsidies¹ | 6 955.1 | 7 336.9 | 7 514.8 | 6 767.9 | -0.9% | 92.7% | 8 364.0 | 8 552.7 | 8 668.3 | 8.6% | 93.5% |
| Departmental agencies and accounts | 4 768.2 | 5 003.6 | 5 165.3 | 5 131.8 | 2.5% | 65.1% | 6 374.3 | 6 509.3 | 6 602.3 | 8.8% | 71.2% |
| Public corporations and private enterprises | 1 722.5 | 1 850.4 | 1 811.7 | 1 256.6 | -10.0% | 21.5% | 1 593.7 | 1 636.1 | 1 653.7 | 9.6% | 17.8% |
| Non-profit institutions | 462.5 | 481.4 | 533.6 | 379.4 | -6.4% | 6.0% | 396.1 | 407.4 | 412.3 | 2.8% | 4.6% |
| Households | 1.8 | 1.5 | 4.2 | - | -100.0% | 0.0% | - | - | - | 0.0% | 0.0% |
| Payments for capital assets | 21.1 | 10.3 | 7.8 | 3.4 | -45.5% | 0.1% | 2.9 | 3.0 | 3.1 | -2.6% | 0.0% |
| Machinery and equipment | 21.1 | 10.3 | 7.8 | 3.4 | -45.5% | 0.1% | 2.9 | 3.0 | 3.1 | -2.6% | 0.0% |
| Payments for financial assets | 0.2 | 0.1 | 0.1 | - | -100.0% | 0.0% | - | - | - | 0.0% | 0.0% |
| Total | 7 528.6 | 7 949.3 | 8 081.4 | 7 278.3 | -1.1% | 100.0% | 8 933.3 | 9 128.0 | 9 244.6 | 8.3% | 100.0% |

1. Tables with expenditure trends, annual budget, adjusted appropriation and audited outcome are available at www.treasury.gov.za and www.vulekamali.gov.za.

Transfers and subsidies expenditure trends and estimates

Table 35.3 Vote transfers and subsidies trends and estimates

| R thousand | Audited outcome | | | Adjusted appropriation 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/ Total (%) 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/ Total (%) 2020/21 - 2023/24 |
|--|------------------|------------------|------------------|-----------------------------------|--|--|----------------------------------|------------------|------------------|--|--|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Households | | | | | | | | | | | |
| Social benefits | | | | | | | | | | | |
| Current | 1 113 | 851 | 2 739 | - | -100.0% | - | - | - | - | - | - |
| Households | 1 113 | 851 | 2 739 | - | -100.0% | - | - | - | - | - | - |
| Departmental agencies and accounts | | | | | | | | | | | |
| Departmental agencies (non-business entities) | | | | | | | | | | | |
| Current | 3 630 637 | 3 760 432 | 4 070 309 | 4 018 513 | 3.4% | 54.2% | 4 742 614 | 4 817 440 | 4 835 954 | 6.4% | 56.9% |
| Various institutions: Institutional and programme support research | 18 | 1 231 | 1 838 | - | -100.0% | - | - | - | - | - | - |
| Various institutions: Biofuels research | - | - | 2 000 | - | - | - | - | - | - | - | - |

Table 35.3 Vote transfers and subsidies trends and estimates

| | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average Expenditure/ Total (%) |
|---|-----------------|---------|---------|------------------------|-------------------------|--------------------------------|----------------------------------|-----------|-----------|-------------------------|--------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R thousand | | | | | | | | | | | |
| Various institutions: Technology transfer offices: Support of research units | 41 439 | 2 073 | 2 188 | - | -100.0% | 0.2% | - | - | - | - | - |
| Various institutions: Energy grand challenge research | 16 000 | - | - | 42 913 | 38.9% | 0.2% | 43 318 | 44 451 | 44 622 | 1.3% | 0.5% |
| Various institutions: Health innovation research | 21 074 | 72 800 | 49 020 | - | -100.0% | 0.5% | - | - | - | - | - |
| Various institutions: HIV and AIDS prevention and treatment technologies research | - | 24 588 | 27 866 | 29 205 | - | 0.3% | 30 225 | 31 019 | 31 139 | 2.2% | 0.4% |
| Various institutions: Hydrogen strategy research | 2 929 | - | - | - | -100.0% | - | - | - | - | - | - |
| Various institutions: Innovation projects research | 15 044 | - | 14 868 | 171 376 | 125.0% | 0.7% | 503 295 | 519 394 | 521 389 | 44.9% | 5.3% |
| Various institutions: Space science research: Economic competitiveness and support package | 44 860 | 13 200 | 54 400 | 51 441 | 4.7% | 0.6% | 32 439 | 33 291 | 33 419 | -13.4% | 0.5% |
| National Research Foundation: Indigenous knowledge systems | 1 574 | - | - | - | -100.0% | - | - | - | - | - | - |
| National Research Foundation: Research and development in indigenous knowledge systems | - | 9 650 | 1 623 | 16 806 | - | 0.1% | 6 599 | 6 765 | 6 792 | -26.1% | 0.1% |
| Technology Innovation Agency | 396 732 | 420 322 | 440 929 | 408 825 | 1.0% | 5.8% | 447 703 | 458 370 | 460 131 | 4.0% | 5.5% |
| South African National Space Agency | 131 226 | 138 036 | 143 464 | 161 196 | 7.1% | 2.0% | 202 193 | 162 439 | 163 063 | 0.4% | 2.1% |
| Various institutions: Emerging research areas | 7 500 | 3 400 | - | - | -100.0% | - | - | - | - | - | - |
| National Research Foundation: Bilateral cooperation for global science development | 13 979 | 14 793 | 15 876 | 11 350 | -6.7% | 0.2% | 16 670 | 17 077 | 17 143 | 14.7% | 0.2% |
| Various institutions: Global science: International multilateral agreements | 27 857 | 9 532 | 18 279 | - | -100.0% | 0.2% | - | - | - | - | - |
| Various institutions: Global science: African multilateral agreements | 3 300 | 5 200 | - | - | -100.0% | - | - | - | - | - | - |
| Academy of Science of South Africa | 25 261 | 25 668 | 26 983 | 24 840 | -0.6% | 0.4% | 33 210 | 33 839 | 33 970 | 11.0% | 0.4% |
| Various institutions: Astronomy research and development | 29 348 | 30 639 | 32 789 | 34 364 | 5.4% | 0.4% | 40 623 | 41 715 | 41 876 | 6.8% | 0.5% |
| Various institutions: Policy development on human and social development dynamics | 26 012 | 25 619 | 27 116 | 30 284 | 5.2% | 0.4% | 36 946 | 37 944 | 38 090 | 7.9% | 0.4% |
| National Research Foundation: Human resources development for science and engineering | 744 590 | 851 898 | 922 337 | 793 972 | 2.2% | 11.6% | 982 897 | 1 006 850 | 1 010 719 | 8.4% | 11.7% |
| National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package | - | - | - | 23 057 | - | 0.1% | 18 607 | 19 104 | 19 178 | -6.0% | 0.2% |
| National Research Foundation | 925 965 | 904 752 | 943 385 | 859 469 | -2.5% | 12.7% | 962 587 | 986 202 | 989 991 | 4.8% | 11.7% |
| Various institutions: Science awareness, research and initiatives to encourage youth participation in science | 73 018 | 58 137 | 64 273 | 33 498 | -22.9% | 0.8% | 91 643 | 94 066 | 94 428 | 41.3% | 1.0% |
| National Research Foundation: South African research chairs initiative to develop human resources in science | 496 872 | 530 274 | 566 305 | 533 508 | 2.4% | 7.4% | 588 550 | 602 902 | 605 218 | 4.3% | 7.2% |
| Various institutions: Strategic science platforms for research and development | 180 626 | 188 883 | 191 335 | 190 609 | 1.8% | 2.6% | 235 171 | 241 332 | 242 258 | 8.3% | 2.8% |
| Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support | - | - | 33 823 | 83 843 | - | 0.4% | - | - | - | -100.0% | 0.3% |
| Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project | - | - | 39 565 | 46 978 | - | 0.3% | - | - | - | -100.0% | 0.1% |
| Various institutions: Advanced manufacturing technology strategy implementation | - | 269 | 904 | - | - | - | - | - | - | - | - |
| Various institutions: Innovative research and development | 36 317 | 19 106 | 24 829 | 69 998 | 24.4% | 0.5% | 48 322 | 49 593 | 49 784 | -10.7% | 0.7% |
| Human Sciences Research Council | 304 656 | 303 733 | 324 155 | 289 325 | -1.7% | 4.3% | 314 394 | 321 098 | 322 332 | 3.7% | 3.9% |
| Various institutions: Local manufacturing capacity research and technical support | 21 172 | 57 544 | 28 689 | 34 495 | 17.7% | 0.5% | 32 588 | 33 451 | 33 579 | -0.9% | 0.4% |
| National Research Foundation: Research information management system | 3 781 | 4 000 | 8 448 | 8 854 | 32.8% | 0.1% | 11 035 | 11 315 | 11 358 | 8.7% | 0.1% |

Table 35.3 Vote transfers and subsidies trends and estimates

| | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average Expenditure/ Total (%) |
|---|------------------|------------------|------------------|------------------------|-------------------------|--------------------------------|----------------------------------|------------------|------------------|-------------------------|--------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R thousand | | | | | | | | | | | |
| Human Science Research Council: Develop and monitor science and technology indicators | 3 172 | 9 984 | 12 404 | 13 000 | 60.0% | 0.1% | 15 221 | 15 557 | 15 617 | 6.3% | 0.2% |
| Various institutions: Environmental innovation | 3 755 | 4 250 | 19 360 | 42 947 | 125.3% | 0.2% | 33 331 | 34 213 | 34 345 | -7.2% | 0.4% |
| Various institutions: Local systems of innovation for the cold chain technologies project | 11 560 | – | – | 12 360 | 2.3% | 0.1% | 15 047 | 15 453 | 15 513 | 7.9% | 0.2% |
| Various institutions: Implementation of bioeconomy strategy | 21 000 | 30 851 | 31 258 | – | -100.0% | 0.3% | – | – | – | – | – |
| Capital | 1 137 597 | 1 243 198 | 1 094 997 | 1 113 319 | -0.7% | 16.1% | 1 631 644 | 1 691 825 | 1 766 390 | 16.6% | 19.2% |
| Various institutions: Infrastructure projects for research and development | 443 666 | 533 991 | 408 023 | 656 736 | 14.0% | 7.1% | 829 237 | 861 609 | 899 583 | 11.1% | 10.0% |
| National Research Foundation: Square Kilometre Array: Capital contribution to research | 693 931 | 709 207 | 686 974 | 456 583 | -13.0% | 8.9% | 802 407 | 830 216 | 866 807 | 23.8% | 9.1% |
| Households | | | | | | | | | | | |
| Other transfers to households | | | | | | | | | | | |
| Current | 680 | 650 | 1 510 | – | -100.0% | – | – | – | – | – | – |
| Households | 280 | 650 | 150 | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Policy development on human and social development dynamics | – | – | 280 | – | – | – | – | – | – | – | – |
| National Research Foundation: Human resources development for science and engineering | 400 | – | 1 080 | – | -100.0% | – | – | – | – | – | – |
| Public corporations and private enterprises | | | | | | | | | | | |
| Other transfers to public corporations | | | | | | | | | | | |
| Current | 373 836 | 432 372 | 456 766 | 302 837 | -6.8% | 5.5% | 343 082 | 352 016 | 353 369 | 5.3% | 4.2% |
| Various institutions: Technology transfer offices: Support of research units | 892 | 7 652 | 8 353 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Energy grand challenge research | – | 10 153 | 3 550 | – | – | – | – | – | – | – | – |
| Various institutions: Hydrogen strategy research | – | 4 860 | 25 884 | – | – | 0.1% | – | – | – | – | – |
| Various institutions: Hydrogen strategy (capital) | – | – | 13 086 | – | – | – | – | – | – | – | – |
| Various institutions: Innovation projects research | 9 808 | 4 916 | 450 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Space science research: Economic competitiveness and support package | – | – | 5 000 | – | – | – | – | – | – | – | – |
| National Research Foundation: Research and development in indigenous knowledge systems | 2 664 | 1 500 | 3 200 | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Emerging research areas | 77 860 | 67 800 | 80 700 | 116 492 | 14.4% | 1.2% | 116 689 | 119 750 | 120 210 | 1.1% | 1.5% |
| Various institutions: Global science: International multilateral agreements | 1 680 | 4 400 | 3 636 | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Global science: African multilateral agreements | 3 110 | 4 002 | 4 380 | – | -100.0% | – | – | – | – | – | – |
| National Research Foundation: Human resources development for science and engineering | – | – | 41 234 | – | – | 0.1% | – | – | – | – | – |
| National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package | 39 056 | 41 040 | 22 000 | – | -100.0% | 0.4% | – | – | – | – | – |
| Various institutions: Science awareness | – | 2 356 | – | – | – | – | – | – | – | – | – |
| Various institutions: Strategic science platforms for research and development | 5 215 | 6 355 | 14 900 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support | – | – | 46 178 | – | – | 0.2% | – | – | – | – | – |
| Various institutions: Advanced manufacturing technology strategy implementation | 48 239 | 41 245 | 58 356 | 57 576 | 6.1% | 0.7% | 63 343 | 65 014 | 65 264 | 4.3% | 0.8% |
| Various institutions: Innovative research and development | 5 283 | – | 1 000 | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Information and communications technology | 26 883 | 26 237 | 27 975 | 39 839 | 14.0% | 0.4% | 41 821 | 42 929 | 43 094 | 2.7% | 0.5% |

Table 35.3 Vote transfers and subsidies trends and estimates

| R thousand | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
|---|-----------------|----------------|----------------|------------------------|-------------------------|---------------------------------|----------------------------------|------------------|------------------|-------------------------|---------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| Various institutions: Local manufacturing capacity research and technical support | 65 172 | 48 320 | - | - | -100.0% | 0.4% | - | - | - | - | - |
| Council for Scientific and Industrial Research: Mining research and development | - | - | 21 139 | 41 659 | - | 0.2% | 63 506 | 65 073 | 65 323 | 16.2% | 0.7% |
| Various institutions: Resource-based industries research and development | 62 571 | 107 391 | 52 852 | 47 271 | -8.9% | 0.9% | 57 723 | 59 250 | 59 478 | 8.0% | 0.7% |
| Various institutions: Environmental innovation | 11 730 | 16 545 | 9 000 | - | -100.0% | 0.1% | - | - | - | - | - |
| Various institutions: Local systems of innovation for the cold chain technologies project | 4 274 | 31 600 | 6 793 | - | -100.0% | 0.1% | - | - | - | - | - |
| Various institutions: Implementation of bioeconomy strategy | 9 399 | 6 000 | 7 100 | - | -100.0% | 0.1% | - | - | - | - | - |
| Capital | 413 273 | 440 991 | 376 282 | 60 218 | -47.4% | 4.5% | 272 121 | 281 770 | 294 188 | 69.7% | 2.8% |
| Various institutions: Hydrogen strategy (capital) | - | 23 999 | - | - | - | 0.1% | - | - | - | - | - |
| Council for Scientific and Industrial Research: Cyberinfrastructure research and development | 413 273 | 236 339 | 251 686 | 60 218 | -47.4% | 3.4% | 272 121 | 281 770 | 294 188 | 69.7% | 2.8% |
| Various institutions: Infrastructure projects for research and development | - | 180 653 | 124 596 | - | - | 1.1% | - | - | - | - | - |
| Public corporations and private enterprises | | | | | | | | | | | |
| Other transfers to private enterprises | | | | | | | | | | | |
| Current | 19 765 | 13 847 | 12 796 | - | -100.0% | 0.2% | - | - | - | - | - |
| Various institutions: Institutional and programme support research | - | 1 415 | - | - | - | - | - | - | - | - | - |
| Various institutions: Technology transfer offices: Support of research units | - | 605 | 2 625 | - | - | - | - | - | - | - | - |
| Various institutions: Health innovation research | 2 467 | 300 | 2 161 | - | -100.0% | - | - | - | - | - | - |
| National Research Foundation: Research and development in indigenous knowledge systems | - | - | 1 200 | - | - | - | - | - | - | - | - |
| Various institutions: Global science: International multilateral agreements | - | 378 | 669 | - | - | - | - | - | - | - | - |
| Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project | - | - | 4 900 | - | - | - | - | - | - | - | - |
| Various institutions: Advanced manufacturing technology strategy implementation | 1 462 | 10 748 | 172 | - | -100.0% | - | - | - | - | - | - |
| Various institutions: Local manufacturing capacity research and technical support | 7 808 | - | - | - | -100.0% | - | - | - | - | - | - |
| Various institutions: Resource-based industries research and development | 8 028 | - | - | - | -100.0% | - | - | - | - | - | - |
| Various institutions: Local systems of innovation for the cold chain technologies project | - | 401 | - | - | - | - | - | - | - | - | - |
| Various institutions: Implementation of bioeconomy strategy | - | - | 1 069 | - | - | - | - | - | - | - | - |
| Public corporations and private enterprises | | | | | | | | | | | |
| Subsidies on products and production (pc) | | | | | | | | | | | |
| Current | 915 645 | 963 164 | 965 823 | 893 581 | -0.8% | 13.1% | 978 449 | 1 002 269 | 1 006 119 | 4.0% | 12.0% |
| Council for Scientific and Industrial Research | 915 645 | 963 164 | 965 823 | 893 581 | -0.8% | 13.1% | 978 449 | 1 002 269 | 1 006 119 | 4.0% | 12.0% |
| Non-profit institutions | | | | | | | | | | | |
| Current | 310 830 | 327 324 | 316 900 | 302 169 | -0.9% | 4.4% | 314 885 | 323 268 | 324 510 | 2.4% | 3.9% |
| Various institutions: Institutional and programme support research | 16 642 | 11 567 | 18 484 | 15 594 | -2.1% | 0.2% | 15 264 | 15 665 | 15 726 | 0.3% | 0.2% |
| Various institutions: Biofuels research | 5 100 | 7 245 | 5 640 | 7 889 | 15.7% | 0.1% | 9 130 | 9 365 | 9 401 | 6.0% | 0.1% |
| Various institutions: Energy grand challenge research | 16 677 | 26 895 | 37 396 | - | -100.0% | 0.3% | - | - | - | - | - |
| Various institutions: Health innovation research | 20 599 | 2 597 | 50 | 52 749 | 36.8% | 0.3% | 53 648 | 54 986 | 55 197 | 1.5% | 0.7% |
| Various institutions: Hydrogen strategy research | 30 581 | 35 347 | 16 574 | 43 776 | 12.7% | 0.4% | 42 580 | 43 630 | 43 797 | - | 0.5% |
| Various institutions: Innovation projects research | 4 379 | 4 501 | 4 135 | - | -100.0% | - | - | - | - | - | - |
| International Centre for Genetic Engineering and Biotechnology | 17 000 | 31 249 | 40 815 | 14 981 | -4.1% | 0.4% | 16 135 | 16 562 | 16 626 | 3.5% | 0.2% |

Table 35.3 Vote transfers and subsidies trends and estimates

| | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average Expenditure/ Total (%) |
|---|------------------|------------------|------------------|------------------------|-------------------------|--------------------------------|----------------------------------|------------------|------------------|-------------------------|--------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R thousand | | | | | | | | | | | |
| Various institutions: Space science research: Economic competitiveness and support package | 3 595 | 5 299 | 10 000 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Technology transfer offices: Support for research units | 35 466 | 37 434 | 27 369 | 42 463 | 6.2% | 0.5% | 43 000 | 44 073 | 44 242 | 1.4% | 0.5% |
| National Research Foundation: Research and development in indigenous knowledge systems | 5 366 | 16 921 | 9 100 | – | -100.0% | 0.1% | – | – | – | – | – |
| South African Association of Science and Technology Centres: Technology Top 100 awards | 1 754 | – | – | – | -100.0% | – | – | – | – | – | – |
| Medical Research Council: Social Impact Bond | 23 711 | – | – | 33 422 | 12.1% | 0.2% | 33 863 | 35 125 | 35 260 | 1.8% | 0.4% |
| Various institutions: Emerging research areas | 6 700 | 25 202 | 31 900 | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Global science: International multilateral agreements | 13 629 | 28 784 | 21 162 | 38 000 | 40.7% | 0.4% | 47 341 | 48 581 | 48 768 | 8.7% | 0.6% |
| Various institutions: Global science: African multilateral agreements | 649 | 186 | 3 652 | 10 351 | 151.7% | 0.1% | 10 493 | 10 769 | 10 810 | 1.5% | 0.1% |
| Academy of Science of South Africa | 12 480 | – | – | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Policy development on human and social development dynamics | – | – | 1 500 | – | – | – | – | – | – | – | – |
| National Research Foundation: Human resources development for science and engineering | 49 611 | 4 568 | 11 157 | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Science awareness, research and initiatives to encourage youth participation in science | – | 16 760 | 17 020 | – | – | 0.1% | – | – | – | – | – |
| National Research Foundation: Square Kilometre Array: Research and development | – | 205 | – | – | – | – | – | – | – | – | – |
| Various institutions: Strategic science platforms for research and development | – | 11 051 | 15 930 | – | – | 0.1% | – | – | – | – | – |
| Various institutions: Policy development on basic science development and support | – | 1 780 | – | – | – | – | – | – | – | – | – |
| Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project | – | – | 17 524 | – | – | 0.1% | – | – | – | – | – |
| Various institutions: Advanced manufacturing technology strategy implementation | 3 462 | 400 | 100 | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Innovative research and development | 1 540 | 6 734 | 13 076 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Local manufacturing capacity research and technical support | 5 241 | – | – | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Resource-based industries research and development | 2 397 | 800 | 800 | – | -100.0% | – | – | – | – | – | – |
| Various institutions: Environmental innovation | 6 409 | 10 917 | 1 042 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Local systems of innovation for the cold chain technologies project | 6 704 | 39 991 | – | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Implementation of the bioeconomy strategy | 21 138 | 891 | 2 200 | 42 944 | 26.7% | 0.2% | 43 431 | 44 512 | 44 683 | 1.3% | 0.5% |
| Various institutions: ICT | – | – | 10 274 | – | – | – | – | – | – | – | – |
| Capital | 151 714 | 154 043 | 216 690 | 77 272 | -20.1% | 2.1% | 81 199 | 84 103 | 87 810 | 4.4% | 1.0% |
| Various institutions: Hydrogen strategy (capital) | 67 080 | 46 972 | 61 859 | 77 272 | 4.8% | 0.9% | 81 199 | 84 103 | 87 810 | 4.4% | 1.0% |
| Various institutions: Infrastructure projects for research and development | 84 634 | 107 071 | 154 831 | – | -100.0% | 1.2% | – | – | – | – | – |
| Total | 6 955 090 | 7 336 872 | 7 514 812 | 6 767 909 | -0.9% | 100.0% | 8 363 994 | 8 552 691 | 8 668 340 | 8.6% | 100.0% |

Personnel information

Table 35.4 Vote personnel numbers and cost by salary level and programme¹

| Programmes | | | | | | | | | | | | | | | | | | | |
|---|---|--|------------|--------------|------------------|------------|--------------|----------------------------------|------------|--------------|------------|------------|--------------|-------------------------|----------------------------------|--------------|------------|--------------|---------------|
| 1. Administration | | | | | | | | | | | | | | | | | | | |
| 2. Technology Innovation | | | | | | | | | | | | | | | | | | | |
| 3. International Cooperation and Resources | | | | | | | | | | | | | | | | | | | |
| 4. Research, Development and Support | | | | | | | | | | | | | | | | | | | |
| 5. Socioeconomic Innovation Partnerships | | | | | | | | | | | | | | | | | | | |
| Number of posts estimated for 31 March 2021 | | Number and cost ² of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | Number | | | | | |
| Number of funded posts | Number of posts additional to the establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/ Total (%) | | | | |
| | | 2019/20 | | | 2020/21 | | | 2021/22 | | 2022/23 | | 2023/24 | | | | | | | |
| | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | |
| Science and Innovation | | | | | | | | | | | | | | | | | | | |
| Salary level | 493 | 4 | 422 | 336.7 | 0.8 | 474 | 362.0 | 0.8 | 457 | 358.0 | 0.8 | 449 | 358.4 | 0.8 | 436 | 358.4 | 0.8 | -2.7% | 100.0% |
| 1 – 6 | 71 | 1 | 57 | 13.8 | 0.2 | 61 | 14.6 | 0.2 | 61 | 14.7 | 0.2 | 62 | 15.2 | 0.2 | 62 | 15.6 | 0.3 | 0.4% | 13.5% |
| 7 – 10 | 146 | 2 | 108 | 47.5 | 0.4 | 136 | 57.2 | 0.4 | 122 | 52.9 | 0.4 | 116 | 51.0 | 0.4 | 114 | 52.5 | 0.5 | -5.7% | 26.9% |
| 11 – 12 | 151 | – | 150 | 137.7 | 0.9 | 161 | 143.2 | 0.9 | 157 | 141.1 | 0.9 | 155 | 141.2 | 0.9 | 139 | 138.5 | 1.0 | -4.7% | 33.7% |
| 13 – 16 | 125 | 1 | 106 | 134.5 | 1.3 | 115 | 144.1 | 1.3 | 116 | 146.3 | 1.3 | 115 | 147.9 | 1.3 | 120 | 148.7 | 1.2 | 1.4% | 25.7% |
| Other | – | – | 1 | 3.1 | 3.1 | 1 | 2.9 | 2.9 | 1 | 3.0 | 3.0 | 1 | 3.1 | 3.1 | 1 | 3.1 | 3.1 | – | 0.2% |
| Programme | 493 | 4 | 422 | 336.7 | 0.8 | 474 | 362.0 | 0.8 | 457 | 358.0 | 0.8 | 449 | 358.4 | 0.8 | 436 | 358.4 | 0.8 | -2.7% | 100.0% |
| Programme 1 | 245 | 3 | 238 | 161.4 | 0.7 | 278 | 171.9 | 0.6 | 266 | 170.0 | 0.6 | 260 | 170.2 | 0.7 | 245 | 170.2 | 0.7 | -4.1% | 57.8% |
| Programme 2 | 60 | – | 44 | 43.8 | 1.0 | 51 | 52.2 | 1.0 | 50 | 51.6 | 1.0 | 50 | 51.7 | 1.0 | 54 | 51.7 | 1.0 | 1.9% | 11.3% |
| Programme 3 | 70 | 1 | 48 | 48.4 | 1.0 | 52 | 53.8 | 1.0 | 51 | 53.2 | 1.0 | 50 | 53.3 | 1.1 | 57 | 53.3 | 0.9 | 3.2% | 11.5% |
| Programme 4 | 56 | – | 46 | 39.9 | 0.9 | 45 | 39.3 | 0.9 | 45 | 38.9 | 0.9 | 44 | 38.9 | 0.9 | 44 | 38.9 | 0.9 | -0.5% | 9.8% |
| Programme 5 | 62 | – | 46 | 43.2 | 0.9 | 48 | 44.8 | 0.9 | 46 | 44.3 | 1.0 | 45 | 44.4 | 1.0 | 36 | 44.4 | 1.2 | -9.3% | 9.6% |

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Departmental receipts

Table 35.5 Departmental receipts by economic classification

| | Audited outcome | | | Adjusted estimate | Revised estimate | Average growth rate (%) | Average: Receipt item/ Total (%) | Medium-term receipts estimate | | | Average growth rate (%) | Average: Receipt item/ Total (%) |
|--|-----------------|---------------|---------------|-------------------|------------------|-------------------------|----------------------------------|-------------------------------|------------|------------|-------------------------|----------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R thousand | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 - 2023/24 | | | | |
| Departmental receipts | 10 298 | 32 749 | 19 416 | 2 076 | 3 073 | -33.2% | 100.0% | 583 | 583 | 583 | -42.5% | 100.0% |
| Sales of goods and services produced by department | 60 | 64 | 67 | 60 | 60 | – | 0.4% | 60 | 60 | 60 | – | 5.0% |
| Other sales | 60 | 64 | 67 | 60 | 60 | – | 0.4% | 60 | 60 | 60 | – | 5.0% |
| of which: | | | | | | | | | | | | |
| Services rendered: | 60 | 64 | 67 | 60 | 60 | – | 0.4% | 60 | 60 | 60 | – | 5.0% |
| Commission on insurance | | | | | | | | | | | | |
| Sales of scrap, waste, arms and other used current goods | – | – | 2 | 3 | 3 | – | – | 3 | 3 | 3 | – | 0.2% |
| of which: | | | | | | | | | | | | |
| Sales: Scrap, waste and other goods | – | – | 2 | 3 | 3 | – | – | 3 | 3 | 3 | – | 0.2% |
| Interest, dividends and rent on land | 34 | 27 | 13 | 10 | 10 | -33.5% | 0.1% | 20 | 20 | 20 | 26.0% | 1.5% |
| Interest | 34 | 27 | 13 | 10 | 10 | -33.5% | 0.1% | 20 | 20 | 20 | 26.0% | 1.5% |
| Sales of capital assets | 430 | 217 | – | – | – | -100.0% | 1.0% | – | – | – | – | – |
| Transactions in financial assets and liabilities | 9 774 | 32 441 | 19 334 | 2 003 | 3 000 | -32.5% | 98.5% | 500 | 500 | 500 | -45.0% | 93.3% |
| Total | 10 298 | 32 749 | 19 416 | 2 076 | 3 073 | -33.2% | 100.0% | 583 | 583 | 583 | -42.5% | 100.0% |

Programme 1: Administration

Programme purpose

Provide strategic leadership, management and support services to the department.

Expenditure trends and estimates

Table 35.6 Administration expenditure trends and estimates by subprogramme and economic classification

| Subprogramme | Audited outcome | | | Adjusted appropriation 2020/21 | Average growth rate (%) | | Medium-term expenditure estimate | | | Average growth rate (%) | |
|--|-----------------|--------------|--------------|-----------------------------------|-------------------------|---------------|----------------------------------|--------------|--------------|-------------------------|---------------|
| | 2017/18 | 2018/19 | 2019/20 | | 2017/18 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 | 2023/24 |
| R million | | | | | | | | | | | |
| Ministry | 8.3 | 8.9 | 2.9 | 5.9 | -10.6% | 1.9% | 5.5 | 5.6 | 5.6 | -1.9% | 1.7% |
| Institutional Planning and Support | 196.5 | 201.4 | 170.1 | 141.2 | -10.4% | 50.9% | 169.0 | 171.2 | 171.5 | 6.7% | 50.3% |
| Corporate Services | 145.6 | 167.0 | 144.2 | 151.4 | 1.3% | 43.6% | 148.1 | 150.1 | 150.5 | -0.2% | 46.2% |
| Office Accommodation | 7.5 | 2.2 | 34.8 | 5.6 | -9.4% | 3.6% | 5.6 | 5.7 | 5.7 | 0.7% | 1.7% |
| Total | 357.9 | 379.5 | 352.1 | 304.1 | -5.3% | 100.0% | 328.2 | 332.6 | 333.3 | 3.1% | 100.0% |
| Change to 2020 Budget estimate | | | | (56.2) | | | (49.9) | (62.4) | (25.9) | | |
| Economic classification | | | | | | | | | | | |
| Current payments | 319.2 | 354.6 | 321.5 | 285.1 | -3.7% | 91.9% | 310.1 | 313.9 | 314.4 | 3.3% | 94.2% |
| Compensation of employees | 167.5 | 179.7 | 161.4 | 171.9 | 0.9% | 48.8% | 170.0 | 170.2 | 170.2 | -0.3% | 52.6% |
| Goods and services ¹ | 151.7 | 174.8 | 160.1 | 113.2 | -9.3% | 43.0% | 140.1 | 143.7 | 144.2 | 8.4% | 41.7% |
| <i>of which:</i> | | | | | | | | | | | |
| Advertising | 8.2 | 23.6 | 11.4 | 12.4 | 14.8% | 4.0% | 12.0 | 12.3 | 12.3 | -0.2% | 3.8% |
| Consultants: Business and advisory services | 2.6 | 7.3 | 9.0 | 8.9 | 50.6% | 2.0% | 15.5 | 15.9 | 16.0 | 21.4% | 4.3% |
| Agency and support/outsourced services | 4.7 | 7.7 | 7.2 | 7.2 | 15.3% | 1.9% | 7.1 | 7.3 | 7.3 | 0.6% | 2.2% |
| Property payments | 12.7 | 11.6 | 42.3 | 14.7 | 4.9% | 5.8% | 13.1 | 13.5 | 13.5 | -2.7% | 4.2% |
| Travel and subsistence | 33.0 | 33.8 | 33.7 | 11.9 | -28.9% | 8.1% | 35.9 | 36.8 | 36.9 | 46.0% | 9.4% |
| Operating payments | 8.9 | 6.2 | 4.7 | 6.8 | -8.7% | 1.9% | 6.7 | 6.9 | 6.9 | 0.6% | 2.1% |
| Transfers and subsidies¹ | 17.5 | 14.6 | 22.7 | 15.6 | -3.8% | 5.1% | 15.3 | 15.7 | 15.7 | 0.3% | 4.8% |
| Departmental agencies and accounts | 0.0 | 1.2 | 1.8 | - | -100.0% | 0.2% | - | - | - | - | - |
| Public corporations and private enterprises | - | 1.4 | - | - | - | 0.1% | - | - | - | - | - |
| Non-profit institutions | 16.6 | 11.6 | 18.5 | 15.6 | -2.1% | 4.5% | 15.3 | 15.7 | 15.7 | 0.3% | 4.8% |
| Households | 0.9 | 0.4 | 2.4 | - | -100.0% | 0.3% | - | - | - | - | - |
| Payments for capital assets | 21.1 | 10.2 | 7.8 | 3.4 | -45.5% | 3.0% | 2.9 | 3.0 | 3.1 | -2.6% | 1.0% |
| Machinery and equipment | 21.1 | 10.2 | 7.8 | 3.4 | -45.5% | 3.0% | 2.9 | 3.0 | 3.1 | -2.6% | 1.0% |
| Payments for financial assets | 0.1 | 0.1 | 0.1 | - | -100.0% | - | - | - | - | - | - |
| Total | 357.9 | 379.5 | 352.1 | 304.1 | -5.3% | 100.0% | 328.2 | 332.6 | 333.3 | 3.1% | 100.0% |
| Proportion of total programme expenditure to vote expenditure | 4.8% | 4.8% | 4.4% | 4.2% | - | - | 3.7% | 3.6% | 3.6% | - | - |
| Details of transfers and subsidies | | | | | | | | | | | |
| Households | | | | | | | | | | | |
| Social benefits | | | | | | | | | | | |
| Current | 0.9 | 0.4 | 2.4 | - | -100.0% | 0.3% | - | - | - | - | - |
| Households | 0.9 | 0.4 | 2.4 | - | -100.0% | 0.3% | - | - | - | - | - |
| Departmental agencies and accounts | | | | | | | | | | | |
| Departmental agencies (non-business entities) | | | | | | | | | | | |
| Current | 0.0 | 1.2 | 1.8 | - | -100.0% | 0.2% | - | - | - | - | - |
| Various institutions: Institutional and programme support research | 0.0 | 1.2 | 1.8 | - | -100.0% | 0.2% | - | - | - | - | - |
| Households | | | | | | | | | | | |
| Other transfers to households | | | | | | | | | | | |
| Current | - | - | - | - | - | - | - | - | - | - | - |
| Households | - | - | - | - | - | - | - | - | - | - | - |
| Non-profit institutions | | | | | | | | | | | |
| Current | 16.6 | 11.6 | 18.5 | 15.6 | -2.1% | 4.5% | 15.3 | 15.7 | 15.7 | 0.3% | 4.8% |
| Various institutions: Institutional and programme support research | 16.6 | 11.6 | 18.5 | 15.6 | -2.1% | 4.5% | 15.3 | 15.7 | 15.7 | 0.3% | 4.8% |
| Public corporations and private enterprises | | | | | | | | | | | |
| Private enterprises | | | | | | | | | | | |
| Other transfers to private enterprises | | | | | | | | | | | |
| Current | - | 1.4 | - | - | - | 0.1% | - | - | - | - | - |
| Various institutions: Institutional and programme support research | - | 1.4 | - | - | - | 0.1% | - | - | - | - | - |

1. Estimates of National Expenditure data tables are available at www.treasury.gov.za. These tables contain detailed information by goods and services, and transfers and subsidies items by programme.

Personnel information

Table 35.7 Administration personnel numbers and cost by salary level¹

| Number of posts estimated for 31 March 2021 | | | Number and cost ² of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | Number | | | | | | | |
|---|---|---|--|----------|------------|------------------|------------|------------|----------------------------------|------------|------------|--------------|------------|------------|-------------------------|----------------------------------|-------------------|--------------|------------|--------------|---------------|-------|
| Number of funded posts | Number of posts additional to the establishment | | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/ Total (%) | | | | | | |
| | | | 2019/20 | | | 2020/21 | | | 2021/22 | | 2022/23 | | 2023/24 | | | | 2020/21 - 2023/24 | | | | | |
| | | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | | Number | Cost | Unit cost | | |
| Administration | | | 245 | 3 | 238 | 161.4 | 0.7 | 278 | 171.9 | 0.6 | 266 | 170.0 | 0.6 | 260 | 170.2 | 0.7 | 245 | 170.2 | 0.7 | -4.1% | 100.0% | |
| Salary level | | | | | | | | | | | | | | | | | | | | | | |
| 1 – 6 | 51 | 1 | 42 | 8.9 | 0.2 | 43 | 8.7 | 0.2 | 44 | 9.0 | 0.2 | 45 | 9.4 | 0.2 | 45 | 9.6 | 0.2 | 45 | 9.6 | 0.2 | 1.3% | 16.9% |
| 7 – 10 | 88 | 1 | 67 | 24.6 | 0.4 | 93 | 32.8 | 0.4 | 80 | 28.6 | 0.4 | 73 | 26.2 | 0.4 | 67 | 26.7 | 0.4 | 67 | 26.7 | 0.4 | -10.2% | 29.8% |
| 11 – 12 | 59 | – | 72 | 57.3 | 0.8 | 82 | 60.6 | 0.7 | 82 | 61.6 | 0.8 | 82 | 62.5 | 0.8 | 73 | 60.7 | 0.8 | 73 | 60.7 | 0.8 | -3.8% | 30.4% |
| 13 – 16 | 47 | 1 | 56 | 67.3 | 1.2 | 59 | 66.8 | 1.1 | 59 | 67.9 | 1.2 | 59 | 69.0 | 1.2 | 59 | 70.1 | 1.2 | 59 | 70.1 | 1.2 | – | 22.5% |
| Other | – | – | 1 | 3.1 | 3.1 | 1 | 2.9 | 2.9 | 1 | 3.0 | 3.0 | 1 | 3.1 | 3.1 | 1 | 3.1 | 3.1 | 1 | 3.1 | 3.1 | – | 0.4% |

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Programme 2: Technology Innovation

Programme purpose

Enable research and development in space science and technology, energy security and the bioeconomy, and in the emerging and converging areas of nanotechnology, robotics, photonics and indigenous knowledge systems, to promote the realisation of commercial products, processes and services. Promote the protection and utilisation of intellectual property, technology transfer and technology commercialisation through the implementation of enabling policies and interventions along the entire innovation value chain.

Objectives

- Facilitate and make strategic investments in space science and technology, energy, the bioeconomy, nanotechnology, robotics, photonics, indigenous knowledge systems, intellectual property management, technology transfer and technology commercialisation by the end of 2023/24, by:
 - funding and/or maintaining 58 instruments to support the use of knowledge
 - generating 365 knowledge products (including published peer-reviewed scientific articles, and the filing of applications for or the registration/granting of intellectual property rights)
 - developing and approving 12 science, technology and innovation strategic policy directives to enhance understanding and analyses that support the implementation of relevant interventions
 - developing and/or maintaining 9 decision support interventions to improve the delivery of government services or functions
 - providing recommendations for all genetically modified organism permit applications received to support government decision-making.
- Oversee, monitor and regulate key policy initiatives in the strategic areas of space science and technology, energy, bio-innovation, nanotechnology, robotics and photonics by the end of 2023/24 by overseeing 620 new disclosures reported by publicly funded institutions.

Subprogrammes

- Space Science* supports the creation of an environment conducive to the implementation of the national space strategy and the South African earth observation strategy, and one that addresses the development of innovative applications and human capital to respond to national priorities and support socioeconomic development.
- Hydrogen and Energy* provides policy leadership in research, development and innovation initiatives in the energy sector. This subprogramme plays a key role in developing a sustainable and globally competitive South African energy knowledge base and industry.
- Bio-innovation* leads the implementation of the national bioeconomy strategy.

- *Innovation Priorities and Instruments* supports and strengthens the innovation policy package aimed at creating and sustaining an enabling environment for innovation, technology and development, and the commercialisation of publicly funded research and development initiatives.
- *National Intellectual Property Management Office* is the implementing agency established to provide for the effective use of intellectual property emanating from publicly financed research and development.
- *Office of the Deputy Director-General: Technology Innovation* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.8 Technology Innovation expenditure trends and estimates by subprogramme and economic classification

| Subprogramme | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | | Medium-term expenditure estimate | | | Average growth rate (%) | Average Expenditure/Total (%) |
|---|-----------------|----------------|----------------|------------------------|-------------------------|-------------------|----------------------------------|----------------|----------------|-------------------------|-------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | 2020/21 | 2017/18 - 2020/21 | 2021/22 | 2022/23 | 2023/24 | | |
| R million | | | | | | | | | | | |
| Space Science | 191.8 | 170.1 | 225.2 | 225.9 | 5.6% | 16.6% | 249.2 | 210.4 | 211.1 | -2.2% | 13.3% |
| Hydrogen and Energy | 147.5 | 164.8 | 176.9 | 183.4 | 7.5% | 13.8% | 188.2 | 193.6 | 197.7 | 2.5% | 11.3% |
| Bio-innovation | 161.9 | 215.3 | 194.9 | 204.7 | 8.1% | 15.9% | 203.9 | 209.1 | 209.9 | 0.8% | 12.3% |
| Innovation Priorities and Instruments | 526.8 | 531.4 | 578.1 | 706.2 | 10.3% | 48.0% | 1 079.6 | 1 109.6 | 1 113.9 | 16.4% | 59.5% |
| National Intellectual Property Management Office | 88.2 | 62.1 | 55.2 | 54.2 | -15.0% | 5.3% | 54.7 | 55.8 | 56.0 | 1.1% | 3.3% |
| Office of the Deputy Director-General: Technology Innovation | 4.4 | 5.2 | 6.4 | 4.0 | -3.1% | 0.4% | 4.7 | 4.8 | 4.8 | 6.2% | 0.3% |
| Total | 1 120.6 | 1 149.0 | 1 236.7 | 1 378.3 | 7.1% | 100.0% | 1 780.2 | 1 783.3 | 1 793.3 | 9.2% | 100.0% |
| Change to 2020 Budget estimate | | | | (126.2) | | | (98.0) | (116.6) | (139.7) | | |
| Economic classification | | | | | | | | | | | |
| Current payments | 58.8 | 65.6 | 67.4 | 64.6 | 3.2% | 5.2% | 74.8 | 75.4 | 75.5 | 5.4% | 4.3% |
| Compensation of employees | 45.0 | 45.4 | 43.8 | 52.2 | 5.1% | 3.8% | 51.6 | 51.7 | 51.7 | -0.3% | 3.1% |
| Goods and services ¹ | 13.8 | 20.1 | 23.6 | 12.4 | -3.6% | 1.4% | 23.2 | 23.8 | 23.8 | 24.5% | 1.2% |
| <i>of which:</i> | | | | | | | | | | | |
| Communication | 0.8 | 0.7 | 0.9 | 0.8 | 2.4% | 0.1% | 1.1 | 1.1 | 1.1 | 11.9% | 0.1% |
| Consultants: Business and advisory services | 1.2 | 5.2 | 2.5 | 1.5 | 10.0% | 0.2% | 1.8 | 1.9 | 1.9 | 7.0% | 0.1% |
| Agency and support/outsourced services | 0.5 | 0.8 | 0.7 | 3.6 | 90.8% | 0.1% | 6.8 | 7.0 | 7.0 | 25.1% | 0.4% |
| Entertainment | 0.0 | 0.0 | 0.0 | 0.6 | 242.4% | - | 3.5 | 3.6 | 3.6 | 86.0% | 0.2% |
| Travel and subsistence | 8.4 | 10.6 | 9.4 | 2.0 | -38.5% | 0.6% | 5.4 | 5.5 | 5.6 | 41.5% | 0.3% |
| Venues and facilities | 1.9 | 1.1 | 6.4 | 2.6 | 11.3% | 0.2% | 2.6 | 2.6 | 2.6 | 0.7% | 0.2% |
| Transfers and subsidies¹ | 1 061.7 | 1 083.4 | 1 169.2 | 1 313.8 | 7.4% | 94.7% | 1 705.4 | 1 707.8 | 1 717.8 | 9.3% | 95.7% |
| Departmental agencies and accounts | 699.4 | 714.9 | 767.6 | 881.8 | 8.0% | 62.7% | 1 265.8 | 1 255.7 | 1 260.6 | 12.7% | 69.2% |
| Public corporations and private enterprises | 103.1 | 127.8 | 154.4 | 116.5 | 4.2% | 10.3% | 116.7 | 119.8 | 120.2 | 1.1% | 7.0% |
| Non-profit institutions | 259.1 | 240.6 | 247.0 | 315.5 | 6.8% | 21.7% | 323.0 | 332.4 | 337.0 | 2.2% | 19.4% |
| Households | 0.1 | 0.1 | 0.2 | - | -100.0% | - | - | - | - | - | - |
| Payments for financial assets | 0.1 | 0.0 | 0.0 | - | -100.0% | - | - | - | - | - | - |
| Total | 1 120.6 | 1 149.0 | 1 236.7 | 1 378.3 | 7.1% | 100.0% | 1 780.2 | 1 783.3 | 1 793.3 | 9.2% | 100.0% |
| Proportion of total programme expenditure to vote expenditure | 14.9% | 14.5% | 15.3% | 18.9% | - | - | 19.9% | 19.5% | 19.4% | - | - |
| Details of transfers and subsidies | | | | | | | | | | | |
| Households | | | | | | | | | | | |
| Social benefits | | | | | | | | | | | |
| Current | 0.1 | 0.1 | 0.1 | - | -100.0% | - | - | - | - | - | - |
| Households | 0.1 | 0.1 | 0.1 | - | -100.0% | - | - | - | - | - | - |
| Departmental agencies and accounts | | | | | | | | | | | |
| Departmental agencies (non-business entities) | | | | | | | | | | | |
| Current | 699.4 | 714.9 | 767.6 | 881.8 | 8.0% | 62.7% | 1 265.8 | 1 255.7 | 1 260.6 | 12.7% | 69.2% |
| Various institutions: Biofuels research | - | - | 2.0 | - | - | - | - | - | - | - | - |
| Various institutions: Technology transfer offices: Support of research units | 41.4 | 2.1 | 2.2 | - | -100.0% | 0.9% | - | - | - | - | - |
| Various institutions: Energy grand challenge research | 16.0 | - | - | 42.9 | 38.9% | 1.2% | 43.3 | 44.5 | 44.6 | 1.3% | 2.6% |
| Various institutions: Health innovation research | 21.1 | 72.8 | 49.0 | - | -100.0% | 2.9% | - | - | - | - | - |
| Various institutions: HIV and AIDS prevention and treatment technologies research | - | 24.6 | 27.9 | 29.2 | - | 1.7% | 30.2 | 31.0 | 31.1 | 2.2% | 1.8% |
| Various institutions: Hydrogen strategy research | 2.9 | - | - | - | -100.0% | 0.1% | - | - | - | - | - |

Table 35.8 Technology Innovation expenditure trends and estimates by subprogramme and economic classification

| Details of transfers and subsidies | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average: Expenditure/Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/Total (%) |
|--|-----------------|--------------|--------------|------------------------|-------------------------|--------------------------------|----------------------------------|--------------|--------------|-------------------------|--------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R million | | | | | | | | | | | |
| Various institutions: Innovation projects research | 15.0 | – | 14.9 | 171.4 | 125.0% | 4.1% | 503.3 | 519.4 | 521.4 | 44.9% | 25.5% |
| Various institutions: Space science research: Economic competitiveness and support package | 44.9 | 13.2 | 54.4 | 51.4 | 4.7% | 3.4% | 32.4 | 33.3 | 33.4 | -13.4% | 2.2% |
| National Research Foundation: Indigenous knowledge systems | 1.6 | – | – | – | -100.0% | – | – | – | – | – | – |
| National Research Foundation: Research and development in indigenous knowledge systems | – | 9.7 | 1.6 | 16.8 | – | 0.6% | 6.6 | 6.8 | 6.8 | -26.1% | 0.5% |
| Technology Innovation Agency | 396.7 | 420.3 | 440.9 | 408.8 | 1.0% | 34.1% | 447.7 | 458.4 | 460.1 | 4.0% | 26.4% |
| South African National Space Agency | 131.2 | 138.0 | 143.5 | 161.2 | 7.1% | 11.7% | 202.2 | 162.4 | 163.1 | 0.4% | 10.2% |
| Various institutions: Emerging research areas | 7.5 | 3.4 | – | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Implementation of bioeconomy strategy | 21.0 | 30.9 | 31.3 | – | -100.0% | 1.7% | – | – | – | – | – |
| Households | | | | | | | | | | | |
| Other transfers to households | | | | | | | | | | | |
| Current | – | – | 0.2 | – | – | – | – | – | – | – | – |
| Households | – | – | 0.2 | – | – | – | – | – | – | – | – |
| Public corporations and private enterprises | | | | | | | | | | | |
| Public corporations | | | | | | | | | | | |
| Other transfers to public corporations | | | | | | | | | | | |
| Current | 100.6 | 102.9 | 147.3 | 116.5 | 5.0% | 9.6% | 116.7 | 119.8 | 120.2 | 1.1% | 7.0% |
| Households | – | – | – | – | – | – | – | – | – | – | – |
| Various institutions: Technology transfer offices: Support of research units | 0.9 | 7.7 | 8.4 | – | -100.0% | 0.3% | – | – | – | – | – |
| Various institutions: Energy grand challenge research | – | 10.2 | 3.6 | – | – | 0.3% | – | – | – | – | – |
| Various institutions: Hydrogen strategy research | – | 4.9 | 25.9 | – | – | 0.6% | – | – | – | – | – |
| Various institutions: Hydrogen strategy (capital) | – | – | 13.1 | – | – | 0.3% | – | – | – | – | – |
| Various institutions: Innovation projects research | 9.8 | 4.9 | 0.5 | – | -100.0% | 0.3% | – | – | – | – | – |
| Various institutions: Space science research: Economic competitiveness and support package | – | – | 5.0 | – | – | 0.1% | – | – | – | – | – |
| National Research Foundation: Research and development in indigenous knowledge systems | 2.7 | 1.5 | 3.2 | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Emerging research areas | 77.9 | 67.8 | 80.7 | 116.5 | 14.4% | 7.0% | 116.7 | 119.8 | 120.2 | 1.1% | 7.0% |
| Various institutions: Implementation of bioeconomy strategy | 9.4 | 6.0 | 7.1 | – | -100.0% | 0.5% | – | – | – | – | – |
| Capital | – | 24.0 | – | – | – | 0.5% | – | – | – | – | – |
| Various institutions: Hydrogen strategy (capital) | – | 24.0 | – | – | – | 0.5% | – | – | – | – | – |
| Non-profit institutions | | | | | | | | | | | |
| Current | 192.1 | 193.6 | 185.2 | 238.2 | 7.4% | 16.6% | 241.8 | 248.3 | 249.2 | 1.5% | 14.5% |
| Various institutions: Biofuels research | 5.1 | 7.2 | 5.6 | 7.9 | 15.7% | 0.5% | 9.1 | 9.4 | 9.4 | 6.0% | 0.5% |
| Various institutions: Energy grand challenge research | 16.7 | 26.9 | 37.4 | – | -100.0% | 1.7% | – | – | – | – | – |
| Various institutions: Health innovation research | 20.6 | 2.6 | 0.1 | 52.7 | 36.8% | 1.6% | 53.6 | 55.0 | 55.2 | 1.5% | 3.2% |
| Various institutions: Hydrogen strategy research | 30.6 | 35.3 | 16.6 | 43.8 | 12.7% | 2.6% | 42.6 | 43.6 | 43.8 | – | 2.6% |
| Various institutions: Innovation projects research | 4.4 | 4.5 | 4.1 | – | -100.0% | 0.3% | – | – | – | – | – |
| International Centre for Genetic Engineering and Biotechnology | 17.0 | 31.2 | 40.8 | 15.0 | -4.1% | 2.1% | 16.1 | 16.6 | 16.6 | 3.5% | 1.0% |
| Various institutions: Space science research: Economic competitiveness and support package | 3.6 | 5.3 | 10.0 | – | -100.0% | 0.4% | – | – | – | – | – |
| Various institutions: Technology transfer offices: Support for research units | 35.5 | 37.4 | 27.4 | 42.5 | 6.2% | 2.9% | 43.0 | 44.1 | 44.2 | 1.4% | 2.6% |
| National Research Foundation: Research and development in indigenous knowledge systems | 5.4 | 16.9 | 9.1 | – | -100.0% | 0.6% | – | – | – | – | – |
| South African Association of Science and Technology Centres: Technology | 1.8 | – | – | – | -100.0% | – | – | – | – | – | – |
| Top 100 awards | | | | | | | | | | | |

Table 35.8 Technology Innovation expenditure trends and estimates by subprogramme and economic classification

| Details of transfers and subsidies | Audited outcome | | | Adjusted appropriation 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) 2020/21 - 2023/24 |
|--|-----------------|-------------|-------------|-----------------------------------|--|---|----------------------------------|-------------|-------------|--|---|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| | R million | | | | | | | | | | |
| Medical Research Council: Social Impact Bond | 23.7 | – | – | 33.4 | 12.1% | 1.2% | 33.9 | 35.1 | 35.3 | 1.8% | 2.0% |
| Various institutions: Emerging research areas | 6.7 | 25.2 | 31.9 | – | -100.0% | 1.3% | – | – | – | – | – |
| Various institutions: Implementation of the bioeconomy strategy | 21.1 | 0.9 | 2.2 | 42.9 | 26.7% | 1.4% | 43.4 | 44.5 | 44.7 | 1.3% | 2.6% |
| Capital | 67.1 | 47.0 | 61.9 | 77.3 | 4.8% | 5.2% | 81.2 | 84.1 | 87.8 | 4.4% | 4.9% |
| Various institutions: Hydrogen strategy (capital) | 67.1 | 47.0 | 61.9 | 77.3 | 4.8% | 5.2% | 81.2 | 84.1 | 87.8 | 4.4% | 4.9% |
| Public corporations and private enterprises | | | | | | | | | | | |
| Private enterprises | | | | | | | | | | | |
| Other transfers to private enterprises | | | | | | | | | | | |
| Current | 2.5 | 0.3 | 7.1 | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Technology transfer offices: Support of research units | – | – | 2.6 | – | – | 0.1% | – | – | – | – | – |
| Various institutions: Health innovation research | 2.5 | 0.3 | 2.2 | – | -100.0% | 0.1% | – | – | – | – | – |
| National Research Foundation: Research and development in indigenous knowledge systems | – | – | 1.2 | – | – | – | – | – | – | – | – |
| Various institutions: Implementation of bioeconomy strategy | – | – | 1.1 | – | – | – | – | – | – | – | – |

1. Estimates of National Expenditure data tables are available at www.treasury.gov.za. These tables contain detailed information by goods and services, and transfers and subsidies items by programme.

Personnel information

Table 35.9 Technology Innovation personnel numbers and cost by salary level¹

| Technology Innovation | Number of posts estimated for 31 March 2021 | | Number and cost ² of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | Number | | | | |
|-----------------------|---|---|--|------|-----------|------------------|------|-----------|----------------------------------|------|-----------|--------|---------|-----------|-------------------------|---------------------------------|--------|-------|-----------|
| | Number of funded posts | Number of posts additional to the establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/Total (%) | | | |
| | | | 2019/20 | | | 2020/21 | | | 2021/22 | | 2022/23 | | 2023/24 | | | | | | |
| | | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | Number | Cost | Unit cost |
| Salary level | 60 | – | 44 | 43.8 | 1.0 | 51 | 52.2 | 1.0 | 50 | 51.6 | 1.0 | 50 | 51.7 | 1.0 | 54 | 51.7 | 1.0 | 1.9% | 100.0% |
| 1 – 6 | 5 | – | 5 | 1.5 | 0.3 | 6 | 1.9 | 0.3 | 6 | 1.9 | 0.3 | 6 | 2.0 | 0.3 | 6 | 2.0 | 0.3 | – | 11.7% |
| 7 – 10 | 9 | – | 6 | 2.6 | 0.4 | 7 | 3.2 | 0.5 | 7 | 3.2 | 0.5 | 8 | 3.3 | 0.4 | 10 | 3.4 | 0.3 | 12.6% | 15.6% |
| 11 – 12 | 24 | – | 20 | 20.8 | 1.0 | 21 | 22.0 | 1.0 | 20 | 21.0 | 1.1 | 20 | 21.3 | 1.1 | 21 | 21.6 | 1.0 | – | 39.6% |
| 13 – 16 | 22 | – | 13 | 18.9 | 1.5 | 17 | 25.1 | 1.5 | 17 | 25.5 | 1.5 | 17 | 25.1 | 1.5 | 17 | 24.7 | 1.5 | -0.1% | 33.0% |

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Programme 3: International Cooperation and Resources

Programme purpose

Strategically develop, promote and manage international partnerships that strengthen the national system of innovation. Enable an exchange of knowledge, capacity and resources between South Africa and its international partners, with a focus on building capacity to support science, technology and innovation in Africa. Support South African foreign policy through science diplomacy.

Objectives

- Maximise South Africa's strategic interests in international cooperation in science, technology and innovation by promoting a transformed, inclusive, responsive and coherent national system of innovation in 129 resource-leveraging engagements over the MTEF period.
- Develop human capabilities and skills for the economy and development by securing participation opportunities for 978 South African students in international programmes over the medium term.
- Use knowledge for economic development in support of 45 Southern African Development Community (SADC) and African Union (AU) initiatives by revitalising existing industries and stimulating research and

development-led industrial development, specifically targeting objectives related to the SADC regional indicative strategic development plan by the end of 2022/23.

- Support innovation for a capable state by engaging 36 science, technology and innovation leaders in multilateral forums over the medium term.

Subprogrammes

- *Multilateral Cooperation and Africa* advances and facilitates South Africa's participation in bilateral science, technology and innovation cooperation initiatives with other African partners; in African multilateral programmes, especially those of the SADC and AU; and in broader multilateral science, technology and innovation partnerships, with a strategic focus on South-South cooperation.
- *International Resources* works to increase the flow of international funding into South African science, technology and innovation initiatives, as well as African regional and continental programmes, through concerted efforts to promote foreign investment, and the fostering of strategic partnerships with partners such as the European Union, philanthropic foundations and organisations, and the multinational private sector.
- *Overseas Bilateral Cooperation* promotes and facilitates South Africa's bilateral science, technology and innovation cooperation with partners in Europe, the Americas, Asia and Australasia, especially for human capital development and collaborative research and innovation; and secures support for joint cooperation with other African partners.
- *Office of the Deputy Director-General: International Cooperation and Resources* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.10 International Cooperation and Resources expenditure trends and estimates by subprogramme and economic classification

| Subprogramme | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
|--|-----------------|--------------|--------------|------------------------|-------------------------|---------------------------------|----------------------------------|--------------|--------------|-------------------------|---------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R million | | | | | | | | | | | |
| Multilateral Cooperation and Africa | 31.4 | 36.1 | 30.5 | 27.6 | -4.2% | 23.5% | 32.1 | 32.5 | 32.6 | 5.7% | 22.2% |
| International Resources | 61.5 | 61.9 | 61.5 | 56.6 | -2.7% | 45.2% | 66.8 | 68.2 | 68.4 | 6.5% | 46.3% |
| Overseas Bilateral Cooperation | 37.8 | 41.9 | 37.4 | 28.4 | -9.1% | 27.2% | 42.8 | 43.4 | 43.5 | 15.3% | 28.1% |
| Office of the Deputy Director-General: International Cooperation and Resources | 6.1 | 5.3 | 6.7 | 4.3 | -11.1% | 4.2% | 5.0 | 5.0 | 5.0 | 5.5% | 3.4% |
| Total | 136.7 | 145.2 | 136.0 | 116.8 | -5.1% | 100.0% | 146.6 | 149.1 | 149.5 | 8.6% | 100.0% |
| Change to 2020 Budget estimate | | | | (39.6) | | | (16.6) | (20.2) | (11.5) | | |
| Economic classification | 72.5 | 77.0 | 68.1 | 57.1 | -7.6% | 51.4% | 72.1 | 72.7 | 72.7 | 8.4% | 48.9% |
| Current payments | | | | | | | | | | | |
| Compensation of employees | 51.0 | 51.8 | 48.4 | 53.8 | 1.8% | 38.3% | 53.2 | 53.3 | 53.3 | -0.3% | 38.0% |
| Goods and services ¹ | 21.4 | 25.2 | 19.8 | 3.3 | -46.4% | 13.0% | 18.9 | 19.4 | 19.5 | 80.8% | 10.9% |
| of which: | | | | | | | | | | | |
| Communication | 1.1 | 1.3 | 1.1 | 0.6 | -16.6% | 0.8% | 1.7 | 1.7 | 1.7 | 41.9% | 1.0% |
| Agency and support/outsourced services | 0.5 | - | 0.1 | 0.1 | -48.4% | 0.1% | 0.8 | 0.8 | 0.8 | 122.1% | 0.4% |
| Entertainment | 0.7 | 0.2 | 0.2 | 0.4 | -13.8% | 0.3% | 0.9 | 0.9 | 0.9 | 30.6% | 0.6% |
| Travel and subsistence | 14.4 | 10.7 | 8.3 | 0.3 | -71.5% | 6.3% | 7.3 | 7.5 | 7.5 | 181.6% | 4.0% |
| Operating payments | 0.8 | 0.5 | 2.7 | 0.3 | -31.3% | 0.8% | 1.4 | 1.4 | 1.4 | 73.5% | 0.8% |
| Venues and facilities | 1.4 | 7.9 | 6.5 | 0.1 | -56.4% | 3.0% | 4.1 | 4.2 | 4.2 | 228.3% | 2.2% |
| Transfers and subsidies¹ | 64.2 | 68.2 | 67.9 | 59.7 | -2.4% | 48.6% | 74.5 | 76.4 | 76.7 | 8.7% | 51.1% |
| Departmental agencies and accounts | 45.1 | 29.5 | 34.2 | 11.4 | -36.9% | 22.5% | 16.7 | 17.1 | 17.1 | 14.7% | 11.1% |
| Public corporations and private enterprises | 4.8 | 8.8 | 8.7 | - | -100.0% | 4.2% | - | - | - | - | - |
| Non-profit institutions | 14.3 | 29.0 | 24.8 | 48.4 | 50.2% | 21.8% | 57.8 | 59.4 | 59.6 | 7.2% | 40.1% |
| Households | 0.0 | 0.9 | 0.2 | - | -100.0% | 0.2% | - | - | - | - | - |
| Payments for capital assets | - | 0.0 | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | 0.0 | - | - | - | - | - | - | - | - | - |
| Payments for financial assets | 0.0 | - | - | - | -100.0% | - | - | - | - | - | - |
| Total | 136.7 | 145.2 | 136.0 | 116.8 | -5.1% | 100.0% | 146.6 | 149.1 | 149.5 | 8.6% | 100.0% |
| Proportion of total programme expenditure to vote expenditure | 1.8% | 1.8% | 1.7% | 1.6% | - | - | 1.6% | 1.6% | 1.6% | - | - |

Table 35.10 International Cooperation and Resources expenditure trends and estimates by subprogramme and economic classification

| Details of transfers and subsidies | | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
|---|--|-----------------|---------|---------|------------------------|-------------------------|---------------------------------|----------------------------------|---------|---------|-------------------------|---------------------------------|
| | | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R million | | | | | | | | | | | | |
| Households | | | | | | | | | | | | |
| Social benefits | | | | | | | | | | | | |
| Current | | | | | | | | | | | | |
| | | 0.0 | 0.2 | 0.2 | – | -100.0% | 0.1% | – | – | – | – | – |
| Households | | 0.0 | 0.2 | 0.2 | – | -100.0% | 0.1% | – | – | – | – | – |
| Departmental agencies and accounts | | | | | | | | | | | | |
| Departmental agencies (non-business entities) | | | | | | | | | | | | |
| Current | | | | | | | | | | | | |
| | | 45.1 | 29.5 | 34.2 | 11.4 | -36.9% | 22.5% | 16.7 | 17.1 | 17.1 | 14.7% | 11.1% |
| National Research Foundation: | | 14.0 | 14.8 | 15.9 | 11.4 | -6.7% | 10.5% | 16.7 | 17.1 | 17.1 | 14.7% | 11.1% |
| Bilateral cooperation for global science development | | | | | | | | | | | | |
| Various institutions: Global science: International multilateral agreements | | 27.9 | 9.5 | 18.3 | – | -100.0% | 10.4% | – | – | – | – | – |
| Various institutions: Global science: African multilateral agreements | | 3.3 | 5.2 | – | – | -100.0% | 1.6% | – | – | – | – | – |
| Households | | | | | | | | | | | | |
| Other transfers to households | | | | | | | | | | | | |
| Current | | | | | | | | | | | | |
| | | – | 0.7 | – | – | – | 0.1% | – | – | – | – | – |
| Households | | – | 0.7 | – | – | – | 0.1% | – | – | – | – | – |
| Public corporations and private enterprises | | | | | | | | | | | | |
| Public corporations | | | | | | | | | | | | |
| Other transfers to public corporations | | | | | | | | | | | | |
| Current | | | | | | | | | | | | |
| | | 4.8 | 8.4 | 8.0 | – | -100.0% | 4.0% | – | – | – | – | – |
| Various institutions: Global science: International multilateral agreements | | 1.7 | 4.4 | 3.6 | – | -100.0% | 1.8% | – | – | – | – | – |
| Various institutions: Global science: African multilateral agreements | | 3.1 | 4.0 | 4.4 | – | -100.0% | 2.1% | – | – | – | – | – |
| Non-profit institutions | | | | | | | | | | | | |
| Current | | | | | | | | | | | | |
| | | 14.3 | 29.0 | 24.8 | 48.4 | 50.2% | 21.8% | 57.8 | 59.4 | 59.6 | 7.2% | 40.1% |
| Various institutions: Global science: International multilateral agreements | | 13.6 | 28.8 | 21.2 | 38.0 | 40.7% | 19.0% | 47.3 | 48.6 | 48.8 | 8.7% | 32.5% |
| Various institutions: Global science: African multilateral agreements | | 0.6 | 0.2 | 3.7 | 10.4 | 151.7% | 2.8% | 10.5 | 10.8 | 10.8 | 1.5% | 7.5% |

1. Estimates of National Expenditure data tables are available at www.treasury.gov.za. These tables contain detailed information by goods and services, and transfers and subsidies items by programme.

Personnel information

Table 35.11 International Cooperation and Resources personnel numbers and cost by salary level¹

| Number of posts estimated for 31 March 2021 | | Number and cost ² of personnel posts filled/planned for on funded establishment | | | | | | | | | | Number | | | | | | | |
|---|---|--|------|-----------|------------------|---------|-----------|----------------------------------|------|-----------|--------|-------------------|-----------|-------------------------|----------------------------------|-----------|-----|-------|--------|
| Number of funded posts | Number of posts additional to the establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/ Total (%) | | | | |
| | | 2019/20 | | 2020/21 | | 2021/22 | | 2022/23 | | 2023/24 | | 2020/21 - 2023/24 | | | | | | | |
| International Cooperation and Resources | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | |
| Salary level | 70 | 1 | 48 | 48.4 | 1.0 | 52 | 53.8 | 1.0 | 51 | 53.2 | 1.0 | 50 | 53.3 | 1.1 | 57 | 53.3 | 0.9 | 3.2% | 100.0% |
| 1 – 6 | 4 | – | 3 | 1.0 | 0.3 | 4 | 1.4 | 0.4 | 4 | 1.4 | 0.4 | 4 | 1.5 | 0.4 | 4 | 1.5 | 0.4 | – | 7.6% |
| 7 – 10 | 27 | 1 | 20 | 13.3 | 0.7 | 20 | 13.6 | 0.7 | 20 | 13.8 | 0.7 | 20 | 14.1 | 0.7 | 21 | 14.8 | 0.7 | 1.6% | 38.6% |
| 11 – 12 | 19 | – | 16 | 19.1 | 1.2 | 17 | 20.6 | 1.2 | 16 | 19.5 | 1.2 | 15 | 19.0 | 1.3 | 16 | 17.9 | 1.1 | -2.0% | 30.5% |
| 13 – 16 | 20 | – | 9 | 14.9 | 1.7 | 11 | 18.2 | 1.7 | 11 | 18.5 | 1.7 | 11 | 18.8 | 1.7 | 16 | 19.1 | 1.2 | 13.7% | 23.2% |

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Programme 4: Research Development and Support

Programme purpose

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

Objectives

- Contribute to the development of representative, high-level human capital that is able to pursue locally relevant, globally competitive research and innovation activities over the medium term by:

- awarding 9 600 bursaries to doctoral students
- awarding 32 500 bursaries to pipeline postgraduate (BTech, honours and masters) students
- placing 2 250 graduates and students in department-funded work preparation programmes in science, engineering and technology institutions.
- Ensure the availability of and access to internationally comparable research and innovation infrastructure to generate new knowledge and train new researchers by:
 - increasing the number of research infrastructure grants from 25 in 2021/22 to 30 in 2023/24
 - increasing the total available broadband capacity provided by the South African National Research Network over the MTEF period from 5 800 Gbps in 2021/22 to 6 200 Gbps in 2022/23 and 6 500 Gbps in 2023/24.
- Support and promote research that develops basic sciences through the production of new knowledge and relevant training opportunities over the medium term by:
 - maintaining the total number of researchers awarded research grants through programmes managed by the National Research Foundation at above 7 700
 - maintaining the number of research articles published by researchers funded by the National Research Foundation and cited in the Web of Science citation database at 17 000
 - maintaining the number of strategic and technical engagements with the National Research Foundation, Academy of Science of South Africa and the South African Council for Natural Scientific Professions to 36 to ensure alignment with national priorities.
- Develop strategic priority science areas in which South Africa enjoys a competitive advantage through promoting internationally competitive research and training activities and outputs by:
 - approving a production plan for the L-band receivers for the additional 20 MeerKAT antennae by 2021/22, ensuring that production is completed by 2022/23, and ensuring that installation is completed by 2023/24
 - awarding the MeerKAT extension antennae tender by 2021/22, installing 4 extension antennae by 2022/23 and 20 antennae by 2023/24
 - launching the national recordal system for registration and access to indigenous knowledge in 2021/22, launching intellectual property instruments in 2022/23, and ensuring that a fully functioning specialised service delivery unit is in operation by 2023/24
 - promoting citizen engagement with science over the medium term through 36 initiatives or projects, including conducting the South African public relationship with science survey, which promotes the development of a scientifically literate society able to form independent opinions about science.

Subprogrammes

- *Human Capital and Science Promotions* formulates and implements policies and strategies that address the availability of human capital for science, technology and innovation; provide fundamental support for research activities; and contribute to the development of a society that is knowledgeable about science, and is critically engaged and scientifically literate.
- *Science Missions* promotes the development of research, the production of scientific knowledge, and human capital in science areas in which South Africa enjoys a geographic advantage.
- *Basic Science and Infrastructure* facilitates the strategic implementation of research and innovation equipment and facilities to promote knowledge production in areas of national priority, and sustain innovation led by research and development.
- *Astronomy* supports the development of astronomical sciences around a new multiwavelength astronomy strategy, and provides strategic guidance and support to relevant astronomy institutions for the implementation of strategic astronomy programmes.
- *Office of the Deputy Director-General: Research, Development and Support* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.12 Research, Development and Support expenditure trends and estimates by subprogramme and economic classification

| Subprogramme | Audited outcome | | | Adjusted appropriation 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average Expenditure/Total (%) 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average Expenditure/Total (%) 2023/24 |
|---|-----------------|----------------|----------------|-----------------------------------|--|--|----------------------------------|----------------|----------------|--|--|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| R million | | | | | | | | | | | |
| Human Capital and Science Promotions | 2 379.6 | 2 447.2 | 2 629.8 | 2 283.0 | -1.4% | 56.8% | 2 693.3 | 2 758.9 | 2 769.5 | 6.7% | 55.3% |
| Science Missions | 201.7 | 223.3 | 239.2 | 202.8 | 0.2% | 5.1% | 249.8 | 256.0 | 257.0 | 8.2% | 5.1% |
| Basic Science and Infrastructure | 977.5 | 1 095.3 | 978.7 | 757.0 | -8.2% | 22.2% | 1 147.6 | 1 190.7 | 1 241.3 | 17.9% | 22.8% |
| Astronomy | 733.2 | 750.8 | 728.4 | 498.3 | -12.1% | 15.8% | 854.6 | 883.6 | 920.4 | 22.7% | 16.6% |
| Office of the Deputy Director-General: Research, Development and Support | 4.5 | 3.8 | 2.3 | 4.1 | -3.1% | 0.1% | 4.0 | 4.0 | 4.0 | -1.3% | 0.1% |
| Total | 4 296.5 | 4 520.4 | 4 578.4 | 3 745.2 | -4.5% | 100.0% | 4 949.2 | 5 093.3 | 5 192.1 | 11.5% | 100.0% |
| Change to 2020 Budget estimate | | | | (1 137.2) | | | (176.1) | (223.2) | (404.7) | | |
| Economic classification | | | | | | | | | | | |
| Current payments | 52.0 | 53.2 | 52.7 | 48.1 | -2.6% | 1.2% | 55.2 | 55.7 | 55.8 | 5.1% | 1.1% |
| Compensation of employees | 38.8 | 37.9 | 39.9 | 39.3 | 0.4% | 0.9% | 38.9 | 38.9 | 38.9 | -0.3% | 0.8% |
| Goods and services ¹ | 13.3 | 15.3 | 12.8 | 8.8 | -12.7% | 0.3% | 16.4 | 16.8 | 16.9 | 24.1% | 0.3% |
| <i>of which:</i> | | | | | | | | | | | |
| Administrative fees | 0.3 | 0.5 | 0.4 | 0.3 | -3.4% | - | 0.7 | 0.7 | 0.7 | 34.9% | - |
| Communication | 0.5 | 0.6 | 0.7 | 0.8 | 14.7% | - | 0.8 | 0.8 | 0.8 | 1.0% | - |
| Consultants: Business and advisory services | 1.1 | 1.3 | 0.7 | 1.2 | 4.7% | - | 1.3 | 1.4 | 1.4 | 3.6% | - |
| Agency and support/outsourced services | 0.2 | 0.7 | 0.3 | 0.9 | 55.1% | - | 1.0 | 1.1 | 1.1 | 6.2% | - |
| Travel and subsistence | 8.0 | 8.5 | 8.3 | 2.9 | -28.2% | 0.2% | 8.3 | 8.5 | 8.5 | 42.6% | 0.1% |
| Venues and facilities | 0.7 | 1.8 | 1.0 | 0.8 | 1.3% | - | 2.4 | 2.4 | 2.4 | 46.4% | - |
| Transfers and subsidies¹ | 4 244.4 | 4 467.3 | 4 525.7 | 3 697.1 | -4.5% | 98.8% | 4 894.0 | 5 037.5 | 5 136.3 | 11.6% | 98.9% |
| Departmental agencies and accounts | 3 639.3 | 3 859.1 | 3 869.5 | 3 636.9 | - | 87.5% | 4 621.9 | 4 755.8 | 4 842.1 | 10.0% | 94.1% |
| Public corporations and private enterprises | 457.5 | 466.7 | 454.4 | 60.2 | -49.1% | 8.4% | 272.1 | 281.8 | 294.2 | 69.7% | 4.8% |
| Non-profit institutions | 146.7 | 141.4 | 200.4 | - | -100.0% | 2.9% | - | - | - | - | - |
| Households | 0.8 | 0.0 | 1.4 | - | -100.0% | - | - | - | - | - | - |
| Payments for capital assets | - | 0.0 | - | - | - | - | - | - | - | - | - |
| Machinery and equipment | - | 0.0 | - | - | - | - | - | - | - | - | - |
| Payments for financial assets | 0.1 | 0.0 | 0.0 | - | -100.0% | - | - | - | - | - | - |
| Total | 4 296.5 | 4 520.4 | 4 578.4 | 3 745.2 | -4.5% | 100.0% | 4 949.2 | 5 093.3 | 5 192.1 | 11.5% | 100.0% |
| Proportion of total programme expenditure to vote expenditure | 57.1% | 56.9% | 56.7% | 51.5% | - | - | 55.4% | 55.8% | 56.2% | - | - |
| Details of transfers and subsidies | | | | | | | | | | | |
| Households | | | | | | | | | | | |
| Social benefits | | | | | | | | | | | |
| Current | 0.1 | 0.0 | - | - | -100.0% | - | - | - | - | - | - |
| Households | 0.1 | 0.0 | - | - | -100.0% | - | - | - | - | - | - |
| Departmental agencies and accounts | | | | | | | | | | | |
| Departmental agencies (non-business entities) | | | | | | | | | | | |
| Current | 2 501.7 | 2 615.9 | 2 774.5 | 2 523.6 | 0.3% | 60.8% | 2 990.2 | 3 064.0 | 3 075.7 | 6.8% | 61.4% |
| Academy of Science of South Africa | 25.3 | 25.7 | 27.0 | 24.8 | -0.6% | 0.6% | 33.2 | 33.8 | 34.0 | 11.0% | 0.7% |
| Various institutions: Astronomy research and development | 29.3 | 30.6 | 32.8 | 34.4 | 5.4% | 0.7% | 40.6 | 41.7 | 41.9 | 6.8% | 0.8% |
| Various institutions: Policy development on human and social development dynamics | 26.0 | 25.6 | 27.1 | 30.3 | 5.2% | 0.6% | 36.9 | 37.9 | 38.1 | 7.9% | 0.8% |
| National Research Foundation: Human resources development for science and engineering | 744.6 | 851.9 | 922.3 | 794.0 | 2.2% | 19.3% | 982.9 | 1 006.9 | 1 010.7 | 8.4% | 20.0% |
| National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package | - | - | - | 23.1 | - | 0.1% | 18.6 | 19.1 | 19.2 | -6.0% | 0.4% |
| National Research Foundation: Various institutions: Science awareness, research and initiatives to encourage youth participation in science | 926.0 | 904.8 | 943.4 | 859.5 | -2.5% | 21.2% | 962.6 | 986.2 | 990.0 | 4.8% | 20.0% |
| National Research Foundation: South African research chairs initiative to develop human resources in science | 73.0 | 58.1 | 64.3 | 33.5 | -22.9% | 1.3% | 91.6 | 94.1 | 94.4 | 41.3% | 1.7% |
| National Research Foundation: South African research chairs initiative to develop human resources in science | 496.9 | 530.3 | 566.3 | 533.5 | 2.4% | 12.4% | 588.6 | 602.9 | 605.2 | 4.3% | 12.3% |

Table 35.12 Research, Development and Support expenditure trends and estimates by subprogramme and economic classification

| Details of transfers and subsidies | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | Average Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average Expenditure/ Total (%) |
|---|-----------------|----------------|----------------|------------------------|-------------------------|--------------------------------|----------------------------------|----------------|----------------|-------------------------|--------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| R million | | | | | | | | | | | |
| Various institutions: Strategic science platforms for research and development | 180.6 | 188.9 | 191.3 | 190.6 | 1.8% | 4.4% | 235.2 | 241.3 | 242.3 | 8.3% | 4.8% |
| Capital | 1 137.6 | 1 243.2 | 1 095.0 | 1 113.3 | -0.7% | 26.8% | 1 631.6 | 1 691.8 | 1 766.4 | 16.6% | 32.7% |
| Various institutions: Infrastructure projects for research and development | 443.7 | 534.0 | 408.0 | 656.7 | 14.0% | 11.9% | 829.2 | 861.6 | 899.6 | 11.1% | 17.1% |
| National Research Foundation: Square Kilometre Array: Capital contribution to research | 693.9 | 709.2 | 687.0 | 456.6 | -13.0% | 14.9% | 802.4 | 830.2 | 866.8 | 23.8% | 15.6% |
| Households | | | | | | | | | | | |
| Other transfers to households | | | | | | | | | | | |
| Current | 0.7 | - | 1.1 | - | -100.0% | - | - | - | - | - | - |
| Households | 0.3 | - | - | - | -100.0% | - | - | - | - | - | - |
| National Research Foundation: Human resources development for science and engineering | 0.4 | - | 1.1 | - | -100.0% | - | - | - | - | - | - |
| Public corporations and private enterprises | | | | | | | | | | | |
| Public corporations | | | | | | | | | | | |
| Other transfers to public corporations | | | | | | | | | | | |
| Current | 44.3 | 49.8 | 78.1 | - | -100.0% | 1.0% | - | - | - | - | - |
| National Research Foundation: Human resources development for science and engineering | - | - | 41.2 | - | - | 0.2% | - | - | - | - | - |
| National Research Foundation: Human resources development for science and engineering: Economic competitiveness and support package | 39.1 | 41.0 | 22.0 | - | -100.0% | 0.6% | - | - | - | - | - |
| Various institutions: Science awareness | - | 2.4 | - | - | - | - | - | - | - | - | - |
| Various institutions: Strategic science platforms for research and development | 5.2 | 6.4 | 14.9 | - | -100.0% | 0.2% | - | - | - | - | - |
| Capital | 413.3 | 417.0 | 376.3 | 60.2 | -47.4% | 7.4% | 272.1 | 281.8 | 294.2 | 69.7% | 4.8% |
| Council for Scientific and Industrial Research: Cyberinfrastructure research and development | 413.3 | 236.3 | 251.7 | 60.2 | -47.4% | 5.6% | 272.1 | 281.8 | 294.2 | 69.7% | 4.8% |
| Various institutions: Infrastructure projects for research and development | - | 180.7 | 124.6 | - | - | 1.8% | - | - | - | - | - |
| Non-profit institutions | | | | | | | | | | | |
| Current | 62.1 | 34.2 | 45.6 | - | -100.0% | 0.8% | - | - | - | - | - |
| Academy of Science of South Africa | 12.5 | - | - | - | -100.0% | 0.1% | - | - | - | - | - |
| Various institutions: Policy development on human and social development dynamics | - | - | 1.5 | - | - | - | - | - | - | - | - |
| National Research Foundation: Human resources development for science and engineering | 49.6 | 4.6 | 11.2 | - | -100.0% | 0.4% | - | - | - | - | - |
| Various institutions: Science awareness, research and initiatives to encourage youth participation in science | - | 16.8 | 17.0 | - | - | 0.2% | - | - | - | - | - |
| Various institutions: Strategic science platforms for research and development | - | 11.1 | 15.9 | - | - | 0.2% | - | - | - | - | - |
| Various institutions: Policy development on basic science development and support | - | 1.8 | - | - | - | - | - | - | - | - | - |
| Capital | 84.6 | 107.1 | 154.8 | - | -100.0% | 2.0% | - | - | - | - | - |
| Various institutions: Infrastructure projects for research and development | 84.6 | 107.1 | 154.8 | - | -100.0% | 2.0% | - | - | - | - | - |

1. Estimates of National Expenditure data tables are available at www.treasury.gov.za. These tables contain detailed information by goods and services, and transfers and subsidies items by programme.

Personnel information

Table 35.13 Research, Development and Support personnel numbers and cost by salary level¹

| Number of posts estimated for 31 March 2021 | | Number and cost ² of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | Number | | | | | |
|---|---|--|------|-----------|------------------|------|-----------|----------------------------------|------|-----------|--------|---------|-----------|-------------------------|----------------------------------|-------------------|--------|--------|-----------|
| Number of funded posts | Number of posts additional to the establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/ Total (%) | | | | |
| | | 2019/20 | | | 2020/21 | | | 2021/22 | | 2022/23 | | 2023/24 | | | | 2020/21 - 2023/24 | | | |
| | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | | Number | Cost | Unit cost |
| Research, Development and Support | | | | | | | | | | | | | | | | | | | |
| Salary level | 56 | – | 46 | 39.9 | 0.9 | 45 | 39.3 | 0.9 | 45 | 38.9 | 0.9 | 44 | 38.9 | 0.9 | 44 | 38.9 | 0.9 | -0.5% | 100.0% |
| 1 – 6 | 5 | – | 4 | 1.3 | 0.3 | 4 | 1.3 | 0.3 | 4 | 1.4 | 0.3 | 4 | 1.4 | 0.3 | 5 | 1.4 | 0.3 | 7.7% | 9.6% |
| 7 – 10 | 10 | – | 7 | 3.3 | 0.5 | 7 | 3.3 | 0.5 | 7 | 3.4 | 0.5 | 8 | 3.9 | 0.5 | 10 | 4.0 | 0.4 | 12.6% | 18.0% |
| 11 – 12 | 24 | – | 21 | 19.1 | 0.9 | 20 | 18.1 | 0.9 | 19 | 17.4 | 0.9 | 17 | 16.5 | 0.9 | 14 | 16.8 | 1.2 | -10.7% | 39.2% |
| 13 – 16 | 17 | – | 14 | 16.2 | 1.2 | 14 | 16.5 | 1.2 | 15 | 16.7 | 1.1 | 15 | 17.0 | 1.1 | 15 | 16.6 | 1.1 | 2.3% | 33.2% |

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Programme 5: Socioeconomic Innovation Partnerships

Programme purpose

Enhance government's growth and development priority areas through targeted science and technology-based innovation interventions, and the development of strategic partnerships with other government departments, industry, research institutions and communities.

Objectives

- Inform and influence how science and technology can be used to achieve inclusive development through knowledge, evidence and learning over the medium term by:
 - publishing 27 knowledge products on innovation for inclusive development
 - maintaining and improving 10 decision support systems
 - generating 46 learning interventions.
- Identify, grow and sustain niche, high-potential science, technology and innovation capabilities for sustainable development and the greening of society and the economy by fully funding and co-funding 380 honours, masters and doctoral students, and adding 25 knowledge and innovation products to the intellectual property portfolio over the medium term.
- Identify, grow and sustain niche, high-potential science, technology and innovation capabilities that improve the competitiveness of existing industries with growth potential in aerospace, advanced manufacturing, chemicals, advanced metals, mining, ICT and sector innovation funds; and facilitate the development of new targeted industries over the medium term by:
 - fully funding or co-funding 1 460 masters and doctoral students, and 600 interns
 - adding 140 knowledge and innovation products to South Africa's intellectual property portfolio
 - funding 12 instruments in support of increased localisation, competitiveness, and research and development-led industry development.
- Introduce and manage interventions and incentive programmes that increase the level of private-sector investment in scientific or technological research and development by providing preapproval decisions, within 90 days of the date of receipt of applications, for the research and development tax incentive over the medium term.

Subprogrammes

- *Sector Innovation and Green Economy* provides policy, strategy and direction for research and the development-led growth of strategic sectors of the economy; and supports the transition to a green economy.
- *Innovation for Inclusive Development* supports the development of science and technology-based innovations for tackling poverty, including the creation of sustainable jobs and human settlements, and the enhanced delivery of basic services.

- *Science and Technology Investment* leads and supports the development of indicators and instruments for monitoring investments in science and technology, as well as the performance of the national system of innovation, and ways of strengthening policy in relation to the national system of innovation.
- *Technology Localisation, Beneficiation and Advanced Manufacturing* funds development programmes for technology and innovation to advance strategic, sustainable economic growth for the medium and long terms; sector development priorities; and service delivery.
- *Office of the Deputy Director-General: Socioeconomic Innovation Partnerships* provides management and administrative support to the programme and the office of the deputy director-general.

Expenditure trends and estimates

Table 35.14 Socioeconomic Innovation Partnerships expenditure trends and estimates by subprogramme and economic classification

| Subprogramme | Audited outcome | | | Adjusted appropriation 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) 2017/18 - 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) 2020/21 - 2023/24 |
|---|-----------------|----------------|----------------|-----------------------------------|--|---|----------------------------------|----------------|----------------|--|---|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| R million | | | | | | | | | | | |
| Sector Innovation and Green Economy | 985.3 | 1 102.9 | 1 049.5 | 987.3 | 0.1% | 59.9% | 1 066.0 | 1 091.9 | 1 096.1 | 3.5% | 60.5% |
| Innovation for Inclusive Development | 356.7 | 340.0 | 373.1 | 369.7 | 1.2% | 20.9% | 374.9 | 382.9 | 384.3 | 1.3% | 21.6% |
| Science and Technology Investment | 22.2 | 29.9 | 34.0 | 32.0 | 13.0% | 1.7% | 35.6 | 36.3 | 36.4 | 4.4% | 2.0% |
| Technology Localisation, Beneficiation and Advanced Manufacturing | 248.4 | 278.5 | 316.8 | 341.3 | 11.2% | 17.2% | 249.2 | 255.3 | 256.2 | -9.1% | 15.7% |
| Office of the Deputy Director-General: Socioeconomic Innovation Partnership | 4.4 | 4.0 | 4.9 | 3.5 | -6.8% | 0.2% | 3.3 | 3.4 | 3.4 | -1.3% | 0.2% |
| Total | 1 617.0 | 1 755.2 | 1 778.2 | 1 733.8 | 2.4% | 100.0% | 1 729.0 | 1 769.8 | 1 776.4 | 0.8% | 100.0% |
| Change to 2020 Budget estimate | | | | (159.9) | | | (103.8) | (131.0) | (138.3) | | |
| Economic classification | | | | | | | | | | | |
| Current payments | 49.7 | 51.7 | 49.0 | 52.1 | 1.6% | 2.9% | 54.2 | 54.6 | 54.6 | 1.6% | 3.1% |
| Compensation of employees | 42.9 | 44.0 | 43.2 | 44.8 | 1.5% | 2.5% | 44.3 | 44.4 | 44.4 | -0.3% | 2.5% |
| Goods and services ¹ | 6.9 | 7.7 | 5.8 | 7.3 | 2.0% | 0.4% | 9.9 | 10.2 | 10.3 | 12.1% | 0.5% |
| of which: | | | | | | | | | | | |
| Advertising | 0.0 | – | 0.0 | 0.2 | 244.4% | – | 0.2 | 0.3 | 0.3 | 0.7% | – |
| Catering: Departmental activities | 0.0 | 0.0 | 0.0 | 0.3 | 102.2% | – | 0.3 | 0.4 | 0.4 | 0.6% | – |
| Communication | 0.6 | 0.7 | 0.8 | 1.2 | 25.9% | – | 1.2 | 1.2 | 1.3 | 0.7% | 0.1% |
| Consultants: Business and advisory services | 0.4 | 0.7 | 0.2 | 1.8 | 70.4% | – | 2.8 | 2.9 | 2.9 | 16.4% | 0.1% |
| Travel and subsistence | 3.4 | 2.3 | 2.2 | 2.1 | -15.5% | 0.1% | 3.8 | 3.9 | 3.9 | 23.8% | 0.2% |
| Venues and facilities | 0.1 | 0.0 | 0.1 | 0.9 | 130.2% | – | 0.9 | 1.0 | 1.0 | 0.7% | 0.1% |
| Transfers and subsidies¹ | 1 567.3 | 1 703.5 | 1 729.2 | 1 681.7 | 2.4% | 97.1% | 1 674.8 | 1 715.2 | 1 721.8 | 0.8% | 96.9% |
| Departmental agencies and accounts | 384.4 | 398.9 | 492.2 | 601.8 | 16.1% | 27.3% | 469.9 | 480.7 | 482.5 | -7.1% | 29.0% |
| Public corporations and private enterprises | 1 157.1 | 1 245.7 | 1 194.2 | 1 079.9 | -2.3% | 67.9% | 1 204.8 | 1 234.5 | 1 239.3 | 4.7% | 67.9% |
| Non-profit institutions | 25.8 | 58.8 | 42.8 | – | -100.0% | 1.9% | – | – | – | – | – |
| Households | 0.0 | 0.1 | 0.1 | – | -100.0% | – | – | – | – | – | – |
| Payments for financial assets | 0.0 | 0.0 | – | – | -100.0% | – | – | – | – | – | – |
| Total | 1 617.0 | 1 755.2 | 1 778.2 | 1 733.8 | 2.4% | 100.0% | 1 729.0 | 1 769.8 | 1 776.4 | 0.8% | 100.0% |
| Proportion of total programme expenditure to vote expenditure | 21.5% | 22.1% | 22.0% | 23.8% | – | – | 19.4% | 19.4% | 19.2% | – | – |
| Details of transfers and subsidies | | | | | | | | | | | |
| Households | | | | | | | | | | | |
| Social benefits | | | | | | | | | | | |
| Current | 0.0 | 0.1 | 0.1 | – | -100.0% | – | – | – | – | – | – |
| Households | 0.0 | 0.1 | 0.1 | – | -100.0% | – | – | – | – | – | – |
| Departmental agencies and accounts | | | | | | | | | | | |
| Departmental agencies (non-business entities) | | | | | | | | | | | |
| Current | 384.4 | 398.9 | 492.2 | 601.8 | 16.1% | 27.3% | 469.9 | 480.7 | 482.5 | -7.1% | 29.0% |
| Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support | – | – | 33.8 | 83.8 | – | 1.7% | – | – | – | -100.0% | 1.2% |
| Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project | – | – | 39.6 | 47.0 | – | 1.3% | – | – | – | -100.0% | 0.7% |

Table 35.14 Socioeconomic Innovation Partnerships expenditure trends and estimates by subprogramme and economic classification

| Details of transfers and subsidies | Audited outcome | | | Adjusted appropriation | Average growth rate (%) | | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
|---|-----------------|--------------|--------------|------------------------|-------------------------|-------------------|----------------------------------|--------------|--------------|-------------------------|---------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | 2020/21 | 2017/18 - 2020/21 | 2021/22 | 2022/23 | 2023/24 | | |
| | R million | | | | | | | | | | |
| Various institutions: Advanced manufacturing technology strategy implementation | – | 0.3 | 0.9 | – | – | – | – | – | – | – | – |
| Various institutions: Innovative research and development | 36.3 | 19.1 | 24.8 | 70.0 | 24.4% | 2.2% | 48.3 | 49.6 | 49.8 | -10.7% | 3.1% |
| Human Sciences Research Council | 304.7 | 303.7 | 324.2 | 289.3 | -1.7% | 17.7% | 314.4 | 321.1 | 322.3 | 3.7% | 17.8% |
| Various institutions: Local manufacturing capacity research and technical support | 21.2 | 57.5 | 28.7 | 34.5 | 17.7% | 2.1% | 32.6 | 33.5 | 33.6 | -0.9% | 1.9% |
| National Research Foundation: Research information management system | 3.8 | 4.0 | 8.4 | 8.9 | 32.8% | 0.4% | 11.0 | 11.3 | 11.4 | 8.7% | 0.6% |
| Human Science Research Council: Develop and monitor science and technology indicators | 3.2 | 10.0 | 12.4 | 13.0 | 60.0% | 0.6% | 15.2 | 15.6 | 15.6 | 6.3% | 0.8% |
| Various institutions: Environmental innovation | 3.8 | 4.3 | 19.4 | 42.9 | 125.3% | 1.0% | 33.3 | 34.2 | 34.3 | -7.2% | 2.1% |
| Various institutions: Local systems of innovation for the cold chain technologies project | 11.6 | – | – | 12.4 | 2.3% | 0.3% | 15.0 | 15.5 | 15.5 | 7.9% | 0.8% |
| Public corporations and private enterprises | | | | | | | | | | | |
| Public corporations | | | | | | | | | | | |
| Other transfers to public corporations | | | | | | | | | | | |
| Current | 224.2 | 271.3 | 223.3 | 186.3 | -6.0% | 13.1% | 226.4 | 232.3 | 233.2 | 7.8% | 12.5% |
| Various institutions: Economic competitiveness and support package: Local manufacturing capacity research and technical support | – | – | 46.2 | – | – | 0.7% | – | – | – | – | – |
| Various institutions: Advanced manufacturing technology strategy implementation | 48.2 | 41.2 | 58.4 | 57.6 | 6.1% | 3.0% | 63.3 | 65.0 | 65.3 | 4.3% | 3.6% |
| Various institutions: Innovative research and development | 5.3 | – | 1.0 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Information and communications technology | 26.9 | 26.2 | 28.0 | 39.8 | 14.0% | 1.8% | 41.8 | 42.9 | 43.1 | 2.7% | 2.4% |
| Various institutions: Local manufacturing capacity research and technical support | 65.2 | 48.3 | – | – | -100.0% | 1.6% | – | – | – | – | – |
| Council for Scientific and Industrial Research: Mining research and development | – | – | 21.1 | 41.7 | – | 0.9% | 63.5 | 65.1 | 65.3 | 16.2% | 3.4% |
| Various institutions: Resource-based industries research and development | 62.6 | 107.4 | 52.9 | 47.3 | -8.9% | 3.9% | 57.7 | 59.3 | 59.5 | 8.0% | 3.2% |
| Various institutions: Environmental innovation | 11.7 | 16.5 | 9.0 | – | -100.0% | 0.5% | – | – | – | – | – |
| Various institutions: Local systems of innovation for the cold chain technologies project | 4.3 | 31.6 | 6.8 | – | -100.0% | 0.6% | – | – | – | – | – |
| Non-profit institutions | | | | | | | | | | | |
| Current | 25.8 | 58.8 | 42.8 | – | -100.0% | 1.9% | – | – | – | – | – |
| Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project | – | – | 17.5 | – | – | 0.3% | – | – | – | – | – |
| Various institutions: Advanced manufacturing technology strategy implementation | 3.5 | 0.4 | 0.1 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Innovative research and development | 1.5 | 6.7 | 13.1 | – | -100.0% | 0.3% | – | – | – | – | – |
| Various institutions: Local manufacturing capacity research and technical support | 5.2 | – | – | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Resource-based industries research and development | 2.4 | 0.8 | 0.8 | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Environmental innovation | 6.4 | 10.9 | 1.0 | – | -100.0% | 0.3% | – | – | – | – | – |
| Various institutions: Local systems of innovation for the cold chain technologies project | 6.7 | 40.0 | – | – | -100.0% | 0.7% | – | – | – | – | – |
| Various institutions: ICT | – | – | 10.3 | – | – | 0.1% | – | – | – | – | – |

Table 35.14 Socioeconomic Innovation Partnerships expenditure trends and estimates by subprogramme and economic classification

| Details of transfers and subsidies | | | | Adjusted appropriation | Average growth rate (%) | | Medium-term expenditure estimate | | | Average growth rate (%) | |
|---|---------|---------|---------|------------------------|-------------------------|---------|----------------------------------|---------|---------|-------------------------|---------|
| Audited outcome | | | | | 2017/18 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 | 2023/24 |
| R million | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2017/18 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 | 2023/24 |
| Public corporations and private enterprises | | | | | | | | | | | |
| Private enterprises | | | | | | | | | | | |
| Other transfers to private enterprises | | | | | | | | | | | |
| Current | 17.3 | 10.7 | 4.9 | – | -100.0% | 0.5% | – | – | – | – | – |
| Various institutions: Economic competitiveness and support package: Local systems of innovation for the cold chain technologies project | – | – | 4.9 | – | – | 0.1% | – | – | – | – | – |
| Various institutions: Advanced manufacturing technology strategy implementation | 1.5 | 10.7 | – | – | -100.0% | 0.2% | – | – | – | – | – |
| Various institutions: Local manufacturing capacity research and technical support | 7.8 | – | – | – | -100.0% | 0.1% | – | – | – | – | – |
| Various institutions: Resource-based industries research and development | 8.0 | – | – | – | -100.0% | 0.1% | – | – | – | – | – |
| Public corporations and private enterprises | | | | | | | | | | | |
| Public corporations | | | | | | | | | | | |
| Public corporations (subsidies on products and production) | | | | | | | | | | | |
| Current | 915.6 | 963.2 | 965.8 | 893.6 | -0.8% | 54.3% | 978.4 | 1 002.3 | 1 006.1 | 4.0% | 55.4% |
| Council for Scientific and Industrial Research | 915.6 | 963.2 | 965.8 | 893.6 | -0.8% | 54.3% | 978.4 | 1 002.3 | 1 006.1 | 4.0% | 55.4% |

1. Estimates of National Expenditure data tables are available at www.treasury.gov.za. These tables contain detailed information by goods and services, and transfers and subsidies items by programme.

Personnel information

Table 35.15 Socioeconomic Innovation Partnerships personnel numbers and cost by salary level¹

| Number of posts estimated for 31 March 2021 | | Number and cost ² of personnel posts filled/planned for on funded establishment | | | | | | | | | | | Number | | | | | | |
|---|---|--|---------|-----------|------------------|---------|-----------|----------------------------------|------|-----------|--------|------|-----------|-------------------------|---------------------------------|-----------|-----|--------|--------|
| Number of funded posts | Number of posts additional to the establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average Salary level/ Total (%) | | | | |
| | | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 | 2023/24 | | | | | | | | | | | |
| Socioeconomic Innovation Partnerships | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | |
| Salary level | 62 | – | 46 | 43.2 | 0.9 | 48 | 44.8 | 0.9 | 46 | 44.3 | 1.0 | 45 | 44.4 | 1.0 | 36 | 44.4 | 1.2 | -9.3% | 100.0% |
| 1 – 6 | 6 | – | 3 | 1.0 | 0.3 | 4 | 1.3 | 0.3 | 3 | 1.0 | 0.3 | 3 | 1.0 | 0.3 | 2 | 1.1 | 0.5 | -20.6% | 6.9% |
| 7 – 10 | 12 | – | 8 | 3.6 | 0.5 | 9 | 4.3 | 0.5 | 8 | 3.9 | 0.5 | 7 | 3.5 | 0.6 | 6 | 3.5 | 0.6 | -13.3% | 17.5% |
| 11 – 12 | 25 | – | 21 | 21.4 | 1.0 | 21 | 21.7 | 1.0 | 21 | 21.7 | 1.1 | 20 | 21.9 | 1.1 | 15 | 21.5 | 1.4 | -10.6% | 44.1% |
| 13 – 16 | 19 | – | 14 | 17.2 | 1.2 | 14 | 17.4 | 1.2 | 14 | 17.7 | 1.3 | 14 | 18.0 | 1.3 | 13 | 18.3 | 1.4 | -2.4% | 31.5% |

1. Data has been provided by the department and may not necessarily reconcile with official government personnel data.

2. Rand million.

Entities

Academy of Science of South Africa

Selected performance indicators

Table 35.16 Academy of Science of South Africa performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|---|------------------------------|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of media releases per year | Administration | Priority 3: Education, skills and health | 20 | 27 | 24 | 20 | 20 | 20 | 20 |
| Number of issues of electronic Science for Society newsletter per year | Administration | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Number of regional public lectures per year | Liaison | | 5 | 5 | 3 | 3 | 3 | 3 | 3 |
| Number of Young Scientists Conferences hosted per year | Liaison | | 3 | 3 | 4 | 1 | 1 | 1 | 1 |
| Number of new members of the Organisation for Women in Science for the Developing World National Chapter per year | Liaison | Priority 1: A capable, ethical and developmental state | 79 | 79 | 8 | 8 | 8 | 8 | 8 |

Table 35.16 Academy of Science of South Africa performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|--------------------------------|---|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of workshop reports published per year | Science advisory programme | Priority 3: Education, skills and health | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Number of consensus study reports published per year | Science advisory programme | | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| Number of new journal titles on the Scientific Electronic Library Online open access platform per year | Scholarly publishing programme | | 7 | 5 | 7 | 7 | 7 | 7 | 7 |
| Number of Quest: Science for South Africa magazines produced per year | Scholarly publishing programme | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

Entity overview

The Academy of Science of South Africa was established in terms of the Academy of Science of South Africa Act (2001), as amended, to promote outstanding achievements in all fields of scientific inquiry, recognise excellence, and provide evidence-based scientific advice to government and other stakeholders. Over the medium term, the academy aims to achieve enhanced national capacity to produce and publish research, provide evidence-based policy advice to government, and increase the quality and visibility of South African research publications.

Expenditure is expected to increase at an average annual rate of 2.2 per cent, from R33.4 million in 2020/21 to R35.6 million in 2023/24, driven mainly by the growing importance and use of digital platforms as a consequence of the COVID-19 pandemic. Transfers from the department, which account for 95.2 per cent (R101 million) of the academy's revenue, are expected to increase at an average annual rate of 2.4 per cent, from R31.6 million in 2020/21 to R34 million in 2023/24.

Programmes/Objectives/Activities

Table 35.17 Academy of Science of South Africa expenditure trends and estimates by programme/objective/activity

| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) 2020/21 - 2023/24 |
|--------------------------------|-----------------|-------------|-------------|-----------------------------|--|---|----------------------------------|-------------|-------------|--|---|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Administration | 19.4 | 20.7 | 22.7 | 10.9 | -17.6% | 37.7% | 12.3 | 12.4 | 10.0 | -2.8% | 32.7% |
| Liaison | 10.9 | 17.0 | 13.9 | 9.0 | -6.2% | 26.1% | 7.8 | 7.7 | 8.7 | -0.8% | 23.9% |
| Science advisory programme | 5.8 | 6.1 | 6.0 | 4.9 | -5.2% | 12.1% | 5.3 | 5.5 | 7.0 | 12.2% | 16.2% |
| Scholarly publishing programme | 12.7 | 14.3 | 10.5 | 8.6 | -12.0% | 24.0% | 9.4 | 9.9 | 10.0 | 4.9% | 27.2% |
| Total | 48.7 | 58.1 | 53.2 | 33.4 | -11.8% | 100.0% | 34.9 | 35.5 | 35.6 | 2.2% | 100.0% |

Statements of financial performance, cash flow and financial position

Table 35.18 Academy of Science of South Africa statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | |
|--|-----------------|--------------|-------------|-----------------------------|--|---|----------------------------------|-------------|-------------|--|---|
| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) 2020/21 - 2023/24 |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Revenue | | | | | | | | | | | |
| Non-tax revenue | 2.5 | 2.7 | 2.7 | 1.7 | -11.2% | 5.1% | 1.6 | 1.7 | 1.7 | -1.8% | 4.8% |
| Sale of goods and services other than capital assets of which: | 0.7 | 1.3 | 0.5 | 0.5 | -9.1% | 1.5% | 0.4 | 0.4 | 0.4 | -6.4% | 1.2% |
| Administrative fees | 0.1 | 0.1 | 0.1 | 0.1 | 2.7% | 0.2% | 0.1 | 0.1 | 0.1 | 2.8% | 0.3% |
| Sales by market establishment | 0.6 | 1.2 | 0.4 | 0.4 | -11.3% | 1.3% | 0.3 | 0.3 | 0.3 | -9.1% | 0.9% |
| Other non-tax revenue | 1.8 | 1.4 | 2.2 | 1.2 | -12.0% | 3.5% | 1.2 | 1.2 | 1.2 | - | 3.6% |
| Transfers received | 46.4 | 53.5 | 50.5 | 31.6 | -12.0% | 94.9% | 33.2 | 33.8 | 34.0 | 2.4% | 95.2% |
| Total revenue | 48.9 | 56.2 | 53.2 | 33.4 | -11.9% | 100.0% | 34.9 | 35.5 | 35.6 | 2.2% | 100.0% |
| Expenses | | | | | | | | | | | |
| Current expenses | 48.7 | 58.1 | 53.2 | 33.4 | -11.8% | 100.0% | 34.9 | 35.5 | 35.6 | 2.2% | 100.0% |
| Compensation of employees | 24.5 | 26.3 | 28.3 | 21.2 | -4.6% | 53.1% | 22.7 | 24.6 | 24.7 | 5.2% | 66.9% |
| Goods and services | 24.0 | 31.7 | 24.7 | 12.2 | -20.2% | 46.7% | 12.1 | 10.8 | 10.9 | -3.6% | 33.1% |
| Depreciation | 0.3 | - | 0.2 | - | -100.0% | 0.3% | - | - | - | - | - |
| Total expenses | 48.7 | 58.1 | 53.2 | 33.4 | -11.8% | 100.0% | 34.9 | 35.5 | 35.6 | 2.2% | 100.0% |
| Surplus/(Deficit) | - | (1.9) | - | - | - | - | - | - | - | - | - |

Table 35.18 Academy of Science of South Africa statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | Average: | Average: |
|---|-----------------|---------|---------|------------------|-------------------------|---------------------------------|----------------------------------|---------|-------------------|-------------------------|---------------------------------|----------|
| R million | Audited outcome | | | Revised estimate | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) | |
| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2017/18 - 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 - 2023/24 | | | |
| Cash flow statement | | | | | | | | | | | | |
| Cash flow from operating activities | 25.7 | 0.3 | 13.6 | 2.1 | -56.6% | 100.0% | 0.1 | 0.4 | 0.3 | -47.2% | 100.0% | |
| Receipts | | | | | | | | | | | | |
| Non-tax receipts | 3.7 | 3.4 | 2.1 | 1.7 | -22.5% | 4.6% | 1.6 | 1.7 | 1.7 | -1.4% | 4.8% | |
| Sales of goods and services other than capital assets | 2.0 | 2.1 | 0.7 | 0.5 | -35.0% | 2.1% | 0.4 | 0.5 | 0.5 | -4.8% | 1.4% | |
| Administrative fees | - | - | 0.1 | 0.0 | - | 0.1% | 0.0 | 0.0 | 0.0 | 1.5% | 0.1% | |
| Sales by market establishment | 0.1 | 0.1 | 0.4 | 0.4 | 55.7% | 0.5% | 0.3 | 0.3 | 0.3 | -7.8% | 0.9% | |
| Other sales | 1.9 | 2.0 | 0.1 | 0.1 | -61.8% | 1.5% | 0.1 | 0.1 | 0.1 | 3.1% | 0.3% | |
| Other tax receipts | 1.8 | 1.4 | 1.4 | 1.2 | -12.1% | 2.5% | 1.2 | 1.2 | 1.2 | - | 3.4% | |
| Transfers received | 70.2 | 63.1 | 61.9 | 33.6 | -21.8% | 95.4% | 33.2 | 33.8 | 34.0 | 0.4% | 95.2% | |
| Total receipts | 73.9 | 66.5 | 64.1 | 35.3 | -21.8% | 100.0% | 34.9 | 35.5 | 35.6 | 0.3% | 100.0% | |
| Payment | | | | | | | | | | | | |
| Current payments | 48.2 | 66.3 | 50.4 | 33.2 | -11.7% | 100.0% | 34.8 | 35.1 | 35.3 | 2.1% | 100.0% | |
| Compensation of employees | 24.5 | 26.3 | 28.2 | 21.2 | -4.6% | 52.6% | 22.7 | 24.6 | 24.7 | 5.2% | 67.4% | |
| Goods and services | 23.8 | 39.9 | 22.2 | 12.0 | -20.4% | 47.4% | 12.1 | 10.4 | 10.6 | -4.0% | 32.6% | |
| Total payments | 48.2 | 66.3 | 50.4 | 33.2 | -11.7% | 100.0% | 34.8 | 35.1 | 35.3 | 2.1% | 100.0% | |
| Net cash flow from investing activities | (0.8) | (3.6) | (1.0) | (0.7) | -7.4% | 100.0% | (0.7) | (0.8) | (0.8) | 7.2% | 100.0% | |
| Acquisition of property, plant, equipment and intangible assets | (0.2) | (0.1) | (0.0) | (0.2) | -0.2% | 11.4% | (0.2) | (0.3) | (0.3) | 26.0% | 31.7% | |
| Other flows from investing activities | (0.7) | (3.5) | (1.0) | (0.5) | -9.2% | 88.6% | (0.5) | (0.5) | (0.5) | - | 68.3% | |
| Net increase/(decrease) in cash and cash equivalents | 24.9 | (3.3) | 12.7 | 1.5 | -61.2% | 18.4% | (0.6) | (0.4) | (0.5) | -169.5% | - | |
| Statement of financial position | | | | | | | | | | | | |
| Carrying value of assets | 0.4 | 0.4 | 0.2 | 0.1 | -27.5% | 4.9% | 0.1 | 0.1 | 0.1 | -3.6% | 18.1% | |
| Acquisition of assets | (0.2) | (0.1) | (0.0) | (0.2) | -0.2% | 100.0% | (0.2) | (0.3) | (0.3) | 26.0% | 100.0% | |
| Investments | 8.6 | 12.2 | 13.1 | 0.2 | -73.0% | 42.7% | 0.1 | 0.1 | 0.1 | -28.1% | 12.2% | |
| Receivables and prepayments | 4.4 | 2.5 | 2.3 | 0.3 | -57.3% | 19.1% | 0.3 | 0.3 | 0.3 | -8.9% | 41.0% | |
| Cash and cash equivalents | 16.2 | 4.6 | 5.8 | 0.3 | -74.9% | 33.3% | 0.2 | 0.2 | 0.2 | -12.6% | 28.7% | |
| Total assets | 29.6 | 19.6 | 21.4 | 0.9 | -68.7% | 100.0% | 0.6 | 0.6 | 0.6 | -12.0% | 100.0% | |
| Capital and reserves | 9.6 | 7.8 | 7.8 | - | -100.0% | 27.1% | - | - | - | - | - | |
| Capital reserve fund | 16.4 | 8.6 | 8.1 | - | -100.0% | 34.3% | - | - | - | - | - | |
| Trade and other payables | 0.6 | 1.9 | 1.8 | 0.1 | -38.3% | 8.7% | 0.1 | 0.1 | 0.1 | -14.6% | 13.8% | |
| Provisions | 3.0 | 1.3 | 3.8 | 0.8 | -36.2% | 29.9% | 0.5 | 0.5 | 0.5 | -11.6% | 86.2% | |
| Total equity and liabilities | 29.6 | 19.6 | 21.4 | 0.9 | -68.7% | 100.0% | 0.6 | 0.6 | 0.6 | -12.0% | 100.0% | |

Personnel information**Table 35.19 Academy of Science of South Africa personnel numbers and cost by salary level**

| Number of posts estimated for 31 March 2020 | | Number and cost ¹ of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | Number | | | | | |
|---|---|--|------|-----------|------------------|------|-----------|----------------------------------|------|-----------|---------|------|-----------|-------------------------|---------------------------------|-----------|-----|-----------|--------|
| Number of funded posts | Number of posts on approved establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/Total (%) | | | | |
| | | 2019/20 | | Unit cost | 2020/21 | | Unit cost | 2021/22 | | Unit cost | 2022/23 | | Unit cost | | | 2023/24 | | Unit cost | |
| Academy of Science of South Africa | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | |
| Salary level | 34 | 34 | 43 | 28.3 | 0.7 | 34 | 21.2 | 0.6 | 34 | 22.7 | 0.7 | 34 | 24.6 | 0.7 | 32 | 24.7 | 0.8 | 5.2% | 100.0% |
| 1-6 | 3 | 3 | 6 | 1.0 | 0.2 | 3 | 0.6 | 0.2 | 3 | 0.6 | 0.2 | 3 | 0.7 | 0.2 | 3 | 0.7 | 0.2 | 6.2% | 2.9% |
| 7-10 | 24 | 24 | 28 | 15.9 | 0.6 | 24 | 12.4 | 0.5 | 24 | 13.4 | 0.6 | 24 | 14.5 | 0.6 | 22 | 14.2 | 0.6 | 4.5% | 58.4% |
| 11-12 | 3 | 3 | 4 | 3.8 | 1.0 | 3 | 2.6 | 0.9 | 3 | 2.7 | 0.9 | 3 | 3.0 | 1.0 | 3 | 3.1 | 1.0 | 6.2% | 12.2% |
| 13-16 | 4 | 4 | 5 | 7.5 | 1.5 | 4 | 5.6 | 1.4 | 4 | 6.0 | 1.5 | 4 | 6.5 | 1.6 | 4 | 6.7 | 1.7 | 6.2% | 26.6% |

1. Rand million.

Council for Scientific and Industrial Research**Selected performance indicators****Table 35.19 Council for Scientific and Industrial Research performance indicators by programme/objective/activity and related MTSF priority**

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of journal articles published per year | Science, engineering and technology operating units and centres | Priority 3: Education, skills and health | 317 | 310 | 300 | 310 | 315 | 320 | 325 |
| Number of conference papers delivered per year | Science, engineering and technology operating units and centres | | 325 | 335 | 330 | 335 | 337 | 338 | 340 |

Table 35.19 Council for Scientific and Industrial Research performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---|--|---------------------|-------------------|-------------------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of new technology demonstrators per year | Science, engineering and technology operating units and centres | Priority 2: Economic transformation and job creation | 60 | 50 | 37 | 57 | 63 | 69 | 76 |
| Amount of contract research and development income per year | Science, engineering and technology operating units and centres | | R1.8bn | R1.7bn | R2.2bn | R2.3bn | R2.4bn | R2.5bn | |
| Number of science, engineering and technology staff per year | Science, engineering and technology operating units and centres | Priority 3: Education, skills and health | 1 850 | 1 860 | 1 410 | 1 481 | 1 555 | 1 632 | 1 714 |
| Percentage of science, engineering and technology staff who are black per year | Science, engineering and technology operating units and centres | | 61% (1 780/2 618) | 62% (1 452/2 342) | 62% (1 452/2 342) | 62% | 63% | 63% | 64% |
| Number of science, engineering and technology staff with doctorates per year | Science, engineering and technology operating units and centres | | 339 | 369 | 18.6 | 22 | 25 | 26 | 28 |
| Number of new patents granted per year | Science, engineering and technology operating units and centres | | 13 | 22 | 21 | 15 | 16 | 18 | 19 |

Entity overview

The Council for Scientific and Industrial Research was established in 1945 and is governed in terms of the Scientific Research Council Act (1988). The council's overarching and continuous focus area is to foster industrial and scientific development in the national interest. This is achieved through conducting multidisciplinary research and providing technological innovation to improve the ability of the state to deliver basic services with the broader objective of reducing inequality. Over the medium term, the council will focus on conducting high-quality and relevant research, pursuing technological innovation to foster industrial and scientific development, and building on industrial development opportunities.

The council's ability to generate its own revenue is directly related to its ability to attract and retain the requisite expertise and skills to deliver favourable research outcomes. As such, spending on compensation of employees accounts for an estimated 56.7 per cent (R6.2 billion) of the council's expenditure, increasing at an average annual rate of 6.4 per cent, from R1.8 billion in 2020/21 to R2.2 billion in 2023/24. The council derives its revenue from transfers from the department; contracts for research; income earned from local, international, and public-sector and private-sector projects; and intellectual property and technology transfers. Transfers from the department account for 23 per cent (R2.5 billion) of the council's total projected revenue, increasing at an average annual rate of 3.7 per cent, from R781.2 million in 2020/21 to R872.3 million in 2023/24.

Programmes/Objectives/Activities

Table 35.20 Council for Scientific and Industrial Research expenditure trends and estimates by programme/objective/activity

| R million | Audited outcome | | | Revised estimate | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
|---|-----------------|----------------|----------------|------------------|-------------------------|---------------------------------|----------------------------------|----------------|----------------|-------------------------|---------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| Administration | 374.0 | 566.0 | 602.3 | 571.6 | 15.2% | 19.2% | 614.2 | 652.3 | 681.6 | 6.0% | 17.9% |
| Science, engineering and technology operating units and centres | 2 182.4 | 1 980.9 | 2 140.0 | 2 616.2 | 6.2% | 80.8% | 2 811.0 | 2 985.2 | 3 119.5 | 6.0% | 82.1% |
| Total | 2 556.5 | 2 546.9 | 2 742.3 | 3 187.9 | 7.6% | 100.0% | 3 425.3 | 3 637.5 | 3 801.1 | 6.0% | 100.0% |

Statements of financial performance, cash flow and financial position

Table 35.21 Council for Scientific and Industrial Research statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | |
|--|-----------------|----------------|----------------|------------------|-------------------------|---------------------------------|----------------------------------|----------------|-------------------|-------------------------|---------------------------------|
| R million | Audited outcome | | | Revised estimate | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2017/18 - 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 - 2023/24 | 2020/21 - 2023/24 | |
| Revenue | | | | | | | | | | | |
| Non-tax revenue | 1 820.7 | 1 592.3 | 1 890.8 | 2 445.4 | 10.3% | 69.2% | 2 672.6 | 2 904.9 | 3 035.6 | 7.5% | 77.0% |
| Sale of goods and services other than capital assets | 1 776.1 | 1 541.0 | 1 821.6 | 2 275.0 | 8.6% | 66.4% | 2 497.2 | 2 724.1 | 2 846.7 | 7.8% | 72.0% |
| <i>Sales by market establishment</i> | <i>1 776.1</i> | <i>1 541.0</i> | <i>1 821.6</i> | <i>2 275.0</i> | <i>8.6%</i> | <i>66.4%</i> | <i>2 497.2</i> | <i>2 724.1</i> | <i>2 846.7</i> | <i>7.8%</i> | <i>72.0%</i> |
| Other non-tax revenue | 44.6 | 51.3 | 69.2 | 170.3 | 56.3% | 2.9% | 175.4 | 180.8 | 189.0 | 3.5% | 5.0% |
| Transfers received | 722.4 | 962.7 | 920.2 | 781.2 | 2.6% | 30.8% | 805.0 | 834.7 | 872.3 | 3.7% | 23.0% |
| Total revenue | 2 543.1 | 2 555.1 | 2 810.9 | 3 226.6 | 8.3% | 100.0% | 3 477.7 | 3 739.7 | 3 907.9 | 6.6% | 100.0% |
| Expenses | | | | | | | | | | | |
| Current expenses | 2 556.5 | 2 546.9 | 2 742.3 | 3 187.8 | 7.6% | 100.0% | 3 425.1 | 3 652.9 | 3 817.3 | 6.2% | 100.0% |
| Compensation of employees | 1 538.9 | 1 585.9 | 1 453.7 | 1 799.3 | 5.3% | 58.0% | 1 940.3 | 2 076.1 | 2 169.6 | 6.4% | 56.7% |
| Goods and services | 951.6 | 895.9 | 1 225.0 | 1 252.2 | 9.6% | 39.1% | 1 334.9 | 1 411.9 | 1 475.4 | 5.6% | 38.9% |
| Depreciation | 65.9 | 65.1 | 62.0 | 136.3 | 27.4% | 2.9% | 149.9 | 164.9 | 172.3 | 8.1% | 4.4% |
| Interest, dividends and rent on land | — | — | 1.5 | — | — | — | — | — | — | — | — |
| Total expenses | 2 556.5 | 2 546.9 | 2 742.3 | 3 187.8 | 7.6% | 100.0% | 3 425.1 | 3 652.9 | 3 817.3 | 6.2% | 100.0% |
| Surplus/(Deficit) | (13.3) | 8.2 | 68.6 | 38.8 | -242.9% | | 52.5 | 86.8 | 90.7 | 32.7% | |
| Cash flow statement | | | | | | | | | | | |
| Cash flow from operating activities | 81.8 | 181.3 | 56.1 | (212.3) | -237.5% | 100.0% | (204.2) | (176.2) | (184.1) | -4.6% | 100.0% |
| Receipts | | | | | | | | | | | |
| Non-tax receipts | 1 881.5 | 1 812.4 | 1 953.5 | 1 771.9 | -2.0% | 68.0% | 1 963.9 | 2 166.7 | 2 264.2 | 8.5% | 59.2% |
| Sales of goods and services other than capital assets | 1 837.2 | 1 761.7 | 1 902.0 | 1 731.7 | -2.0% | 66.3% | 1 922.9 | 2 125.2 | 2 220.8 | 8.6% | 58.0% |
| <i>Sales by market establishment</i> | <i>1 837.2</i> | <i>1 761.7</i> | <i>1 902.0</i> | <i>1 731.7</i> | <i>-2.0%</i> | <i>66.3%</i> | <i>1 922.9</i> | <i>2 125.2</i> | <i>2 220.8</i> | <i>8.6%</i> | <i>58.0%</i> |
| Other tax receipts | 44.3 | 50.7 | 51.4 | 40.2 | -3.2% | 1.7% | 41.0 | 41.5 | 43.4 | 2.6% | 1.2% |
| Transfers received | 729.4 | 760.1 | 758.1 | 1 319.9 | 21.9% | 32.0% | 1 372.4 | 1 423.2 | 1 487.2 | 4.1% | 40.8% |
| Total receipts | 2 610.9 | 2 572.5 | 2 711.5 | 3 091.8 | 5.8% | 100.0% | 3 336.3 | 3 589.9 | 3 751.4 | 6.7% | 100.0% |
| Payment | | | | | | | | | | | |
| Current payments | 2 529.1 | 2 391.3 | 2 655.4 | 3 304.2 | 9.3% | 100.0% | 3 540.5 | 3 766.1 | 3 935.5 | 6.0% | 100.0% |
| Compensation of employees | 1 538.9 | 1 586.8 | 1 453.7 | 1 799.3 | 5.3% | 59.1% | 1 940.3 | 2 076.1 | 2 169.6 | 6.4% | 54.9% |
| Goods and services | 990.2 | 804.4 | 1 201.6 | 1 504.9 | 15.0% | 40.9% | 1 600.2 | 1 689.9 | 1 766.0 | 5.5% | 45.1% |
| Interest and rent on land | 0.0 | — | 0.1 | — | -100.0% | — | — | — | — | — | — |
| Total payments | 2 529.1 | 2 391.3 | 2 655.4 | 3 304.2 | 9.3% | 100.0% | 3 540.5 | 3 766.1 | 3 935.5 | 6.0% | 100.0% |
| Net cash flow from investing activities | (87.6) | (40.4) | (43.3) | (120.0) | 11.0% | 100.0% | (150.0) | (150.0) | (156.7) | 9.3% | 100.0% |
| Acquisition of property, plant, equipment and intangible assets | (87.4) | (40.2) | (44.0) | (120.0) | 11.2% | 100.2% | (150.0) | (150.0) | (156.7) | 9.3% | 100.0% |
| Proceeds from the sale of property, plant, equipment and intangible assets | 3.3 | 1.8 | 0.8 | — | -100.0% | -2.5% | — | — | — | — | — |
| Other flows from investing activities | (3.6) | (2.1) | — | — | -100.0% | 2.3% | — | — | — | — | — |
| Net cash flow from financing activities | — | — | (0.7) | — | — | — | — | — | — | — | — |
| Other flows from financing activities | — | — | (0.7) | — | — | — | — | — | — | — | — |
| Net increase/(decrease) in cash and cash equivalents | (5.9) | 140.9 | 12.2 | (332.3) | 283.9% | -1.2% | (354.2) | (326.2) | (340.9) | 0.8% | -9.7% |
| Statement of financial position | | | | | | | | | | | |
| Carrying value of assets | 784.4 | 758.7 | 773.8 | 716.9 | -3.0% | 32.5% | 717.0 | 702.1 | 733.7 | 0.8% | 28.1% |
| <i>Acquisition of assets</i> | <i>(87.4)</i> | <i>(40.2)</i> | <i>(44.0)</i> | <i>(120.0)</i> | <i>11.2%</i> | <i>100.0%</i> | <i>(150.0)</i> | <i>(150.0)</i> | <i>(156.7)</i> | <i>9.3%</i> | <i>100.0%</i> |
| Investments | 9.1 | 5.1 | 2.4 | 9.1 | -0.1% | 0.3% | 9.1 | 9.1 | 9.5 | 1.5% | 0.4% |
| Inventory | 113.7 | 124.8 | 115.2 | 128.3 | 4.1% | 5.2% | 137.9 | 148.9 | 155.6 | 6.7% | 5.6% |
| Receivables and prepayments | 224.7 | 196.0 | 312.0 | 246.0 | 3.1% | 10.4% | 232.5 | 249.1 | 260.3 | 1.9% | 9.7% |
| Cash and cash equivalents | 1 100.6 | 1 241.5 | 1 248.8 | 1 237.7 | 4.0% | 51.6% | 1 381.1 | 1 551.2 | 1 621.0 | 9.4% | 56.3% |
| Total assets | 2 232.4 | 2 326.0 | 2 452.2 | 2 337.9 | 1.6% | 100.0% | 2 477.5 | 2 660.4 | 2 780.1 | 5.9% | 100.0% |
| Accumulated surplus/(deficit) | 994.5 | 1 002.5 | 1 071.1 | 1 009.2 | 0.5% | 43.6% | 1 080.8 | 1 167.6 | 1 220.2 | 6.5% | 43.6% |
| Finance lease | — | — | 13.2 | — | — | 0.1% | — | — | — | — | — |
| Trade and other payables | 1 227.0 | 1 301.4 | 1 343.6 | 1 317.5 | 2.4% | 55.5% | 1 385.3 | 1 481.3 | 1 547.9 | 5.5% | 55.9% |
| Provisions | 11.0 | 22.1 | 24.3 | 11.3 | 1.0% | 0.7% | 11.4 | 11.5 | 12.0 | 2.1% | 0.5% |
| Total equity and liabilities | 2 232.4 | 2 326.0 | 2 452.2 | 2 337.9 | 1.6% | 100.0% | 2 477.5 | 2 660.4 | 2 780.1 | 5.9% | 100.0% |

Personnel information

Table 35.22 Council for Scientific and Industrial Research personnel numbers and cost by salary level

| Number of posts estimated for 31 March 2020 | | Number and cost ¹ of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | | | Number | | | |
|--|---|--|-------|-----------|------------------|-------|-----------|----------------------------------|-------|-----------|---------|-------|-----------|-------------------------|---------------------------------|-----------|-------------------|-----------|--------|
| Number of funded posts | Number of posts on approved establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/Total (%) | | | | |
| | | 2019/20 | | Unit cost | 2020/21 | | Unit cost | 2021/22 | | Unit cost | 2022/23 | | Unit cost | | | 2023/24 | | Unit cost | |
| Council for Scientific and Industrial Research | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | 2020/21 - 2023/24 | | |
| Salary level | 2 490 | 2 490 | 2 601 | 1 453.7 | 0.6 | 2 490 | 1 587.2 | 0.6 | 2 616 | 1 713.1 | 0.7 | 2 746 | 1 766.6 | 0.6 | 2 882 | 1 844.3 | 0.6 | 5.1% | 100.0% |
| 1 – 6 | 341 | 341 | 471 | 53.0 | 0.1 | 341 | 55.0 | 0.2 | 359 | 59.4 | 0.2 | 378 | 61.2 | 0.2 | 394 | 63.9 | 0.2 | 5.1% | 3.5% |
| 7 – 10 | 1 268 | 1 268 | 1 255 | 500.9 | 0.4 | 1 268 | 560.9 | 0.4 | 1 334 | 605.4 | 0.5 | 1 399 | 624.2 | 0.4 | 1 472 | 651.7 | 0.4 | 5.1% | 35.3% |
| 11 – 12 | 453 | 453 | 456 | 351.5 | 0.8 | 453 | 382.3 | 0.8 | 475 | 412.6 | 0.9 | 497 | 425.5 | 0.9 | 522 | 444.2 | 0.9 | 5.1% | 24.1% |
| 13 – 16 | 403 | 403 | 395 | 491.2 | 1.2 | 403 | 514.8 | 1.3 | 422 | 555.6 | 1.3 | 446 | 573.0 | 1.3 | 466 | 598.2 | 1.3 | 5.1% | 32.4% |
| 17 – 22 | 25 | 25 | 24 | 57.1 | 2.4 | 25 | 74.3 | 3.0 | 26 | 80.2 | 3.1 | 26 | 82.7 | 3.2 | 28 | 86.3 | 3.1 | 5.1% | 4.7% |

1. Rand million.

Human Sciences Research Council

Selected performance indicators

Table 35.23 Human Sciences Research Council performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|---|--------------------------------------|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of peer-reviewed journal articles published in acknowledged scientific journals per Human Sciences Research Council researcher per year | Administration | Priority 1: A capable, ethical and developmental state | 2 | 2 | 3 | 2 | 2 | 2 | 2 |
| Number of curated datasets downloaded for secondary use per year | Administration | | 507 | 661 | 608 | 520 | 546 | 574 | 603 |
| Number of historically disadvantaged institutions with which the Human Sciences Research Council has actively collaborated per year | Administration | | -1 | -1 | -1 | 3 | 4 | 6 | 7 |
| Percentage of researchers (excluding trainees) with PhDs per year | Administration | | -1 | -1 | -1 | 75% | 76% | 77% | 78% |
| Number of PhD trainees per year | Administration | Priority 2: Economic transformation and job creation | 55 | 54 | 47 | 25 | 27 | 28 | 30 |
| Number of peer-reviewed journal articles published with at least one non-council co-author from an African country other than South Africa per year | Research, development and innovation | Priority 7: A better Africa and world | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| Number of scholarly book chapters published by council researchers per year | Research, development and innovation | Priority 1: A capable, ethical and developmental state | 42 | 93 | 86 | 42 | 42 | 42 | 42 |
| Number of policy briefs and/or evidence reviews completed and published per year | Research, development and innovation | | 19 | 13 | 12 | 19 | 19 | 19 | 19 |
| Number of incoming international exchange visits or fellowships active per year | Research, development and innovation | Priority 7: A better Africa and world | 7 | 7 | 7 | 7 | 7 | 7 | 7 |

1. No historical data available.

Entity overview

The Human Sciences Research Council was established in 1968 to undertake, promote and coordinate research in the human and social sciences. The council is mandated to initiate, undertake and foster strategic, basic and applied research in human sciences; and address developmental challenges by gathering, analysing and publishing relevant data, especially through projects linked to collaborative programmes oriented towards the

public sector. The council's research outputs are widely disseminated to support policy development at all levels of government. As such, over the medium term, the council will continue to focus on: producing research that serves the public; contributing to good governance and public service delivery; helping to address the challenges of poverty, inequality and inclusive development; and building the capacity of scholars and researchers.

As a research institute, human capital plays a central role in the council's work. As such, spending on compensation of employees accounts for an estimated 55.3 per cent (R1.1 billion) of the council's budget. Expenditure on compensation of employees is expected to increase at an average annual rate of 5.1 per cent, from R319.7 million in 2020/21 to R371.5 million in 2023/24. The council receives 55.1 per cent (R1.1 billion) of its revenue through transfers from the department, increasing at an average annual rate of 4 per cent, from R324.6 million in 2020/21 to R365.5 million in 2023/24. The remaining revenue is generated through research contracts and grants from national and international agencies, government departments and private-sector foundations.

Programmes/Objectives/Activities

Table 35.24 Human Sciences Research Council expenditure trends and estimates by programme/objective/activity

| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) 2017/18 - 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) 2020/21 - 2023/24 |
|--------------------------------------|-----------------|--------------|--------------|-----------------------------|--|---|----------------------------------|--------------|--------------|--|---|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Administration | 166.2 | 188.0 | 124.5 | 221.7 | 10.1% | 34.1% | 227.5 | 238.4 | 249.2 | 4.0% | 37.5% |
| Research and development | 357.6 | 275.7 | – | – | -100.0% | 30.3% | – | – | – | – | – |
| Africa Institute of South Africa | 32.7 | 21.8 | – | – | -100.0% | 2.6% | – | – | – | – | – |
| Research, development and innovation | – | – | 295.4 | 358.1 | – | 33.0% | 383.0 | 401.9 | 420.0 | 5.5% | 62.5% |
| Total | 556.5 | 485.5 | 419.9 | 579.8 | 1.4% | 100.0% | 610.5 | 640.4 | 669.2 | 4.9% | 100.0% |

Statements of financial performance, cash flow and financial position

Table 35.25 Human Sciences Research Council statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | |
|---|-----------------|--------------|--------------|-----------------------------|--|---|----------------------------------|--------------|--------------|--|---|
| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) 2017/18 - 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) 2020/21 - 2023/24 |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Revenue | 288.5 | 220.9 | 175.3 | 255.4 | -4.0% | 45.1% | 273.4 | 290.8 | 303.9 | 6.0% | 44.9% |
| Non-tax revenue | 247.7 | 180.7 | 134.1 | 215.4 | -4.6% | 37.2% | 226.2 | 237.0 | 247.7 | 4.8% | 37.0% |
| Sale of goods and services other than capital assets | – | – | – | 0.3 | – | – | 0.3 | 0.3 | 0.3 | 4.7% | – |
| of which: | | | | | | | | | | | |
| Administrative fees | 247.3 | 180.6 | 134.1 | 210.1 | -5.3% | 37.0% | 220.6 | 231.2 | 241.6 | 4.8% | 36.1% |
| Sales by market establishment | 0.5 | 0.0 | – | 5.0 | 121.4% | 0.2% | 5.3 | 5.5 | 5.8 | 4.8% | 0.9% |
| Other sales | 40.7 | 40.2 | 41.2 | 40.0 | -0.6% | 7.9% | 47.2 | 53.8 | 56.2 | 12.0% | 7.9% |
| Other non-tax revenue | 267.2 | 264.1 | 272.9 | 324.6 | 6.7% | 54.9% | 337.3 | 349.8 | 365.5 | 4.0% | 55.1% |
| Transfers received | 555.7 | 485.0 | 448.2 | 580.0 | 1.4% | 100.0% | 610.7 | 640.6 | 669.4 | 4.9% | 100.0% |
| Total revenue | 555.7 | 485.0 | 448.2 | 580.0 | 1.4% | 100.0% | 610.7 | 640.6 | 669.4 | 4.9% | 100.0% |
| Expenses | 556.5 | 485.5 | 419.9 | 537.5 | -1.2% | 98.2% | 566.5 | 594.8 | 621.5 | 5.0% | 92.8% |
| Current expenses | 282.7 | 293.2 | 291.8 | 319.7 | 4.2% | 59.0% | 336.3 | 355.5 | 371.5 | 5.1% | 55.3% |
| Compensation of employees | 259.3 | 176.7 | 117.3 | 201.8 | -8.0% | 36.4% | 215.4 | 223.8 | 233.9 | 5.0% | 35.0% |
| Goods and services | 13.0 | 14.4 | 9.4 | 14.5 | 3.6% | 2.5% | 13.2 | 13.8 | 14.4 | -0.2% | 2.2% |
| Depreciation | 1.5 | 1.3 | 1.4 | 1.5 | 0.7% | 0.3% | 1.6 | 1.6 | 1.7 | 4.8% | 0.3% |
| Interest, dividends and rent on land | – | – | – | 42.3 | – | 1.8% | 44.0 | 45.6 | 47.7 | 4.0% | 7.2% |
| Transfers and subsidies | 556.5 | 485.5 | 419.9 | 579.8 | 1.4% | 100.0% | 610.5 | 640.4 | 669.2 | 4.9% | 100.0% |
| Total expenses | 556.5 | 485.5 | 419.9 | 579.8 | 1.4% | 100.0% | 610.5 | 640.4 | 669.2 | 4.9% | 100.0% |
| Surplus/(Deficit) | (0.8) | (0.6) | 28.3 | – | -100.0% | – | – | – | – | – | – |
| Cash flow statement | | | | | | | | | | | |
| Cash flow from operating activities | (10.5) | 108.6 | 105.5 | 112.2 | -320.6% | 100.0% | 116.9 | 118.6 | 123.9 | 3.4% | 100.0% |
| Receipts | 317.9 | 310.6 | 298.5 | 320.4 | 0.3% | 48.9% | 336.4 | 352.5 | 368.3 | 4.8% | 48.9% |
| Non-tax receipts | 288.0 | 134.7 | 293.8 | 315.5 | 3.1% | 40.4% | 331.3 | 347.1 | 362.7 | 4.8% | 48.1% |
| Sales of goods and services other than capital assets | 288.0 | 134.7 | 293.8 | 315.5 | 3.1% | 40.4% | 331.3 | 347.1 | 362.7 | 4.8% | 48.1% |
| Sales by market establishment | 29.9 | 176.0 | 4.7 | 4.9 | -45.3% | 8.5% | 5.1 | 5.4 | 5.6 | 4.8% | 0.7% |
| Other tax receipts | 304.7 | 324.2 | 326.3 | 337.6 | 3.5% | 50.6% | 353.6 | 366.7 | 383.2 | 4.3% | 51.1% |
| Transfers received | 10.4 | 1.5 | – | – | -100.0% | 0.5% | – | – | – | – | – |
| Tax benefit | 633.0 | 636.3 | 624.8 | 658.0 | 1.3% | 100.0% | 690.0 | 719.2 | 751.6 | 4.5% | 100.0% |
| Total receipts | 633.0 | 636.3 | 624.8 | 658.0 | 1.3% | 100.0% | 690.0 | 719.2 | 751.6 | 4.5% | 100.0% |

Table 35.25 Human Sciences Research Council statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | |
|--|-----------------|--------------|--------------|------------------|-------------------------|---------------------------------|----------------------------------|--------------|--------------|-------------------------|---------------------------------|
| R million | Audited outcome | | | Revised estimate | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2020/21 | 2021/22 | 2022/23 | | |
| Payment | | | | | | | | | | | |
| Current payments | 606.1 | 488.1 | 477.5 | 501.9 | -6.1% | 92.6% | 527.0 | 552.3 | 577.1 | 4.8% | 92.0% |
| Compensation of employees | 332.0 | 285.6 | 299.5 | 314.8 | -1.8% | 55.3% | 330.5 | 346.4 | 362.0 | 4.8% | 57.7% |
| Goods and services | 273.5 | 202.5 | 178.0 | 187.1 | -11.9% | 37.4% | 196.4 | 205.8 | 215.1 | 4.8% | 34.3% |
| Interest and rent on land | 0.6 | - | - | - | -100.0% | - | - | - | - | - | - |
| Transfers and subsidies | 37.4 | 39.6 | 41.8 | 43.9 | 5.5% | 7.4% | 46.1 | 48.3 | 50.5 | 4.8% | 8.0% |
| Total payments | 643.5 | 527.7 | 519.3 | 545.8 | -5.3% | 100.0% | 573.1 | 600.6 | 627.6 | 4.8% | 100.0% |
| Net cash flow from investing activities | (7.1) | (2.0) | (3.2) | (3.4) | -21.8% | 100.0% | (3.6) | (3.7) | (3.9) | 4.8% | 100.0% |
| Acquisition of property, plant, equipment and intangible assets | (7.4) | (2.0) | (3.3) | (3.5) | -22.1% | 102.7% | (3.7) | (3.8) | (4.0) | 4.8% | 102.6% |
| Acquisition of software and other intangible assets | (0.2) | - | (0.4) | (0.4) | 23.6% | 6.4% | (0.4) | (0.4) | (0.4) | 4.8% | 11.3% |
| Proceeds from the sale of property, plant, equipment and intangible assets | 0.5 | 0.0 | - | - | -100.0% | -2.1% | - | - | - | - | - |
| Other flows from investing activities | - | - | 0.4 | 0.5 | - | -6.9% | 0.5 | 0.5 | 0.5 | 4.8% | -13.8% |
| Net increase/(decrease) in cash and cash equivalents | (17.6) | 106.6 | 102.2 | 108.8 | -283.7% | 15.5% | 113.4 | 114.9 | 120.0 | 3.3% | 18.3% |
| Statement of financial position | | | | | | | | | | | |
| Carrying value of assets | 438.3 | 425.7 | 414.5 | 447.4 | 0.7% | 75.8% | 469.8 | 492.3 | 514.5 | 4.8% | 75.8% |
| Acquisition of assets | (7.4) | (2.0) | (3.3) | (3.5) | -22.1% | 100.0% | (3.7) | (3.8) | (4.0) | 4.8% | 100.0% |
| Inventory | 4.9 | 4.9 | 4.8 | 7.8 | 16.4% | 1.0% | 8.2 | 8.6 | 9.0 | 4.8% | 1.3% |
| Receivables and prepayments | 50.8 | 64.5 | 46.2 | 59.5 | 5.4% | 9.7% | 62.5 | 65.5 | 68.4 | 4.8% | 10.1% |
| Cash and cash equivalents | 43.8 | 44.8 | 151.4 | 74.6 | 19.4% | 13.4% | 78.3 | 82.1 | 85.7 | 4.8% | 12.6% |
| Taxation | 0.4 | - | - | 1.2 | 44.8% | 0.1% | 1.2 | 1.3 | 1.3 | 4.8% | 0.2% |
| Total assets | 538.1 | 539.9 | 617.0 | 590.4 | 3.1% | 100.0% | 619.9 | 649.7 | 678.9 | 4.8% | 100.0% |
| Accumulated surplus/(deficit) | 59.7 | 59.2 | 86.5 | 23.5 | -26.7% | 10.0% | 24.7 | 25.9 | 27.1 | 4.8% | 4.0% |
| Capital and reserves | 392.8 | 392.8 | 392.8 | 412.9 | 1.7% | 69.8% | 433.5 | 454.3 | 474.8 | 4.8% | 69.9% |
| Finance lease | - | - | - | 0.8 | - | - | 0.8 | 0.8 | 0.9 | 4.8% | 0.1% |
| Deferred income | 39.9 | 36.2 | 83.2 | 80.8 | 26.5% | 10.3% | 84.8 | 88.9 | 92.9 | 4.8% | 13.7% |
| Trade and other payables | 37.2 | 43.4 | 27.1 | 35.7 | -1.4% | 6.3% | 37.5 | 39.3 | 41.0 | 4.8% | 6.0% |
| Taxation | - | 5.9 | 7.6 | - | - | 0.6% | - | - | - | - | - |
| Provisions | 8.5 | 2.5 | 17.4 | 36.8 | 63.1% | 2.8% | 38.6 | 40.5 | 42.3 | 4.8% | 6.2% |
| Derivatives financial instruments | - | - | 2.3 | - | - | 0.1% | - | - | - | - | - |
| Total equity and liabilities | 538.1 | 539.9 | 617.0 | 590.4 | 3.1% | 100.0% | 619.9 | 649.7 | 678.9 | 4.8% | 100.0% |

Personnel information**Table 35.26 Human Sciences Research Council personnel numbers and cost by salary level**

| Number of posts estimated for 31 March 2020 | | Number and cost ¹ of personnel posts filled/planned for on funded establishment | | | | | | | | | | | Number | | | | | | |
|---|---|--|------|-----------|------------------|---------|-----------|----------------------------------|------|-----------|--------|-------------------|-----------|-------------------------|---------------------------------|-----------|-----|--------|--------|
| Number of funded posts | Number of posts on approved establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/Total (%) | | | | |
| | | 2019/20 | | 2020/21 | | 2021/22 | | 2022/23 | | 2023/24 | | 2020/21 - 2023/24 | | | | | | | |
| Human Sciences Research Council | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | |
| Salary level | 451 | 451 | 455 | 291.8 | 0.6 | 451 | 319.7 | 0.7 | 451 | 319.0 | 0.7 | 451 | 330.8 | 0.7 | 451 | 331.8 | 0.7 | 1.2% | 100.0% |
| 1-6 | 134 | 134 | 123 | 81.8 | 0.7 | 134 | 84.6 | 0.6 | 134 | 57.3 | 0.4 | 134 | 63.1 | 0.5 | 134 | 55.5 | 0.4 | -13.1% | 20.1% |
| 7-10 | 189 | 189 | 69 | 83.6 | 1.2 | 189 | 93.9 | 0.5 | 189 | 110.9 | 0.6 | 189 | 109.4 | 0.6 | 189 | 111.7 | 0.6 | 6.0% | 32.7% |
| 11-12 | 48 | 48 | 48 | 19.4 | 0.4 | 48 | 38.4 | 0.8 | 48 | 40.2 | 0.8 | 48 | 42.2 | 0.9 | 48 | 43.9 | 0.9 | 4.5% | 12.7% |
| 13-16 | 78 | 78 | 212 | 102.8 | 0.5 | 78 | 97.8 | 1.3 | 78 | 105.3 | 1.3 | 78 | 110.6 | 1.4 | 78 | 115.0 | 1.5 | 5.5% | 32.9% |
| 17-22 | 2 | 2 | 3 | 4.3 | 1.4 | 2 | 5.0 | 2.5 | 2 | 5.3 | 2.6 | 2 | 5.5 | 2.8 | 2 | 5.8 | 2.9 | 5.2% | 1.7% |

1. Rand million.

National Research Foundation**Selected performance indicators****Table 35.27 National Research Foundation performance indicators by programme/objective/activity and related MTSF priority**

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---|--|---------------------|-----------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of members of the public reached through interactions focusing on science awareness activities per year | Science engagement | Priority 3: Education, skills and health | 1 191 892 | 1 090 000 | 680 300 | 682 150 | 683 300 | 683 300 | 683 300 |
| Number of black researchers funded per year | Research and innovation support and advancement | | 1 698 | 2 182 | 2 154 | 2 295 | 2 368 | 2 368 | 2 368 |

Table 35.27 National Research Foundation performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of female researchers funded per year | Research and innovation support and advancement | Priority 3: Education, skills and health | 1 698 | 1 520 | 1 579 | 2 020 | 2 100 | 2 100 | 2 100 |
| Number of black postgraduate students funded per year | Research and innovation support and advancement | | 11 328 | 10 980 | 9 157 | 9 675 | 5 885 | 5 885 | 5 885 |
| Number of female postgraduate students funded per year | Research and innovation support and advancement | | 8 266 | 7 692 | 6 300 | 6 786 | 4 046 | 4 046 | 4 046 |
| Number of masters students supported per year | Research and innovation support and advancement | | 5 435 | 4 990 | 3 586 | 3 770 | 2 289 | 2 289 | 2 289 |
| Number of doctoral students supported per year | Research and innovation support and advancement | | 3 519 | 3 265 | 2 855 | 2 987 | 1 813 | 1 813 | 1 813 |
| Number of researchers rated through the National Research Foundation system per year | Research and innovation support and advancement | | 1 069 | 1 026 | 1 120 | 1 337 | 1 512 | 1 512 | 1 512 |
| Number of black female researchers rated by the foundation per year | Research and innovation support and advancement | | 1 285 | 1 292 | 1 365 | 1 499 | 1 638 | 1 638 | 1 638 |
| Number of researchers rated by the foundation per year | Research and innovation support and advancement | | 3 885 | 3 750 | 3 900 | 4 050 | 4 200 | 4 200 | 4 200 |
| Number of active grants emanating from binational, multinational and agency-to-agency agreements per year | Research and innovation support and advancement | | 996 | 990 | 945 | 950 | 955 | 955 | 955 |
| Number of users of equipment funded by the national equipment programme and national nanotechnology programme per year | Research and innovation support and advancement | | 2 881 | 2 641 | 2 252 | 2 014 | 1 976 | 1 976 | 1 976 |
| Number of publications emanating from the use of equipment funded by the national equipment programme and the national nanotechnology equipment programme per year | Research and innovation support and advancement | 908 | 695 | 682 | 530 | 520 | 520 | 520 | |
| Number of Web of Science publications in nuclear, biodiversity, conservation and environment at foundation's facilities per year | National research infrastructure platforms | Priority 2: Economic transformation and job creation | 574 | 397 | 551 | 575 | 615 | 615 | 615 |

Entity overview

The National Research Foundation was established in terms of the National Research Foundation Act (1998), as amended. In terms of this legislation, the foundation is mandated to support research through funding, the development of human resources, and the provision of research facilities to enable knowledge creation, innovation and development in all fields of science and technology. It is also mandated to promote indigenous knowledge. The foundation currently supports approximately 4 000 research-productive and internationally recognised researchers. The productivity and quality of the knowledge produced by researchers who are funded by the foundation has been significant over the past five years. In this regard, over the MTEF period, the foundation will continue to drive excellence underpinned by the strength of the South African science system with a strong emphasis on transformation, innovation and sustainability.

Estimated capital expenditure of R5 billion in the national research infrastructure platforms programme over the medium term is earmarked primarily for the Square Kilometre Array, specialised equipment at iThemba LABS for the isotope facility project, and the extension of the MeerKAT telescope. The foundation derives its revenue primarily through a parliamentary grant, contract funding from the department and other government institutions, and income generated by sales and interest. Contract funding accounts for almost 75 per cent (R14.4 billion) of the foundation's revenue over the period ahead. Revenue received from the department is

expected to increase at an average annual rate of 6.3 per cent, from R3.7 billion in 2020/21 to R4.4 billion in 2023/24.

Programmes/Objectives/Activities

Table 35.28 National Research Foundation expenditure trends and estimates by programme/objective/activity

| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/ Total (%) 2017/18 - 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/ Total (%) 2020/21 - 2023/24 |
|---|-----------------|----------------|----------------|-----------------------------|--|--|----------------------------------|----------------|----------------|--|--|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Administration | 89.7 | 101.3 | 100.9 | 112.9 | 8.0% | 2.5% | 138.4 | 141.9 | 149.5 | 9.8% | 3.0% |
| Science engagement | 169.9 | 119.7 | 121.0 | 104.5 | -15.0% | 3.1% | 121.6 | 123.4 | 129.4 | 7.4% | 2.6% |
| Research and innovation support and advancement | 2 793.8 | 2 638.3 | 2 471.3 | 2 435.4 | -4.5% | 63.0% | 2 807.2 | 2 717.8 | 2 681.5 | 3.3% | 58.9% |
| National research infrastructure platforms | 1 175.4 | 1 251.4 | 1 296.9 | 1 432.0 | 6.8% | 31.4% | 1 649.8 | 1 627.2 | 1 706.2 | 6.0% | 35.5% |
| Total | 4 228.8 | 4 110.7 | 3 990.2 | 4 084.8 | -1.1% | 100.0% | 4 717.0 | 4 610.3 | 4 666.6 | 4.5% | 100.0% |

Statements of financial performance, cash flow and financial position

Table 35.29 National Research Foundation statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | |
|--|-----------------|----------------|----------------|-----------------------------|--|--|----------------------------------|----------------|----------------|--|--|
| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/ Total (%) 2017/18 - 2020/21 | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/ Total (%) 2020/21 - 2023/24 |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Revenue | | | | | | | | | | | |
| Non-tax revenue | 1 419.6 | 608.7 | 206.8 | 414.8 | -33.6% | 15.1% | 337.8 | 324.5 | 278.2 | -12.5% | 7.5% |
| Sale of goods and services other than capital assets | 115.3 | 60.4 | 84.5 | 69.3 | -15.6% | 1.9% | 75.6 | 80.2 | 84.4 | 6.8% | 1.7% |
| <i>of which:</i> | | | | | | | | | | | |
| <i>Sales by market establishment</i> | 80.6 | 57.1 | 82.1 | 68.6 | -5.2% | 1.7% | 73.7 | 78.2 | 82.5 | 6.4% | 1.6% |
| Other sales | 34.7 | 3.4 | 2.4 | 0.7 | -72.9% | 0.2% | 1.9 | 2.0 | 1.9 | 39.8% | - |
| Other non-tax revenue | 1 304.2 | 548.3 | 122.3 | 345.5 | -35.8% | 13.1% | 262.2 | 244.3 | 193.8 | -17.5% | 5.8% |
| Transfers received | 3 309.8 | 3 504.8 | 3 737.4 | 3 655.2 | 3.4% | 84.9% | 4 468.2 | 4 573.8 | 4 388.4 | 6.3% | 92.5% |
| Total revenue | 4 729.3 | 4 113.5 | 3 944.2 | 4 070.0 | -4.9% | 100.0% | 4 806.1 | 4 898.3 | 4 666.6 | 4.7% | 100.0% |
| Expenses | | | | | | | | | | | |
| Current expenses | 1 508.7 | 1 537.8 | 1 590.5 | 1 723.2 | 4.5% | 38.8% | 1 976.3 | 1 971.3 | 2 069.7 | 6.3% | 42.8% |
| Compensation of employees | 717.8 | 729.4 | 763.3 | 864.4 | 6.4% | 18.8% | 928.7 | 976.8 | 1 035.4 | 6.2% | 21.1% |
| Goods and services | 617.7 | 544.9 | 553.5 | 564.2 | -3.0% | 13.9% | 733.5 | 660.4 | 685.1 | 6.7% | 14.6% |
| Depreciation | 173.2 | 263.5 | 273.7 | 294.6 | 19.4% | 6.1% | 314.0 | 334.2 | 349.2 | 5.8% | 7.2% |
| Interest, dividends and rent on land | 0.0 | 0.0 | 0.0 | - | -100.0% | - | - | - | - | - | - |
| Transfers and subsidies | 2 720.1 | 2 572.9 | 2 399.7 | 2 361.5 | -4.6% | 61.2% | 2 740.8 | 2 638.9 | 2 596.8 | 3.2% | 57.2% |
| Total expenses | 4 228.8 | 4 110.7 | 3 990.2 | 4 084.8 | -1.1% | 100.0% | 4 717.0 | 4 610.3 | 4 666.6 | 4.5% | 100.0% |
| Surplus/(Deficit) | 500.6 | 2.8 | (45.9) | (14.8) | -130.9% | | 89.1 | 288.0 | - | -100.0% | |
| Cash flow statement | | | | | | | | | | | |
| Cash flow from operating activities | 662.0 | 467.0 | 403.9 | 145.2 | -39.7% | 100.0% | 303.1 | 572.2 | 247.6 | 19.5% | 100.0% |
| Receipts | | | | | | | | | | | |
| Non-tax receipts | 1 400.3 | 935.3 | 469.9 | 780.2 | -17.7% | 21.3% | 701.8 | 862.6 | 355.2 | -23.1% | 15.3% |
| Sales of goods and services other than capital assets | 121.4 | 85.1 | 71.4 | 72.3 | -15.9% | 2.1% | 78.6 | 83.0 | 86.4 | 6.1% | 1.8% |
| <i>Sales by market establishment</i> | 80.6 | 57.1 | 71.4 | 68.6 | -5.2% | 1.7% | 73.7 | 78.2 | 82.5 | 6.4% | 1.7% |
| <i>Other sales</i> | 40.8 | 28.0 | - | 3.7 | -55.1% | 0.4% | 4.9 | 4.9 | 3.9 | 1.7% | 0.1% |
| Other tax receipts | 1 278.9 | 850.2 | 398.5 | 708.0 | -17.9% | 19.2% | 623.2 | 779.5 | 268.8 | -27.6% | 13.5% |
| Transfers received | 2 906.4 | 3 504.8 | 3 737.4 | 3 036.9 | 1.5% | 78.7% | 3 976.3 | 3 974.8 | 4 188.4 | 11.3% | 84.7% |
| Total receipts | 4 306.7 | 4 440.0 | 4 207.2 | 3 817.1 | -3.9% | 100.0% | 4 678.0 | 4 837.4 | 4 543.6 | 6.0% | 100.0% |
| Payment | | | | | | | | | | | |
| Current payments | 1 356.7 | 1 283.8 | 1 411.3 | 1 356.3 | - | 35.9% | 1 654.2 | 1 636.3 | 1 709.2 | 8.0% | 38.2% |
| Compensation of employees | 691.0 | 754.2 | 767.5 | 864.1 | 7.7% | 20.4% | 928.7 | 976.8 | 1 035.4 | 6.2% | 22.9% |
| Goods and services | 665.7 | 529.5 | 643.8 | 492.1 | -9.6% | 15.5% | 725.5 | 659.5 | 673.8 | 11.0% | 15.3% |
| Interest and rent on land | 0.0 | 0.0 | - | - | -100.0% | - | - | - | - | - | - |
| Transfers and subsidies | 2 288.0 | 2 689.2 | 2 392.0 | 2 315.6 | 0.4% | 64.1% | 2 720.8 | 2 628.9 | 2 586.8 | 3.8% | 61.8% |
| Total payments | 3 644.7 | 3 973.0 | 3 803.3 | 3 671.9 | 0.2% | 100.0% | 4 374.9 | 4 265.2 | 4 296.0 | 5.4% | 100.0% |
| Net cash flow from investing activities | (693.3) | (252.9) | (200.6) | (356.3) | -19.9% | 100.0% | (403.1) | (622.2) | (347.6) | -0.8% | 100.0% |
| Acquisition of property, plant, equipment and intangible assets | (690.3) | (250.7) | (173.9) | (326.6) | -22.1% | 94.3% | (402.3) | (621.4) | (346.6) | 2.0% | 97.8% |
| Acquisition of software and other intangible assets | (3.8) | (2.6) | (27.3) | (29.7) | 97.9% | 5.9% | (0.8) | (0.8) | (1.0) | -67.7% | 2.2% |
| Proceeds from the sale of property, plant, equipment and intangible assets | 0.8 | 0.4 | 0.6 | - | -100.0% | -0.1% | - | - | - | - | - |
| Net cash flow from financing activities | (0.1) | (19.8) | (0.0) | - | -100.0% | - | - | - | - | - | - |
| Repayment of finance leases | (0.1) | (0.1) | (0.0) | - | -100.0% | - | - | - | - | - | - |
| Other flows from financing activities | - | (19.7) | - | - | - | - | - | - | - | - | - |
| Net increase/(decrease) in cash and cash equivalents | (31.4) | 194.4 | 203.3 | (211.1) | 88.8% | 1.0% | (100.0) | (50.0) | (100.0) | -22.0% | -2.6% |

Table 35.29 National Research Foundation statements of financial performance, cash flow and financial position

| Statement of financial position | | Audited outcome | | | Revised estimate | Average growth rate (%) | Average Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average Expenditure/ Total (%) |
|-------------------------------------|----------------|-----------------|----------------|----------------|-------------------|-------------------------|--------------------------------|----------------------------------|-------------------|-------------------|-------------------------|--------------------------------|
| R million | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2017/18 - 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 - 2023/24 | 2020/21 - 2023/24 | | |
| Carrying value of assets | 2 669.0 | 2 630.8 | 2 553.9 | 2 615.6 | -0.7% | 60.1% | 2 704.7 | 2 992.7 | 2 992.7 | 4.6% | 65.9% | |
| Acquisition of assets | (690.3) | (250.7) | (173.9) | (326.6) | -22.1% | 100.0% | (402.3) | (621.4) | (346.6) | 2.0% | 100.0% | |
| Investments | 16.1 | 13.8 | 12.6 | 10.5 | -13.3% | 0.3% | 9.0 | 8.0 | 7.0 | -12.6% | 0.2% | |
| Inventory | 6.1 | 4.5 | 5.1 | 5.2 | -5.3% | 0.1% | 5.3 | 5.3 | 5.3 | 0.6% | 0.1% | |
| Receivables and prepayments | 1 080.8 | 1 195.2 | 1 024.3 | 965.0 | -3.7% | 24.4% | 930.0 | 910.0 | 880.0 | -3.0% | 21.5% | |
| Cash and cash equivalents | 463.4 | 657.8 | 861.1 | 650.0 | 11.9% | 15.0% | 550.0 | 500.0 | 400.0 | -14.9% | 12.3% | |
| Defined benefit plan assets | 4.0 | 2.0 | 2.2 | 2.3 | -16.8% | 0.1% | 2.3 | 2.3 | 2.3 | - | 0.1% | |
| Total assets | 4 239.4 | 4 504.1 | 4 459.2 | 4 248.6 | 0.1% | 100.0% | 4 201.2 | 4 418.3 | 4 287.3 | 0.3% | 100.0% | |
| Accumulated surplus/(deficit) | 2.6 | 2.4 | 5.6 | - | -100.0% | 0.1% | - | - | - | - | - | |
| Capital and reserves | 89.0 | 86.7 | 114.4 | 43.5 | -21.3% | 1.9% | 40.0 | 35.0 | 30.0 | -11.6% | 0.9% | |
| Capital reserve fund | 2 669.0 | 2 630.8 | 2 553.9 | 2 615.6 | -0.7% | 60.1% | 2 704.7 | 2 992.7 | 2 992.7 | 4.6% | 65.9% | |
| Finance lease | 0.1 | 0.0 | - | - | -100.0% | - | - | - | - | - | - | |
| Deferred income | 1 335.9 | 1 662.4 | 1 667.5 | 1 479.5 | 3.5% | 35.2% | 1 351.5 | 1 290.6 | 1 167.6 | -7.6% | 30.9% | |
| Trade and other payables | 107.7 | 111.5 | 117.8 | 110.0 | 0.7% | 2.6% | 105.0 | 100.0 | 97.0 | -4.1% | 2.4% | |
| Provisions | 35.2 | 10.4 | - | - | -100.0% | 0.3% | - | - | - | - | - | |
| Total equity and liabilities | 4 239.4 | 4 504.1 | 4 459.2 | 4 248.6 | 0.1% | 100.0% | 4 201.2 | 4 418.3 | 4 287.3 | 0.3% | 100.0% | |

Personnel information

Table 35.30 National Research Foundation personnel numbers and cost by salary level

| Number of posts estimated for 31 March 2020 | | Number and cost ¹ of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | Number | | | | |
|---|---|--|-------|-----------|------------------|---------|-----------|----------------------------------|-------|-----------|--------|-------------------|-----------|-------------------------|--------------------------------|-----------|------|--------|
| Number of funded posts | Number of posts on approved establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average Salary level/Total (%) | | | |
| | | 2019/20 | | 2020/21 | | 2021/22 | | 2022/23 | | 2023/24 | | 2020/21 - 2023/24 | | | | | | |
| National Research Foundation | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | |
| Salary level | 1 386 | 1 386 | 763.3 | 0.6 | 1 386 | 864.4 | 0.6 | 1 386 | 928.7 | 0.7 | 1 386 | 976.8 | 0.7 | 1 386 | 1 035.4 | 0.7 | 6.2% | 100.0% |
| 1 - 6 | 210 | 210 | 36.2 | 0.2 | 210 | 41.0 | 0.2 | 210 | 44.0 | 0.2 | 210 | 46.3 | 0.2 | 210 | 49.1 | 0.2 | 6.2% | 4.7% |
| 7 - 10 | 851 | 851 | 379.8 | 0.4 | 851 | 430.1 | 0.5 | 851 | 462.1 | 0.5 | 851 | 486.0 | 0.6 | 851 | 515.2 | 0.6 | 6.2% | 49.8% |
| 11 - 12 | 213 | 213 | 183.9 | 0.9 | 213 | 208.3 | 1.0 | 213 | 223.8 | 1.1 | 213 | 235.3 | 1.1 | 213 | 249.4 | 1.2 | 6.2% | 24.1% |
| 13 - 16 | 107 | 107 | 147.7 | 1.4 | 107 | 167.3 | 1.6 | 107 | 179.7 | 1.7 | 107 | 189.0 | 1.8 | 107 | 200.3 | 1.9 | 6.2% | 19.3% |
| 17 - 22 | 5 | 5 | 15.8 | 3.2 | 5 | 17.8 | 3.6 | 5 | 19.2 | 3.8 | 5 | 20.2 | 4.0 | 5 | 21.4 | 4.3 | 6.2% | 2.1% |

1. Rand million.

South African National Space Agency

Selected performance indicators

Table 35.31 South African National Space Agency performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|---|------------------------------|---|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of students supported for formalised training per year | Space science | Priority 3: Education, skills and health | 53 | 87 | 50 | 70 | 80 | 100 | 100 |
| Number of high-impact products and applications to support national geospatial decisions per year | Earth observation | Priority 5: Spatial integration, human settlements and local government | 5 | 5 | 5 | 32 | 34 | 35 | 36 |
| National research productivity score for space-supported research and development per year | Space science | Priority 3: Education, skills and health | 1 200 | 1 656 | 1 200 | 2 800 | 3 300 | 3 800 | 3 900 |
| Number of active formal African partnerships per year | Earth observation | Priority 7: A better Africa and world | -1 | -1 | 5 | 9 | 10 | 11 | 11 |
| Number of active formal national partnerships per year | Earth observation | Priority 5: Spatial integration, human settlements and local government | -1 | -1 | 5 | 12 | 13 | 13 | 13 |

1. No historical data available.

Entity overview

The South African National Space Agency was established in terms of the South African National Space Agency Act (2008), as amended, to promote the peaceful use of space, foster international cooperation in space-related activities, and facilitate the creation of an environment conducive to space technology and industrial development. In addition to continuing its focus on these priorities, over the medium term, the agency will focus on broadening the suite of products and services available in the space sector, and contributing to promoting socioeconomic development across Africa. Currently, more than 30 government departments and entities use

national geospatial data for planning, monitoring and decision-making.

As the agency relies on highly skilled and professional personnel to fulfil its mandate, compensation of employees accounts for an estimated 45.1 per cent (R465.9 million) of expenditure over the medium term. Expenditure on personnel increases at an average annual rate of 1.2 per cent, from R150.4 million in 2020/21 to R155.7 million in 2023/24. Transfers from the department account for an estimated 76.6 per cent (R706 million) of the agency's revenue over the MTEF period. Additional revenue is generated by services rendered to government institutions and other organisations, mainly international clients in the space sector.

Programmes/Objectives/Activities

Table 35.32 South African National Space Agency expenditure trends and estimates by programme/objective/activity

| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/ Total (%) |
|-------------------|-----------------|--------------|--------------|-----------------------------|--|---------------------------------|----------------------------------|--------------|--------------|--|---------------------------------|
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Administration | 51.3 | 51.7 | 51.6 | 77.1 | 14.5% | 19.6% | 112.1 | 73.5 | 76.9 | -0.1% | 24.7% |
| Earth observation | 94.3 | 66.4 | 68.2 | 135.1 | 12.7% | 30.1% | 89.2 | 90.5 | 41.5 | -32.5% | 24.3% |
| Space operation | 55.6 | 76.5 | 88.9 | 118.8 | 28.8% | 28.3% | 73.6 | 74.8 | 78.4 | -12.9% | 24.4% |
| Space science | 41.5 | 44.6 | 54.5 | 99.7 | 34.0% | 19.3% | 69.8 | 70.9 | 74.6 | -9.2% | 22.5% |
| Space engineering | - | - | 5.2 | 43.5 | - | 2.8% | 8.5 | 7.3 | 7.6 | -44.2% | 4.1% |
| Total | 242.7 | 239.2 | 268.4 | 474.1 | 25.0% | 100.0% | 353.2 | 317.0 | 279.0 | -16.2% | 100.0% |

Statements of financial performance, cash flow and financial position

Table 35.33 South African National Space Agency statements of financial performance, cash flow and financial position

| Statement of financial performance | | | | | | | | | | | |
|---|-----------------|---------------|---------------|-----------------------------|--|---------------------------------|----------------------------------|--------------|--------------|--|---------------------------------|
| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/ Total (%) |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Revenue | | | | | | | | | | | |
| Non-tax revenue | 100.9 | 101.0 | 114.2 | 75.7 | -9.1% | 29.8% | 79.4 | 79.8 | 84.1 | 3.6% | 23.4% |
| Sale of goods and services other than capital assets | 87.8 | 90.4 | 104.2 | 72.8 | -6.1% | 26.9% | 76.1 | 76.3 | 80.5 | 3.4% | 22.5% |
| <i>of which:</i> | | | | | | | | | | | |
| <i>Sales by market establishment</i> | 87.8 | 90.4 | 104.2 | 72.8 | -6.1% | 26.9% | 76.1 | 76.3 | 80.5 | 3.4% | 22.5% |
| Other non-tax revenue | 13.1 | 10.6 | 10.0 | 2.9 | -39.7% | 2.9% | 3.3 | 3.5 | 3.6 | 7.9% | 1.0% |
| Transfers received | 219.0 | 179.9 | 205.3 | 398.5 | 22.1% | 70.2% | 273.8 | 237.3 | 194.9 | -21.2% | 76.6% |
| Total revenue | 319.8 | 280.9 | 319.5 | 474.1 | 14.0% | 100.0% | 353.2 | 317.0 | 279.0 | -16.2% | 100.0% |
| Expenses | | | | | | | | | | | |
| Current expenses | 237.1 | 234.7 | 263.0 | 444.6 | 23.3% | 96.9% | 350.6 | 314.3 | 257.3 | -16.7% | 96.1% |
| Compensation of employees | 110.5 | 115.2 | 125.1 | 150.4 | 10.8% | 43.0% | 154.8 | 155.4 | 155.7 | 1.2% | 45.1% |
| Goods and services | 101.2 | 92.0 | 115.6 | 294.2 | 42.7% | 46.3% | 195.8 | 158.9 | 101.6 | -29.8% | 51.0% |
| Depreciation | 25.4 | 27.5 | 22.3 | - | -100.0% | 7.6% | - | - | - | - | - |
| Transfers and subsidies | 5.6 | 4.6 | 5.3 | 29.5 | 73.8% | 3.1% | 2.6 | 2.8 | 21.7 | -9.8% | 3.9% |
| Total expenses | 242.7 | 239.2 | 268.4 | 474.1 | 25.0% | 100.0% | 353.2 | 317.0 | 279.0 | -16.2% | 100.0% |
| Surplus/(Deficit) | 77.1 | 41.7 | 51.1 | - | -100.0% | - | - | - | - | - | - |
| Cash flow statement | | | | | | | | | | | |
| Cash flow from operating activities | 168.1 | (40.4) | 121.6 | - | -100.0% | - | 34.5 | - | - | - | - |
| Receipts | | | | | | | | | | | |
| Non-tax receipts | 98.8 | 98.9 | 113.3 | 74.7 | -8.9% | 30.2% | 79.5 | 79.8 | 84.1 | 4.0% | 24.5% |
| Sales of goods and services other than capital assets | 90.4 | 91.1 | 104.6 | 73.2 | -6.8% | 28.1% | 76.6 | 76.7 | 80.9 | 3.4% | 23.7% |
| <i>Sales by market establishment</i> | 85.7 | 90.4 | 104.2 | 72.8 | -5.3% | 27.6% | 76.1 | 76.3 | 80.5 | 3.4% | 23.5% |
| <i>Other sales</i> | 4.8 | 0.7 | 0.4 | 0.4 | -56.3% | 0.5% | 0.4 | 0.4 | 0.5 | 5.0% | 0.1% |
| Other tax receipts | 8.3 | 7.8 | 8.8 | 1.5 | -43.0% | 2.1% | 2.9 | 3.0 | 3.2 | 27.1% | 0.8% |
| Transfers received | 233.9 | 179.9 | 205.3 | 294.7 | 8.0% | 69.8% | 273.8 | 237.3 | 194.9 | -12.9% | 75.5% |
| Total receipts | 332.7 | 278.8 | 318.6 | 369.5 | 3.6% | 100.0% | 353.3 | 317.1 | 279.0 | -8.9% | 100.0% |
| Payment | | | | | | | | | | | |
| Current payments | 164.6 | 319.2 | 197.0 | 369.5 | 30.9% | 100.0% | 318.8 | 317.1 | 279.0 | -8.9% | 100.0% |
| Compensation of employees | 110.4 | 115.2 | 125.1 | 150.4 | 10.9% | 51.8% | 154.8 | 155.4 | 155.4 | 1.1% | 48.5% |
| Goods and services | 54.2 | 204.0 | 71.9 | 219.0 | 59.3% | 48.2% | 164.0 | 161.7 | 123.6 | -17.4% | 51.5% |
| Total payments | 164.6 | 319.2 | 197.0 | 369.5 | 30.9% | 100.0% | 318.8 | 317.1 | 279.0 | -8.9% | 100.0% |
| Net cash flow from investing activities | (109.1) | 64.3 | (39.6) | - | -100.0% | - | (34.5) | - | - | - | - |
| Acquisition of property, plant, equipment and intangible assets | (106.5) | 64.7 | (32.2) | - | -100.0% | - | (34.5) | - | - | - | - |
| Acquisition of software and other intangible assets | (2.7) | (0.4) | (7.4) | - | -100.0% | - | - | - | - | - | - |
| Net cash flow from financing activities | (5.4) | - | - | - | -100.0% | - | - | - | - | - | - |
| Borrowing activities | (5.4) | - | - | - | -100.0% | - | - | - | - | - | - |
| Net increase/(decrease) in cash and cash equivalents | 53.5 | 23.9 | 81.9 | - | -100.0% | 15.6% | 0.0 | - | - | - | - |

Table 35.33 South African National Space Agency statements of financial performance, cash flow and financial position

| Statement of financial position | | | | | | | | | | | |
|-------------------------------------|-----------------|--------------|--------------|-----------------------------|--|--------------------------------|----------------------------------|--------------|--------------|--|--------------------------------|
| R million | Audited outcome | | | Revised estimate 2020/21 | Average growth rate (%) 2017/18 - 2020/21 | Average: Expenditure/Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) 2020/21 - 2023/24 | Average: Expenditure/Total (%) |
| | 2017/18 | 2018/19 | 2019/20 | | | | 2021/22 | 2022/23 | 2023/24 | | |
| Carrying value of assets | 447.5 | 436.7 | 490.0 | 466.6 | 1.4% | 72.9% | 473.2 | 474.5 | 495.8 | 2.0% | 74.2% |
| Acquisition of assets | (106.5) | 64.7 | (32.2) | – | -100.0% | – | (34.5) | – | – | – | – |
| Inventory | 0.5 | 0.3 | 0.4 | 0.5 | -3.0% | 0.1% | 0.5 | 0.5 | 0.5 | 1.5% | 0.1% |
| Receivables and prepayments | 25.4 | 36.4 | 40.2 | 20.8 | -6.4% | 4.8% | 10.4 | 10.4 | 10.9 | -19.5% | 2.0% |
| Cash and cash equivalents | 97.2 | 121.1 | 203.0 | 151.2 | 15.8% | 22.2% | 151.2 | 151.2 | 158.0 | 1.5% | 23.7% |
| Total assets | 570.6 | 594.5 | 733.6 | 639.0 | 3.8% | 100.0% | 635.2 | 636.5 | 665.1 | 1.3% | 100.0% |
| Accumulated surplus/(deficit) | 484.4 | 524.3 | 611.4 | 472.1 | -0.9% | 82.6% | 483.6 | 489.9 | 512.0 | 2.7% | 76.0% |
| Borrowings | – | – | – | 1.0 | – | – | 1.0 | 1.0 | 1.1 | 1.5% | 0.2% |
| Deferred income | 58.1 | 44.3 | 90.3 | 132.9 | 31.8% | 12.7% | 132.9 | 132.9 | 138.9 | 1.5% | 20.9% |
| Trade and other payables | 22.1 | 17.7 | 23.4 | 25.4 | 4.7% | 3.5% | 10.0 | 5.0 | 5.2 | -40.9% | 1.8% |
| Provisions | 6.0 | 8.2 | 8.5 | 7.6 | 8.4% | 1.2% | 7.6 | 7.6 | 8.0 | 1.5% | 1.2% |
| Total equity and liabilities | 570.6 | 594.5 | 733.6 | 639.0 | 3.8% | 100.0% | 635.2 | 636.5 | 665.1 | 1.3% | 100.0% |

Personnel information

Table 35.34 South African National Space Agency personnel numbers and cost by salary level

| Number of posts estimated for 31 March 2020 | | Number and cost ¹ of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | | | Number | | | |
|---|---|--|------|-----------|------------------|------|-----------|----------------------------------|------|-----------|---------|------|-----------|-------------------------|---------------------------------|-----------|-------------------|-----------|--------|
| Number of funded posts | Number of posts on approved establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | Average growth rate (%) | Average: Salary level/Total (%) | | | | |
| | | 2019/20 | | Unit cost | 2020/21 | | Unit cost | 2021/22 | | Unit cost | 2022/23 | | Unit cost | | | 2023/24 | | Unit cost | |
| South African National Space Agency | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | 2020/21 - 2023/24 | | |
| Salary level | 35 | 35 | 35 | 125.1 | 3.6 | 35 | 150.4 | 4.3 | 35 | 154.8 | 4.4 | 35 | 155.4 | 4.4 | 35 | 155.7 | 4.4 | 1.2% | 100.0% |
| 1 – 6 | – | – | – | 15.3 | – | – | 13.5 | – | – | 14.1 | – | – | 14.0 | – | – | 14.1 | – | 1.4% | 9.0% |
| 7 – 10 | – | – | – | 45.7 | – | – | 56.6 | – | – | 58.3 | – | – | 58.4 | – | – | 58.7 | – | 1.2% | 37.6% |
| 11 – 12 | – | – | – | 20.9 | – | – | 24.7 | – | – | 25.5 | – | – | 25.5 | – | – | 25.6 | – | 1.2% | 16.4% |
| 13 – 16 | 34 | 34 | 34 | 40.9 | 1.2 | 34 | 48.8 | 1.4 | 34 | 50.3 | 1.5 | 34 | 50.3 | 1.5 | 34 | 50.6 | 1.5 | 1.2% | 32.4% |
| 17 – 22 | 1 | 1 | 1 | 2.3 | 2.3 | 1 | 6.9 | 6.9 | 1 | 6.6 | 6.6 | 1 | 7.2 | 7.2 | 1 | 6.7 | 6.7 | -1.0% | 4.4% |

1. Rand million.

Technology Innovation Agency

Selected performance indicators

Table 35.35 Technology Innovation Agency performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|---|---|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of technologies, processes or services advancing by 1 or more technology readiness levels per year | Provide technology development funding and support in strategic high-impact areas | Priority 1: A capable, ethical and developmental state | 13 | 30 | 30 | 31 | 31 | 34 | 34 |
| Number of innovation project outputs taken up in the market per year | Provide technology development funding and support in strategic high-impact areas | | 10 | 14 | 12 | 13 | 19 | 22 | 22 |
| Additional funding attracted to the agency's portfolio per year | Provide technology development funding and support in strategic high-impact areas | Priority 2: Economic transformation and job creation | R66m | R94m | R157m | R167m | R167m | R170m | R170m |
| Income received per year | Provide technology development funding and support in strategic high-impact areas | | R141.8m | R127.3m | R145m | R180m | R182m | R190m | R190m |
| Number of knowledge innovation products as a result of the agency's funding and support programmes per year | Provide an enabling environment for technology innovation | | 83 | 110 | 96 | 113 | 114 | 120 | 120 |

Table 35.35 Technology Innovation Agency performance indicators by programme/objective/activity and related MTSF priority

| Indicator | Programme/Objective/Activity | MTSF priority | Audited performance | | | Estimated performance | MTEF targets | | |
|--|---|--|---------------------|---------|---------|-----------------------|--------------|---------|---------|
| | | | 2017/18 | 2018/19 | 2019/20 | 2021/21 | 2021/22 | 2022/23 | 2023/24 |
| Number of knowledge innovation products produced by agency-supported programmes receiving additional funding per year | Provide an enabling environment for technology innovation | Priority 2: Economic transformation and job creation | 27 | 31 | 33 | 36 | 37 | 40 | 40 |
| Number of SMMEs receiving technology support per year | Provide an enabling environment for technology innovation | | 2 800 | 3 272 | 3 840 | 4 000 | 4 100 | 4 200 | 4 200 |
| SMMEs owned by historically disadvantaged individuals assisted as a percentage of total SMMEs supported, receiving funding, and receiving support and/or technology services from the agency per year | Provide an enabling environment for technology innovation | | 65% | 74% | 69% | 75% | 75% | 80% | 80% |
| Number of technology innovation initiatives undertaken by the agency, consisting of conference papers, presentations and posters, policy recommendations, panel discussions, position papers, publications, think-tanks and keynote addresses per year | Provide an enabling environment for technology innovation | Priority 3: Education, skills and health | 31 | 44 | 34 | 41 | 42 | 50 | 50 |

Entity overview

The Technology Innovation Agency Act (2008), as amended, mandates the agency to serve as a key institutional intervention to bridge the innovation gap between research and development outcomes from higher education institutions, science councils, public entities, and private companies. This with the purpose of intensifying the effect of technological innovation in the economy. Over the medium term, the agency will continue to focus on bridging the innovation gap between research and development goals, and supporting technologies within the national system of innovation.

As human resources are central to the agency's operations, compensation of employees is its largest cost driver, accounting for an estimated 19.7 per cent (R329.3 million) of expenditure over the MTEF period. Goods and services is the second largest spending area, accounting for 9.1 per cent (R150.9 million) of expenditure over the same period. The agency derives 79.9 per cent (R1.4 billion) of its revenue from the department, increasing at an average annual rate of 3.9 per cent, from R410.3 million in 2020/21 to R460.1 million in 2023/24. Other sources of income include co-funding partnerships, and interest and royalties earned.

Programmes/Objectives/Activities

Table 35.36 Technology Innovation Agency expenditure trends and estimates by programme/objective/activity

| R million | Audited outcome | | | Revised estimate | Average growth rate (%) | | Medium-term expenditure estimate | | | Average growth rate (%) | |
|--|-----------------|--------------|--------------|------------------|-------------------------|---------------|----------------------------------|--------------|--------------|-------------------------|---------------|
| | 2017/18 | 2018/19 | 2019/20 | | 2017/18 - 2020/21 | 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 - 2023/24 | 2023/24 |
| Administration | 151.3 | 175.6 | 166.3 | 167.2 | 3.4% | 30.4% | 166.2 | 167.3 | 168.2 | 0.2% | 30.1% |
| Provide customer-centric, early-stage commercialisation for technology development | 92.4 | 78.0 | 84.0 | 74.8 | -6.8% | 15.3% | 81.4 | 83.1 | 83.4 | 3.7% | 14.5% |
| Provide an enabling environment for technology innovation | 216.7 | 28.0 | 42.0 | 47.8 | -39.6% | 16.9% | 49.6 | 49.6 | 49.6 | 1.3% | 8.8% |
| Provide bioeconomy programmes and platforms | – | 161.0 | 228.0 | 180.1 | – | 24.6% | 204.0 | 210.1 | 210.7 | 5.4% | 36.2% |
| Technology development stations | – | 102.0 | 97.0 | 92.4 | – | 12.7% | 45.0 | 46.7 | 46.7 | -20.4% | 10.4% |
| Total | 460.4 | 544.6 | 617.3 | 562.2 | 6.9% | 100.0% | 546.2 | 556.9 | 558.6 | -0.2% | 100.0% |

Statements of financial performance, cash flow and financial position**Table 35.37 Technology Innovation Agency statements of financial performance, cash flow and financial position**

| Statement of financial performance | | | | | | | | | | | |
|--|-----------------|--------------|---------------|------------------|-------------------------|---------------------------------|----------------------------------|--------------|-------------------|-------------------------|---------------------------------|
| R million | Audited outcome | | | Revised estimate | Average growth rate (%) | Average: Expenditure/ Total (%) | Medium-term expenditure estimate | | | Average growth rate (%) | Average: Expenditure/ Total (%) |
| | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2017/18 - 2020/21 | 2021/22 | 2022/23 | 2023/24 | 2020/21 - 2023/24 | 2020/21 - 2023/24 | |
| Revenue | | | | | | | | | | | |
| Non-tax revenue | 88.7 | 146.4 | 162.8 | 151.9 | 19.6% | 24.5% | 98.5 | 98.5 | 98.5 | -13.4% | 20.1% |
| <i>of which:</i> | | | | | | | | | | | |
| Other non-tax revenue | 88.7 | 146.4 | 162.8 | 151.9 | 19.6% | 24.5% | 98.5 | 98.5 | 98.5 | -13.4% | 20.1% |
| Transfers received | 396.7 | 420.3 | 440.9 | 410.3 | 1.1% | 75.5% | 447.7 | 458.4 | 460.1 | 3.9% | 79.9% |
| Total revenue | 485.4 | 566.7 | 603.8 | 562.2 | 5.0% | 100.0% | 546.2 | 556.9 | 558.6 | -0.2% | 100.0% |
| Expenses | | | | | | | | | | | |
| Current expenses | 151.3 | 175.6 | 166.3 | 167.2 | 3.4% | 30.4% | 166.2 | 167.3 | 168.2 | 0.2% | 30.1% |
| Compensation of employees | 98.7 | 105.1 | 109.0 | 109.3 | 3.5% | 19.5% | 109.3 | 110.0 | 110.0 | 0.2% | 19.7% |
| Goods and services | 44.5 | 61.2 | 51.1 | 50.8 | 4.5% | 9.6% | 49.8 | 50.3 | 50.8 | - | 9.1% |
| Depreciation | 8.0 | 9.4 | 6.2 | 7.0 | -4.5% | 1.4% | 7.0 | 7.0 | 7.3 | 1.5% | 1.3% |
| Transfers and subsidies | 309.1 | 369.0 | 451.0 | 395.0 | 8.5% | 69.6% | 380.0 | 389.5 | 390.5 | -0.4% | 69.9% |
| Total expenses | 460.4 | 544.6 | 617.3 | 562.2 | 6.9% | 100.0% | 546.2 | 556.9 | 558.6 | -0.2% | 100.0% |
| Surplus/(Deficit) | 25.0 | 22.1 | (13.5) | - | -100.0% | - | - | - | - | - | - |
| Cash flow statement | | | | | | | | | | | |
| Cash flow from operating activities | 22.4 | 51.1 | (16.4) | 2.6 | -51.2% | 100.0% | 2.6 | 2.6 | 2.7 | 1.5% | 100.0% |
| Receipts | | | | | | | | | | | |
| Non-tax receipts | 89.3 | 30.1 | 14.1 | 151.9 | 19.4% | 13.3% | 98.5 | 98.5 | 98.5 | -13.4% | 20.1% |
| Other tax receipts | 89.3 | 30.1 | 14.1 | 151.9 | 19.4% | 13.3% | 98.5 | 98.5 | 98.5 | -13.4% | 20.1% |
| Transfers received | 396.7 | 530.4 | 587.0 | 410.3 | 1.1% | 86.7% | 447.7 | 458.4 | 460.1 | 3.9% | 79.9% |
| Total receipts | 486.1 | 560.5 | 601.1 | 562.2 | 5.0% | 100.0% | 546.2 | 556.9 | 558.6 | -0.2% | 100.0% |
| Payment | | | | | | | | | | | |
| Current payments | 154.6 | 185.7 | 241.5 | 155.7 | 0.2% | 34.2% | 156.9 | 166.7 | 170.0 | 3.0% | 29.3% |
| Compensation of employees | 98.7 | 105.1 | 109.0 | 109.3 | 3.5% | 19.8% | 109.4 | 110.0 | 110.0 | 0.2% | 19.8% |
| Goods and services | 55.8 | 80.6 | 132.5 | 46.4 | -6.0% | 14.4% | 47.6 | 56.7 | 60.0 | 9.0% | 9.5% |
| Transfers and subsidies | 309.1 | 323.7 | 376.0 | 403.9 | 9.3% | 65.8% | 386.7 | 387.6 | 385.9 | -1.5% | 70.7% |
| Total payments | 463.7 | 509.4 | 617.5 | 559.6 | 6.5% | 100.0% | 543.6 | 554.3 | 555.9 | -0.2% | 100.0% |
| Net cash flow from investing activities | 5.9 | (3.7) | 2.6 | (2.6) | -176.2% | 100.0% | (2.6) | (2.6) | (2.7) | 1.5% | 100.0% |
| Acquisition of property, plant, equipment and intangible assets | (5.1) | (5.1) | (1.9) | (1.1) | -40.0% | 5.5% | (1.1) | (1.1) | (1.1) | 1.5% | 42.3% |
| Acquisition of software and other intangible assets | (1.8) | (2.3) | (0.7) | (1.5) | -6.0% | 15.8% | (1.5) | (1.5) | (1.6) | 1.5% | 57.7% |
| Proceeds from the sale of property, plant, equipment and intangible assets | 0.4 | - | - | - | -100.0% | 1.6% | - | - | - | - | - |
| Other flows from investing activities | 12.4 | 3.8 | 5.1 | - | -100.0% | 77.1% | - | - | - | - | - |
| Net cash flow from financing activities | 33.8 | (7.2) | (8.1) | - | -100.0% | - | - | - | - | - | - |
| Deferred income | 33.8 | 106.4 | 154.3 | - | -100.0% | - | - | - | - | - | - |
| Borrowing activities | - | (113.5) | (162.4) | - | - | - | - | - | - | - | - |
| Net increase/(decrease) in cash and cash equivalents | 62.1 | 40.3 | (22.0) | 0.0 | -98.5% | 4.3% | (0.0) | (0.0) | (0.0) | -209.5% | - |
| Statement of financial position | | | | | | | | | | | |
| Carrying value of assets | 14.1 | 18.6 | 13.1 | 18.6 | 9.6% | 8.7% | 18.6 | 18.6 | 19.4 | 1.5% | 14.5% |
| Acquisition of assets | (5.1) | (5.1) | (1.9) | (1.1) | -40.0% | 100.0% | (1.1) | (1.1) | (1.1) | 1.5% | 100.0% |
| Investments | 26.3 | 33.4 | 32.6 | 32.4 | 7.2% | 16.6% | 30.1 | 26.3 | 27.5 | -5.3% | 22.2% |
| Loans | 5.7 | 15.9 | 11.4 | 3.8 | -12.8% | 4.5% | - | - | - | -100.0% | 0.7% |
| Receivables and prepayments | 4.3 | 4.1 | 4.8 | 4.1 | -1.4% | 2.3% | 4.1 | 4.1 | 4.3 | 1.5% | 3.2% |
| Cash and cash equivalents | 126.7 | 169.2 | 147.5 | 86.9 | -11.8% | 67.9% | 76.9 | 71.9 | 75.1 | -4.7% | 59.4% |
| Total assets | 177.1 | 241.3 | 209.5 | 145.8 | -6.3% | 100.0% | 129.8 | 121.0 | 126.4 | -4.7% | 100.0% |
| Accumulated surplus/(deficit) | 62.9 | 97.5 | 66.2 | 82.4 | 9.4% | 41.0% | 76.3 | 72.5 | 75.8 | -2.7% | 58.8% |
| Capital reserve fund | 88.3 | 81.1 | 88.4 | 41.1 | -22.5% | 38.5% | 31.1 | 26.1 | 27.3 | -12.8% | 23.8% |
| Finance lease | 0.1 | 0.2 | 0.3 | 0.5 | 58.3% | 0.2% | 0.5 | 0.5 | 0.6 | 1.5% | 0.4% |
| Trade and other payables | 25.8 | 61.8 | 53.9 | 21.4 | -6.0% | 20.2% | 21.4 | 21.4 | 22.4 | 1.5% | 16.7% |
| Derivatives financial instruments | - | 0.6 | 0.7 | 0.3 | - | 0.2% | 0.3 | 0.3 | 0.4 | 1.5% | 0.3% |
| Total equity and liabilities | 177.1 | 241.3 | 209.5 | 145.8 | -6.3% | 100.0% | 129.8 | 121.0 | 126.4 | -4.7% | 100.0% |

Personnel information**Table 35.38 Technology Innovation Agency personnel numbers and cost by salary level**

| Number of posts estimated for 31 March 2020 | | Number and cost ¹ of personnel posts filled/planned for on funded establishment | | | | | | | | | | | | | | Number | | | | |
|---|---|--|------|-----------|------------------|------|-----------|----------------------------------|------|-----------|---------|------|-----------|---------|------|-----------|-------------------------|---------------------------------|-------------------|--|
| Number of funded posts | Number of posts on approved establishment | Actual | | | Revised estimate | | | Medium-term expenditure estimate | | | | | | | | | Average growth rate (%) | Average: Salary level/Total (%) | | |
| | | 2019/20 | | | 2020/21 | | | 2021/22 | | | 2022/23 | | | 2023/24 | | | | | 2020/21 - 2023/24 | |
| | | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | Number | Cost | Unit cost | | | | |
| Technology Innovation Agency | | 183 | 148 | 109.0 | 0.7 | 155 | 109.3 | 0.7 | 155 | 109.3 | 0.7 | 147 | 110.0 | 0.7 | 147 | 110.0 | 0.7 | 0.2% | 100.0% | |
| Salary level | | | | | | | | | | | | | | | | | | | | |
| 1-6 | 2 261 | 13 | 14 | 2.4 | 0.2 | 14 | 2.2 | 0.2 | 14 | 2.2 | 0.2 | 14 | 2.2 | 0.2 | 14 | 2.2 | 0.2 | 0.1% | 2.0% | |
| 7-10 | 35 831 | 73 | 76 | 41.4 | 0.5 | 73 | 36.9 | 0.5 | 73 | 36.9 | 0.5 | 73 | 37.1 | 0.5 | 73 | 37.1 | 0.5 | 0.2% | 33.7% | |
| 11-12 | 39 601 | 49 | 30 | 23.7 | 0.8 | 36 | 29.0 | 0.8 | 36 | 29.0 | 0.8 | 30 | 29.2 | 1.0 | 30 | 29.2 | 1.0 | 0.2% | 26.5% | |
| 13-16 | 60 657 | 45 | 25 | 31.7 | 1.3 | 30 | 36.9 | 1.2 | 30 | 36.9 | 1.2 | 28 | 37.1 | 1.3 | 28 | 37.1 | 1.3 | 0.2% | 33.7% | |
| 17-22 | 8 559 | 3 | 3 | 9.8 | 3.3 | 2 | 4.4 | 2.2 | 2 | 4.4 | 2.2 | 2 | 4.4 | 2.2 | 2 | 4.4 | 2.2 | 0.2% | 4.0% | |

1. Rand million.

