

# BUDGET 2013



ESTIMATES OF NATIONAL EXPENDITURE

**VOTE 34: Science and Technology**



**national treasury**

Department:  
National Treasury  
**REPUBLIC OF SOUTH AFRICA**



# **Estimates of National Expenditure**

## **2013**

**National Treasury**

**Republic of South Africa**

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The Estimates of National Expenditure 2013 e-publications are compiled with the latest available information from departmental and other sources. Some of this information is unaudited or subject to revision.

The Estimates of National Expenditure e-publications for individual votes are available on [www.treasury.gov.za](http://www.treasury.gov.za).

Compared to the abridged version of the Estimates of National Expenditure, these publications contain more comprehensive coverage of goods and services, transfers and subsidies, and public entities. Additional tables are included containing information on the main and adjusted appropriation, with revised spending estimates for the current financial year, on skills training, conditional grants to provinces and municipalities, public private partnerships and information on donor funding. Expenditure information at the level of service delivery is also included, where appropriate.

# Foreword

The 2013 Budget is set within the context of a prolonged and slow economic recovery globally and domestically; arising as an overhang from the global financial crisis of 2008, domestic structural constraints and recent supply side disruptions emanating from the mining sector. The fiscal stance underpinning this year's Budget balances support for the economy in the short term with the objective of rebuilding fiscal space in the medium to long term. This approach is informed by a growing belief that some of the slowdown in growth and revenue is in fact structural. Accordingly, strong measures have been instituted to contain government's consumption expenditure.

The 2012 medium term budget policy statement (MTBPS) presented an expenditure framework that kept the budget baselines for the first two years of the 2013 medium term expenditure framework (MTEF) unchanged since their publication in February 2012. Spending agencies had been advised to reprioritise spending within their baseline allocations to accommodate new priorities or the expansion of existing programmes. However, in response to the cumulative effects of the slowdown in growth and revenue, government has appropriately decided to reduce aggregate spending by R10.4 billion relative to the 2013 MTEF announced in the 2012 MTBPS. In addition, R52.1 billion has been shifted from within institutional baselines for reprioritisation to key government priority programmes. All of this has been done in a manner that does not compromise the attainment of the priorities set out in the MTBPS.

In guiding departments on how to approach the 2013 Budget, the Ministers' Committee on the Budget stated: 'In response to difficult global economic circumstances, we have expanded government's contribution to the economy. ... Financing this expansion at the same time as declining government income has meant a significant increase in borrowing. Since 2008/09, our stock of debt has more than doubled, and with it, the cost of servicing our debt has also accelerated. Higher borrowing and interest costs have meant that fiscal space is being eroded and our economy will have to finance a relatively larger government interest bill for many years. This means less money will be available for other purposes.' (2012 Medium Term Expenditure Framework Guidelines)

Indeed, departments and spending agencies do have to learn to do more with less. In the period ahead, improvements in outcomes have to come from qualitative improvements in the use of available budgets and other inputs. All institutions need to increase their efficiency and effectiveness in terms of service delivery, particularly in relation to infrastructure development. The National Development Plan 2030 sets out the planning framework for improving delivery in the public sector. The National Development Plan is the first long term plan for South Africa. Future budgets will therefore facilitate stronger alignment of institutional planning with the National Development Plan.

With our well established budgeting processes and practices, we have a good basis for the changes we need to make into the future in order to continue to ensure fiscal sustainability, while simultaneously increasing government performance in line with the expectations of South Africans. In the 2012 Open Budget Index Survey, conducted independently by the International Budget Partnership, South Africa was rated second out of the 100 countries participating in this assessment of budget transparency. South Africans can be proud of the comprehensiveness of the budget information that is available and should strive to make good use of the information in discussions with government regarding its policies and practices.

The expenditure estimates on the votes are the product of extensive consultative processes of policy review at the technical and executive level, designed to ensure the efficient allocation of public funds. These took place under difficult economic circumstances. I am grateful to our colleagues in national departments and agencies for their partnership, contributions and advice, during both the budget process and the finalisation of this publication. Special appreciation goes out to the team at National Treasury, who worked tirelessly to produce a document, the substance and quality of which are a source of great pride.



**Lungisa Fuzile**  
**Director-General: National Treasury**



# Introduction

## The Estimates of National Expenditure publications

The Estimates of National Expenditure publications are important accountability documents, which set out the details in relation to planned expenditure and planned performance at the time of the tabling of the Budget. In pursuit of an ever-improving representation of information, many changes have been introduced in the 2013 ENE publications. In terms of the non-financial information, it is noted in these publications how vote activities are envisaged to align with the National Development Plan 2030 over the long term, and how they are contributing to government's 12 outcomes and other key service delivery goals. Performance information has been further emphasised and in the 2013 ENE publications forms an integral part of the discussion of the financial information in the expenditure trends section of every programme within each of the votes. The personnel information has also been disaggregated and moved to the programme level. This allows for a more holistic discussion of budget plans at the programme level and gives greater effect to South Africa's Programme Budgeting by function approach.

Essentially, performance, personnel and finances are discussed together in respect of the impact they have on the programme plans. The analyses of the average growth of different categories of personnel and expenditure over time, as well as the magnitude this represents relative to the total, are now shown in the publication tables. This makes the narrative in the text less cluttered and more specifically focused on performance and related discussions. Expenditure information is in addition now shown for selected subprogrammes by economic classification, together with tables showing personnel numbers according to salary level for these subprogrammes. Progress made on the implementation of key existing and new infrastructure projects is discussed with all infrastructure projects shown in an additional table.

The e-publications for individual votes contain more comprehensive coverage of goods and services, transfers and subsidies, and public entities. Additional tables are included containing information on: the main and adjusted appropriation, with revised spending estimates for the current financial year; training; conditional grants to provinces and municipalities; public private partnerships; and donor funding. Expenditure information at the level of service delivery is also included, where appropriate.

A consolidated account, summarising the Estimates of National Expenditure publication information across votes, is provided in the form of a narrative and summary tables in the Introduction chapter, which is included in the front pages of the abridged version of the Estimates of National Expenditure. A write-up containing the explanation of the information that is contained in each section of the publications has also been included in the abridged version of the Estimates of National Expenditure. Like the separate Estimates of National Expenditure e-publications for each vote, the abridged Estimates of National Expenditure publication is also available on [www.treasury.gov.za](http://www.treasury.gov.za).



# **Science and Technology**

**National Treasury  
Republic of South Africa**



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# Vote 34

## Science and Technology

### Budget summary

R million	2013/14				2014/15	2015/16
	Total to be appropriated	Current payments	Transfers and subsidies	Payments for capital assets	Total	Total
<b>MTEF allocation</b>						
Administration	268.2	254.4	11.6	2.2	291.0	309.2
Research, Development and Innovation	1 627.1	57.5	1 569.6	–	1 603.9	1 702.0
International Cooperation and Resources	148.4	61.6	86.8	–	157.2	164.4
Human Capital and Knowledge Systems	2 476.8	35.6	2 441.2	–	2 683.5	3 417.8
Socio Economic Partnerships	1 677.6	44.9	1 632.7	–	1 864.7	2 050.9
<b>Total expenditure estimates</b>	<b>6 198.2</b>	<b>454.1</b>	<b>5 741.9</b>	<b>2.2</b>	<b>6 600.2</b>	<b>7 644.3</b>
Executive authority	Minister of Science and Technology					
Accounting officer	Director General of Science and Technology					
Website address	<a href="http://www.dst.gov.za">www.dst.gov.za</a>					

*The Estimates of National Expenditure e-publications for individual votes are available on [www.treasury.gov.za](http://www.treasury.gov.za). These publications provide more comprehensive coverage of vote specific information, particularly about goods and services, transfers and subsidies, public entities, donor funding, public private partnerships, conditional grants to provinces and municipalities, expenditure on skills training, a revised spending estimate for the current financial year, and expenditure information at the level of service delivery, where appropriate.*

### Aim

*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 Technology executes its mandate through the implementation of the 1996 White Paper on Science and Technology, the national research and development strategy and the 10-year innovation plan. The plan aims to make science and technology a driving force in enhancing productivity, economic growth and socioeconomic development.

### Strategic goals

The department's strategic goals over the medium term are to:

- develop the innovation capacity of the national system of innovation in order to contribute to socioeconomic development
- enhance South Africa's capacity for generating knowledge to produce world class research outputs and turn some advanced findings into innovation products and processes
- develop appropriate human capital in the science, technology and innovation sector to meet the needs of society
- build world class infrastructure in the science, technology and innovation sectors to extend the frontiers of knowledge, train the next generation of researchers, and enable technology development and transfer as well as knowledge exchange
- position South Africa as a strategic international research and development and innovation partner and destination through the exchange of knowledge, capacity and resources between South Africa and its regional and other international partners, thus strengthening the national system of innovation.

## Programme purposes

### Programme 1: Administration

**Purpose:** Conduct the overall management of the department. Ensure that organisations funded by the department comply with good corporate governance and that their activities are aligned with the strategic focus of the national system of innovation. Monitor and evaluate the performance of the science councils.

### Programme 2: Research, Development and Innovation

**Purpose:** Facilitate knowledge generation and exploitation through research and development in the key priority areas of space science, bioeconomy and energy. Promote the expansion of South Africa's knowledge stock by stimulating the development of innovative and viable products and services, together with their commercialisation, where appropriate.

### Programme 3: International Cooperation and Resources

**Purpose:** Develop, promote and manage international relationships, opportunities and science and technology agreements that both strengthen the national system of innovation and enable an exchange of knowledge, capacity and resources between South Africa and its regional and international partners.

### Programme 4: Human Capital and Knowledge Systems

**Purpose:** Provide leadership to foster an innovative and competitive society with skilled human capital, superior knowledge and research infrastructure.

### Programme 5: Socio Economic Partnerships

**Purpose:** Enhance the growth and development priorities of government through targeted science and technology interventions and the development of strategic partnerships with other government departments, industry, research institutions and communities.

## Selected performance indicators

**Table 34.1 Science and Technology**

Indicator	Programme	Outcomes	Past			Current	Projections		
			2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
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	Socio Economic Partnerships	Outcome 5: A skilled and capable workforce to support an inclusive growth path	19	59	14	37 <sup>2</sup>	17	22	27
Total number of companies on a register of companies receiving technology assistance packages	Socio Economic Partnerships	Outcome 4: Decent employment through inclusive economic growth	24	24	24	50	72	130	160
Total number of postgraduate research students awarded bursaries, as reflected in the National Research Foundation's project reports	Human Capital and Knowledge Systems	Outcome 5: A skilled and capable workforce to support an inclusive growth path	5 131	5 644	7 083	6 100	8 933	8 856	12 920
Total number of researchers awarded research grants through National Research Foundation managed programmes, as reflected in the foundation project reports	Human Capital and Knowledge Systems		2 442	2 519	2 886	2 600	3 650	3 820	3 820

**Table 34.1 Science and Technology (continued)**

Indicator	Programme	Outcomes	Past			Current	Projections		
			2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Value of foreign science, technology and innovative funds secured for knowledge production, technology transfer, enhanced innovation and science, technology and innovative human capital development from international partners through agreed instruments per year	International Cooperation and Resources	Outcome 5: A skilled and capable workforce to support an inclusive growth path	R230m	R196.3m	R285m	R240m	R300m	R330m	R360m
Number of foreign participants per year (representing the links to global knowledge and science, technology and innovative networks) collaborating with South African participants in knowledge production, technology transfer, enhanced innovation, and human capital development as agreed with foreign partners	International Cooperation and Resources		- <sup>1</sup>	- <sup>1</sup>	3 460	800	3 985	4 095	4 485
Number of small and medium enterprises provided with technology support per year	Socio Economic Partnerships	Outcome 4: Decent employment through inclusive economic growth	1 594	1 791	1 918	1 928	2 300	3 000	3 800

1. The use of this indicator began in 2011/12, hence there is no data in these years.

2. The achievement of 37 reflects a combined contribution from programmes 2, 4 and 5 as per the commitment in the 2012 ENE.

## The national development plan

The national development plan considers science, technology and innovation key aspects of the South African developmental agenda, and their contribution informs the discussion throughout the plan. Science and technology are crucial to equitable economic growth because advances in these fields underpin economic advances, education, and improvements in health systems and all infrastructure. In order to realise the potential of technology as an engine of growth, investment needs to be made in scientific and technological education and the population empowered, through access to knowledge and skills, to use technology efficiently.

The department's alignment with the objectives of the plan is demonstrated particularly by the success of South Africa's recent bid to host the Square Kilometre Array radio telescope. It will be the most powerful telescope ever built and, significantly, the project promises to greatly enhance the country's scientific reputation, as well as providing a considerable number of jobs and opportunities.

The department will continue to align its strategies and plans with the priorities and key drivers of the national development plan and through ongoing investment focused on human capital development in various programmes, including financial support for research and development initiatives to improve education, training and innovation. The plan proposes the country should double the number of first rate scientists by 2030, which the department addresses through a number of its programmes.

The department will also provide economic infrastructure to enable technological innovation through platforms such as the provision of high speed broadband networks and the South African National Research Network. An additional focus of the department is on stimulating technology innovation within industry and small business through the department's business support programmes. Some of these initiatives include the research and development tax incentive programme, and technology assistance packages to small, medium and micro enterprises (SMMEs), and contributing to employment creation and economic growth. Research in the department contributes to industrial development opportunities in a variety of niche areas such as global change and earth systems sciences, advanced manufacturing, advanced metals as well as ICTs.

## Expenditure estimates

Table 34.2 Science and Technology

Programme	Audited outcome			Adjusted appropriation	Revised estimate	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12			2009/10 - 2012/13	2012/13	2013/14	2014/15	2015/16		
R million												
Administration	159.1	188.9	195.6	229.4	229.4	13.0%	4.4%	268.2	291.0	309.2	10.5%	4.3%
Research, Development and Innovation	1 141.4	802.8	854.9	1 142.8	1 142.8	0.0%	22.3%	1 627.1	1 603.9	1 702.0	14.2%	23.9%
International Cooperation and Resources	117.5	131.4	132.3	139.3	139.3	5.8%	3.0%	148.4	157.2	164.4	5.7%	2.4%
Human Capital and Knowledge Systems	1 591.4	1 754.1	1 956.3	2 064.7	2 064.7	9.1%	41.8%	2 476.8	2 683.5	3 417.8	18.3%	41.8%
Socio Economic Partnerships	1 174.6	1 174.7	1 264.4	1 423.4	1 423.4	6.6%	28.6%	1 677.6	1 864.7	2 050.9	12.9%	27.6%
<b>Total</b>	<b>4 183.9</b>	<b>4 051.9</b>	<b>4 403.5</b>	<b>4 999.6</b>	<b>4 999.6</b>	<b>6.1%</b>	<b>100.0%</b>	<b>6 198.2</b>	<b>6 600.2</b>	<b>7 644.3</b>	<b>15.2%</b>	<b>100.0%</b>
Change to 2012 Budget estimate				43.7	43.7			620.5	579.4	1 549.2		
<b>Economic classification</b>												
<b>Current payments</b>	<b>284.2</b>	<b>331.7</b>	<b>345.9</b>	<b>409.3</b>	<b>409.3</b>	<b>12.9%</b>	<b>7.8%</b>	<b>454.1</b>	<b>487.2</b>	<b>510.0</b>	<b>7.6%</b>	<b>7.3%</b>
Compensation of employees	167.5	190.6	207.2	247.6	247.6	13.9%	4.6%	260.7	283.8	301.0	6.7%	4.3%
Goods and services	116.8	140.7	138.3	161.7	161.7	11.5%	3.2%	193.3	203.4	209.0	8.9%	3.0%
of which:												
Administration fees	2.6	3.1	3.3	10.5	10.5	59.7%	0.1%	5.2	5.6	5.9	-17.6%	0.1%
Advertising	5.0	14.2	14.0	4.0	4.0	-7.5%	0.2%	13.7	14.9	16.1	59.5%	0.2%
Assets less than the capitalisation threshold	0.5	0.4	0.4	0.6	0.6	6.0%	0.0%	0.9	0.7	0.7	6.1%	0.0%
Audit cost: External	2.4	3.0	2.7	5.4	5.4	30.5%	0.1%	5.8	6.0	6.4	5.8%	0.1%
Bursaries: Employees	1.0	1.2	1.4	2.0	2.0	27.7%	0.0%	2.4	2.4	2.5	7.2%	0.0%
Catering: Departmental activities	1.7	1.4	1.2	2.3	2.3	11.3%	0.0%	2.6	2.6	2.7	4.7%	0.0%
Communication	8.4	8.0	6.2	8.5	8.5	0.5%	0.2%	9.3	9.8	10.0	5.6%	0.1%
Computer services	9.3	5.3	5.7	7.1	7.1	-8.7%	0.2%	7.5	8.1	8.5	6.3%	0.1%
Consultants and professional services: Business and advisory services	7.3	9.7	3.9	14.7	14.7	26.5%	0.2%	16.0	17.3	17.8	6.6%	0.3%
Consultants and professional services: Legal costs	0.2	1.9	0.3	1.1	1.1	78.5%	0.0%	1.2	1.2	0.8	-10.4%	0.0%
Contractors	6.2	6.7	4.9	7.2	7.2	4.9%	0.1%	11.6	13.4	12.8	21.2%	0.2%
Agency and support / outsourced services	19.3	16.6	24.8	14.9	14.9	-8.4%	0.4%	16.2	15.5	15.5	1.3%	0.2%
Entertainment	0.6	0.5	0.8	5.5	5.5	104.5%	0.0%	7.1	7.5	7.6	11.6%	0.1%
Inventory: Food and food supplies	-	-	0.1	-	-	-	0.0%	-	-	-	-	-
Inventory: Fuel, oil and gas	-	0.0	-	0.1	0.1	-	0.0%	0.1	0.1	0.1	6.5%	0.0%
Inventory: Materials and supplies	-	0.0	1.2	-	-	-	0.0%	-	-	-	-	-
Inventory: Other consumables	0.2	0.6	0.1	2.9	2.9	129.3%	0.0%	1.6	1.1	1.2	-26.3%	0.0%
Inventory: Stationery and printing	4.5	6.6	5.8	4.9	4.9	2.7%	0.1%	7.1	6.0	7.4	15.0%	0.1%
Operating leases	3.1	2.5	2.6	3.7	3.7	6.6%	0.1%	4.6	5.0	5.3	12.0%	0.1%
Property payments	1.6	3.4	2.9	5.0	5.0	46.0%	0.1%	5.9	6.2	6.6	10.1%	0.1%
Travel and subsistence	27.9	38.6	33.9	40.1	40.1	12.9%	0.8%	45.1	46.9	46.6	5.1%	0.7%
Training and development	5.8	2.8	4.2	4.7	4.7	-6.4%	0.1%	5.2	5.5	5.8	7.0%	0.1%
Operating payments	4.0	4.8	4.5	7.0	7.0	20.2%	0.1%	6.5	7.0	7.3	1.4%	0.1%
Venues and facilities	5.1	9.6	13.2	9.6	9.6	23.3%	0.2%	17.8	20.6	21.6	30.8%	0.3%
Rental and hiring	-	-	0.1	-	-	-	0.0%	-	-	-	-	-
Interest and rent on land	-	0.3	0.5	-	-	-	0.0%	-	-	-	-	-
<b>Transfers and subsidies</b>	<b>3 891.9</b>	<b>3 709.6</b>	<b>4 050.4</b>	<b>4 587.7</b>	<b>4 587.7</b>	<b>5.6%</b>	<b>92.1%</b>	<b>5 741.9</b>	<b>6 110.6</b>	<b>7 131.9</b>	<b>15.8%</b>	<b>92.6%</b>
Departmental agencies and accounts	2 318.3	2 243.1	2 599.3	3 063.4	3 063.4	9.7%	58.0%	4 174.9	4 463.4	5 401.1	20.8%	67.2%
Higher education institutions	113.4	173.2	151.1	-	-	-100.0%	2.5%	-	-	-	-	-
Public corporations and private enterprises	1 185.8	1 246.3	1 245.8	1 015.7	1 015.7	-5.0%	26.6%	1 034.2	1 082.8	1 136.7	3.8%	16.8%
Non-profit institutions	273.6	46.1	53.6	508.6	508.6	23.0%	5.0%	532.8	564.5	594.2	5.3%	8.6%
Households	0.7	1.0	0.6	-	-	-100.0%	0.0%	-	-	-	-	-
<b>Payments for capital assets</b>	<b>7.7</b>	<b>10.6</b>	<b>6.9</b>	<b>2.6</b>	<b>2.6</b>	<b>-30.5%</b>	<b>0.2%</b>	<b>2.2</b>	<b>2.3</b>	<b>2.4</b>	<b>-2.1%</b>	<b>0.0%</b>
Machinery and equipment	7.7	10.6	6.9	2.6	2.6	-30.5%	0.2%	2.2	2.3	2.4	-2.1%	0.0%
<b>Payments for financial assets</b>	<b>0.1</b>	<b>0.0</b>	<b>0.2</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	<b>0.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>4 183.9</b>	<b>4 051.9</b>	<b>4 403.5</b>	<b>4 999.6</b>	<b>4 999.6</b>	<b>6.1%</b>	<b>100.0%</b>	<b>6 198.2</b>	<b>6 600.2</b>	<b>7 644.3</b>	<b>15.2%</b>	<b>100.0%</b>

## Personnel information

**Table 34.3 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>**

Post status as at 30 September 2012		Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment												Number					
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate <sup>3</sup>			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)				
		2011/12			2012/13			2013/14		2014/15		2015/16				2012/13 - 2015/16			
		Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost						
<b>Science and Technology</b>																			
Salary level	470	-	409	207.2	0.5	413	247.6	0.6	470	260.7	0.6	470	283.8	0.6	470	301.0	0.6	4.4%	100.0%
1 – 6	61	-	48	5.6	0.1	51	11.4	0.2	61	11.5	0.2	61	12.3	0.2	61	12.7	0.2	6.1%	12.8%
7 – 10	146	-	122	36.8	0.3	121	48.6	0.4	146	50.2	0.3	146	54.3	0.4	146	56.6	0.4	6.5%	30.7%
11 – 12	156	-	136	70.7	0.5	137	84.8	0.6	156	89.6	0.6	156	98.7	0.6	156	103.1	0.7	4.4%	33.2%
13 – 16	107	-	103	94.0	0.9	104	102.7	1.0	107	109.3	1.0	107	118.6	1.1	107	128.5	1.2	1.0%	23.3%

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

2. Rand million.

3. As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term will be on funding the development of human capital and the generation and exploration of knowledge, investing in research and development infrastructure, and encouraging South African innovation by funding marketable products emerging from research and incubation. Thus the bulk of the department's budget is spent on transfers and subsidies, such as the transfer to the National Research Foundation through the *Human Capital and Knowledge Systems* programme. The National Research Foundation uses the funds for the upkeep of national research facilities and to provide bursaries for postgraduate students in the field of science and technology to provide the skills development needed to create a knowledge economy.

The department was allocated R59 million in the 2012 budget from the economic competitiveness and support package in aid of the internship programme and research into satellite development, titanium and nanotechnology.

The 2013 Budget sets out additional funding of R3.1 billion over the medium term to the department as follows:

- R1.1 billion for the Square Kilometre Array project through the *Research, Development and Innovation* programme
- R400 million for human capital development and R605 million for the modernisation of research infrastructure through the *Human Capital and Knowledge Systems* programme
- R910 million from the economic competitiveness and support package in aid of the National Intellectual Property Management Office, technology stations and the industry innovation partnership fund
- R125 million for improved conditions of service in the department and its public entities.

The department has reprioritised R160 million over the medium term from the line function programmes, mainly in spending on goods and services, to centralise all communication related activities within the *Administration* programme and increase transfers to non-profit institutions for science research. R30.5 million has been reprioritised to the South African National Space Agency, R11.1 million to global science and R3 million for spending on goods and services in the *Human Capital and Knowledge Systems* programme.

The department has a funded establishment of 470 posts, 57 of which were vacant as at 30 September 2012. The vacancies were mostly in the *Administration* programme, were a result of natural attrition and are in the process of being filled. The ratio of support staff to line function staff is 1:6.

The department will spend R45 million of its total allocation in 2013/14 on consultants to support critical skills and to provide technical expertise. Spending on consultants is expected to increase over the medium term as a result of an anticipated increase in the scope and number of projects undertaken.

## Infrastructure spending

### *Mega project: Square Kilometre Array*

The Square Kilometre Array Organisation awarded a large portion of the final Square Kilometre Array project to South Africa and its 8 African partner countries. The construction of the Square Kilometre Array telescope is expected to begin in 2016/17. In the period leading up to the start of construction, South Africa will build the 64-dish antennae radio telescope, MeerKAT. The first MeerKAT antenna is scheduled for completion in 2013/14. The MeerKAT telescope and associated infrastructure are due for completion in 2016/17. R1.9 billion has been allocated over the medium term toward the Square Kilometre Array project, which includes MeerKAT.

### *Large project: Research and development infrastructure*

Over the medium term, R279.5 million has been allocated for infrastructure required to provide the scientific community with research and development facilities that are state of the art to ensure the country's global competitiveness in research, development and innovation. In 2012/13, the department adopted an infrastructure framework that identifies 5 research and development infrastructure categories: scientific equipment, specialised facilities, high end infrastructure, cyber infrastructure and global infrastructure. The department uses the framework to strategically disburse the infrastructure funding allocations over the MTEF period.

About 50 per cent of the funding over the MTEF period is allocated within the scientific equipment category for the National Research Foundation to implement the national equipment and nanotechnology programmes. Over the medium term, R36 million has been allocated within the high end infrastructure category for a lithium battery development laboratory, a titanium additive manufacturing laboratory and the development of a primary titanium pilot plant. Over the same period, R70 million has been committed within the specialised facilities category. More than a third of this was allocated to the critical infrastructure needs of the National Research Foundation's national facilities.

Since 2009/10, the department has invested R1 billion towards the establishment of the cluster of individual cyber infrastructure components, namely the South African National Research Network and the Centre for High Performance Computing. In 2012/13, R99 million was allocated for South African National Research Network to continue the roll out of broadband connectivity to all universities, science councils and other research institutions. The major campuses of all universities were to be connected by 2012/13 and form part of a total of 138 connected research sites nationally. Part of the investment of R86 million to the Centre for High Performance Computing was used to upgrade infrastructure in October 2011, resulting in the centre being recognised in February 2012 as one of the top 500 supercomputers globally.

## Departmental receipts

**Table 34.4 Receipts**

R thousand	Audited outcome			Adjusted estimate	Revised estimate	Average growth rate (%)	Receipt/ total: Average (%)	Medium-term receipts estimate			Average growth rate (%)	Receipt/ total: Average (%)
	2009/10	2010/11	2011/12					2012/13	2009/10 - 2012/13	2013/14		
<b>Departmental receipts</b>	<b>1 585</b>	<b>468</b>	<b>1 365</b>	<b>1 008</b>	<b>1 200</b>	<b>-8.9%</b>	<b>100.0%</b>	<b>116</b>	<b>116</b>	<b>121</b>	<b>-53.5%</b>	<b>100.0%</b>
Sales of goods and services produced by department	30	35	56	83	46	15.3%	3.6%	28	28	29	-14.3%	8.4%
Other sales	30	35	56	83	46	15.3%	3.6%	28	28	29	-14.3%	8.4%
<i>of which:</i>												
Service rendered:	28	32	56	83	46	18.0%	3.5%	27	27	28	-15.3%	8.2%
Commission on insurance	2	3	-	-	-	-100.0%	0.1%	1	1	1	-	0.2%
Replacement of security cards												
Interest, dividends and rent on land	3	8	7	-	3	-	0.5%	8	8	8	38.7%	1.7%
Interest	3	8	7	-	1	-30.7%	0.4%	8	8	8	100.0%	1.6%
Rent on land	-	-	-	-	2	-	-	-	-	-	-100.0%	0.1%
Sales of capital assets	-	-	257	577	599	-	18.5%	-	-	-	-100.0%	38.6%
Transactions in financial assets and liabilities	1 552	425	1 045	348	552	-29.1%	77.4%	80	80	84	-46.6%	51.3%
<b>Total</b>	<b>1 585</b>	<b>468</b>	<b>1 365</b>	<b>1 008</b>	<b>1 200</b>	<b>-8.9%</b>	<b>100.0%</b>	<b>116</b>	<b>116</b>	<b>121</b>	<b>-53.5%</b>	<b>100.0%</b>

# Programme 1: Administration

## Expenditure estimates

Table 34.5 Administration

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2013/14	2014/15		
R thousand											
Ministry	3 192	3 303	3 453	3 669	4.8%	1.8%	3 853	4 065	4 252	5.0%	1.4%
Management	58 208	64 812	63 703	86 559	14.1%	35.4%	90 254	102 198	107 052	7.3%	35.2%
Corporate Services	90 285	113 204	119 666	126 594	11.9%	58.2%	160 882	170 737	183 277	13.1%	58.4%
Governance	5 772	5 425	5 858	8 411	13.4%	3.3%	8 755	9 281	9 708	4.9%	3.3%
Office Accommodation	1 665	2 114	2 876	4 196	36.1%	1.4%	4 414	4 679	4 894	5.3%	1.7%
<b>Total</b>	<b>159 122</b>	<b>188 858</b>	<b>195 556</b>	<b>229 429</b>	<b>13.0%</b>	<b>100.0%</b>	<b>268 158</b>	<b>290 960</b>	<b>309 183</b>	<b>10.5%</b>	<b>100.0%</b>
Change to 2012 Budget estimate				26 778			55 887	60 495	-		

### Economic classification

<b>Current payments</b>	<b>151 582</b>	<b>179 481</b>	<b>189 740</b>	<b>226 359</b>	<b>14.3%</b>	<b>96.7%</b>	<b>254 429</b>	<b>276 564</b>	<b>293 972</b>	<b>9.1%</b>	<b>95.8%</b>
Compensation of employees	82 637	94 254	102 916	120 896	13.5%	51.8%	123 222	137 041	147 437	6.8%	48.2%
Goods and services	68 945	85 016	86 543	105 463	15.2%	44.8%	131 207	139 523	146 535	11.6%	47.6%
of which:											
Administration fees	1 942	2 601	3 044	10 084	73.2%	2.3%	4 832	5 123	5 358	-19.0%	2.3%
Advertising	2 585	12 098	12 944	2 102	-6.7%	3.8%	12 553	13 706	14 831	91.8%	3.9%
Assets less than the capitalisation threshold	438	215	219	475	2.7%	0.2%	718	549	576	6.6%	0.2%
Audit cost: External	1 964	2 931	2 715	5 368	39.8%	1.7%	5 757	6 021	6 351	5.8%	2.1%
Bursaries: Employees	967	1 156	1 366	1 991	27.2%	0.7%	2 218	2 351	2 459	7.3%	0.8%
Catering: Departmental activities	751	677	595	1 202	17.0%	0.4%	1 315	1 394	1 459	6.7%	0.5%
Communication	4 758	4 485	3 198	5 070	2.1%	2.3%	5 528	5 860	6 130	6.5%	2.1%
Computer services	8 194	3 738	3 908	6 437	-7.7%	2.9%	6 777	7 403	7 744	6.4%	2.6%
Consultants and professional services: Business and advisory services	3 564	4 930	2 226	10 231	42.1%	2.7%	10 341	10 961	11 465	3.9%	3.9%
Consultants and professional services: Legal costs	189	234	147	626	49.1%	0.2%	698	740	774	7.3%	0.3%
Contractors	5 441	5 906	4 802	5 580	0.8%	2.8%	9 871	11 619	10 975	25.3%	3.5%
Agency and support / outsourced services	9 409	9 943	13 375	5 143	-18.2%	4.9%	7 362	7 804	8 163	16.6%	2.6%
Entertainment	247	241	148	523	28.4%	0.1%	563	597	525	0.1%	0.2%
Inventory: Food and food supplies	-	-	126	-	-	-	-	-	-	-	-
Inventory: Fuel, oil and gas	-	10	-	106	-	-	116	123	128	6.5%	-
Inventory: Materials and supplies	-	10	-	-	-	-	-	-	-	-	-
Inventory: Other consumables	220	538	90	2 664	129.6%	0.5%	1 288	835	874	-31.0%	0.5%
Inventory: Stationery and printing	2 480	4 648	4 436	3 146	8.3%	1.9%	4 498	3 682	4 990	16.6%	1.5%
Operating leases	2 200	1 743	755	2 554	5.1%	0.9%	3 305	3 496	3 731	13.5%	1.2%
Property payments	1 417	1 707	2 488	4 568	47.7%	1.3%	5 430	5 726	6 165	10.5%	2.0%
Travel and subsistence	11 617	17 413	16 467	23 137	25.8%	8.9%	24 254	25 032	25 745	3.6%	8.9%
Training and development	5 711	2 789	4 199	4 273	-9.2%	2.2%	4 761	5 047	5 279	7.3%	1.8%
Operating payments	3 277	3 779	3 227	5 505	18.9%	2.0%	4 902	5 207	5 463	-0.3%	1.9%
Venues and facilities	1 574	3 224	6 056	4 678	43.8%	2.0%	14 120	16 247	17 350	54.8%	4.8%
Rental and hiring	-	-	12	-	-	-	-	-	-	-	-
Interest and rent on land	-	211	281	-	-	0.1%	-	-	-	-	-
<b>Transfers and subsidies</b>	<b>1 005</b>	<b>1 425</b>	<b>1 036</b>	<b>1 000</b>	<b>-0.2%</b>	<b>0.6%</b>	<b>11 551</b>	<b>12 087</b>	<b>12 796</b>	<b>133.9%</b>	<b>3.4%</b>
Higher education institutions	135	80	264	-	-100.0%	0.1%	-	-	-	-	-
Public corporations and private enterprises	-	284	-	-	-	-	-	-	-	-	-
Non-profit institutions	418	636	698	1 000	33.7%	0.4%	11 551	12 087	12 796	133.9%	3.4%
Households	452	425	74	-	-100.0%	0.1%	-	-	-	-	-
<b>Payments for capital assets</b>	<b>6 458</b>	<b>7 940</b>	<b>4 780</b>	<b>2 070</b>	<b>-31.6%</b>	<b>2.7%</b>	<b>2 178</b>	<b>2 309</b>	<b>2 415</b>	<b>5.3%</b>	<b>0.8%</b>
Machinery and equipment	6 458	7 940	4 780	2 070	-31.6%	2.7%	2 178	2 309	2 415	5.3%	0.8%
<b>Payments for financial assets</b>	<b>77</b>	<b>12</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>159 122</b>	<b>188 858</b>	<b>195 556</b>	<b>229 429</b>	<b>13.0%</b>	<b>100.0%</b>	<b>268 158</b>	<b>290 960</b>	<b>309 183</b>	<b>10.5%</b>	<b>100.0%</b>
<b>Proportion of total programme expenditure to vote expenditure</b>	<b>3.8%</b>	<b>4.7%</b>	<b>4.4%</b>	<b>4.6%</b>			<b>4.3%</b>	<b>4.4%</b>	<b>4.0%</b>		

Table 34.5 Administration (continued)

R thousand	Audited outcome			Adjusted appropriation 2012/13	Average growth rate (%) 2009/10 - 2012/13	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2013/14	2014/15	2015/16		
<b>Details of transfers and subsidies</b>											
<b>Households</b>											
<b>Social benefits</b>											
<b>Current</b>	452	425	74	-	-100.0%	0.1%	-	-	-	-	-
Households	452	425	74	-	-100.0%	0.1%	-	-	-	-	-
<b>Non-profit institutions</b>											
<b>Current</b>	418	636	698	1 000	33.7%	0.4%	11 551	12 087	12 796	133.9%	3.4%
Institutional and programme support	418	636	698	1 000	33.7%	0.4%	11 551	12 087	12 796	133.9%	3.4%
<b>Public corporations and private enterprises</b>											
<b>Public corporations</b>											
<b>Other transfers to public corporations</b>											
<b>Current</b>	-	284	-	-	-	-	-	-	-	-	-
Institutional and programme support	-	284	-	-	-	-	-	-	-	-	-
<b>Higher education institutions</b>											
<b>Current</b>	135	80	264	-	-100.0%	0.1%	-	-	-	-	-
Institutional and programme support	135	80	264	-	-100.0%	0.1%	-	-	-	-	-

## Personnel information

Table 34.6 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>

Post status as at 30 September 2012		Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment												Number					
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate <sup>3</sup>			Medium-term expenditure estimate						Average growth rate (%) 2012/13 - 2015/16	Salary level/total: Average (%)				
		2011/12		2012/13		2013/14		2014/15		2015/16									
		Number	Unit Cost	Number	Unit Cost	Number	Unit Cost	Number	Unit Cost	Number	Unit Cost								
<b>Administration</b>																			
Salary level	259	-	218	102.9	0.5	221	120.9	0.5	259	123.2	0.5	259	137.0	0.5	259	147.4	0.6	5.4%	100.0%
1 - 6	45	-	35	2.7	0.1	35	7.7	0.2	45	7.7	0.2	45	8.4	0.2	45	8.7	0.2	8.7%	17.0%
7 - 10	102	-	79	22.7	0.3	81	32.1	0.4	102	31.7	0.3	102	34.8	0.3	102	36.3	0.4	8.0%	38.8%
11 - 12	69	-	57	28.5	0.5	58	31.9	0.6	69	33.9	0.5	69	39.1	0.6	69	40.7	0.6	6.0%	26.6%
13 - 16	43	-	47	49.0	1.0	47	49.2	1.0	43	49.9	1.2	43	54.8	1.3	43	61.8	1.4	-2.9%	17.6%

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

2. Rand million.

3. As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term will continue to be on the overall management of the department and providing centralised support services to ensure good corporate governance practices.

The increase in expenditure between 2009/10 to 2012/13 is attributed to the expansion of executive support in 2010/11, informed by normal operations, the procurement of a performance information management system in 2011/12, and the establishment of a ministerial public participation programme as required by government regulations for performance monitoring. This increase is also due to the ministerial committee commissioned to review the current science, technology and innovation landscape of South Africa in 2012/13. This accounts for the increased expenditure over this period in the *Management*, *Corporate Services*, *Governance* and *Office Accommodation* subprogrammes, and the increase over this period in expenditure on consultants, venues and facilities, and inventories.

Spending on travel and subsistence increased significantly between 2009/10 and 2012/13 because of the ministerial review having been conducted, as well as the National Advisory Council on Innovation having been housed in this programme, the result of which can also be observed in spending in the *Management* subprogramme.

Over the medium term, expenditure in the *Corporate Services* subprogramme is projected to increase following the centralisation of certain activities to this subprogramme in 2012/13. These include communication, asset management, information services, knowledge management, inventory and facilities management. The activities

were centralised to realise the benefits of strategic sourcing. In addition, funding for improved conditions of service contributed to the substantial increases in spending in this programme.

The programme has a funded establishment of 259 posts, 38 of which were vacant as at 30 September 2012. These vacancies were mostly as a result of natural attrition and are in the process of being filled. Between 2009/10 and 2012/13, expenditure on consultants increased due to the increased use of management advisory services. Spending on consultants is expected to increase to R31.4 million in 2015/16.

## Programme 2: Research, Development and Innovation

### Objectives

- Promote a knowledge based economy by:
  - supporting ongoing research development and the demonstration of technology centred solutions to increase economic competitiveness
  - increasing the number of research and development initiatives in biosciences, hydrogen and energy related fields from 6 in 2012/13 to 14 in 2015/16
  - completing 56 MeerKAT antennae by 2015/16
  - supporting a total of 12 technology solutions, proofs of concepts, pilots or demonstrators by 2015/16
  - supporting the development of 115 technology based products and/or processes by 2015/16
  - supporting 69 technology solutions that are applied in all markets, and 50 Technology Innovation Agency investments by 2015/16.
- Provide system based leadership and support to optimise the use of technology based solutions by:
  - developing 14 policy recommendations, briefs and directives by 2014/15
  - developing and publishing guidelines and practice notes by 2015/16 to enable the implementation of the intellectual property rights from the Publicly Financed Research and Development Act (2008)
  - supporting 12 offices of technology transfers by 2015/16.

### Subprogrammes

- *Space Science* focuses on creating the necessary strategic and institutional regimes for the development of a viable space programme and a functional Earth observation system. This entails providing strategic leadership on the Square Kilometre Array telescope, and addressing governance issues in relation to the international consortium. In 2012/13, R230.6 million was used for the Square Kilometre Array project and R96 million was transferred to the South African National Space Agency. In 2013/14, the Square Kilometre Array research and technology development demonstrator, MeerKAT, will produce its first of 4 antennae; and the development of the African Very Long Baseline Interferometry Network will be enhanced by the South Africa-Ghana partnership to set up a radio telescope in Ghana. This subprogramme had a staff complement of 7 in 2012/13.
- *Hydrogen and Energy* provides policy direction in long term and cross-cutting research, development and innovation in the energy sector. This entails playing a key role in developing a sustainable and globally competitive South African energy knowledge base and industry that will ensure broader socioeconomic benefits for the country from the global hydrogen economy. Bursaries are also funded through the National Research Foundation. The department describes its priority agenda in terms of grand challenges, of which energy is one. In 2012/13, R130.8 million was spent on transfers and subsidies for the energy grand challenge and the hydrogen strategy. Over the medium term, the focus will be on implementing the hydrogen strategy through the 3 established centres of competence to facilitate human capacity development, research and the commercialisation of companies. This subprogramme had a staff complement of 11 in 2012/13.
- *Biotechnology and Health* provides policy leadership for developing a world class bioeconomy in South Africa; and supports health interventions aimed at combating infectious diseases, such as HIV and AIDS, malaria and tuberculosis. This entails implementing innovation instruments that provide financial, intellectual property and innovation management support. In 2012/13, R104.6 million was used for health

innovation research, implementing the biotechnology strategy, and HIV and AIDS prevention and treatment technologies. Over the medium term, the focus will be on increasing the number and quality of South African developed products and services for the prevention and treatment of HIV and AIDS, malaria, tuberculosis, and some non-communicable diseases through the increased support for basic and applied research, leading to the potential development of new drugs, microbicides, vaccines and diagnostics. This subprogramme had a staff complement of 12 in 2012/13.

- *Innovation Planning and Instruments* drives strategic interventions and creates support instruments that enable the national system of innovation to translate a greater portion of its research and development and intellectual property into diversified products, services, spin-offs and new industries. This entails overseeing and governing the Technology Innovation Agency and the National Intellectual Property Management Office, which was established in 2011 as an interim office within the department to identify, disclose, protect, manage and commercialise intellectual property referred to it by a recipient of public research and development funds. In 2012/13, specific activities relating to these entities included reviewing the Technology Innovation Agency, and crafting a feasibility study in consultation with the treasury's technical assistance unit for the establishment of the National Intellectual Property Management Office as a special services delivery unit. This subprogramme had a staff complement of 15 in 2012/13.

## Expenditure estimates

**Table 34.7 Research, Development and Innovation**

Subprogramme	Audited outcome			Adjusted appropriation 2012/13	Average growth rate (%) 2009/10 - 2012/13	Expenditure/total: Average (%) 2009/10 - 2012/13	Medium-term expenditure estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%) 2012/13 - 2015/16
	2009/10	2010/11	2011/12				2013/14	2014/15	2015/16		
R thousand											
Space Science	575 166	88 607	130 780	373 593	-13.4%	29.6%	809 305	833 689	891 771	33.6%	47.9%
Hydrogen and Energy	146 755	130 844	145 641	146 012	-0.2%	14.4%	147 987	156 645	163 739	3.9%	10.1%
Biotechnology and Health	253 907	153 974	102 744	128 552	-20.3%	16.2%	130 399	136 524	142 694	3.5%	8.9%
Innovation Planning and Instruments	165 522	429 349	475 779	494 650	44.0%	39.7%	539 454	476 993	503 823	0.6%	33.2%
<b>Total</b>	<b>1 141 350</b>	<b>802 774</b>	<b>854 944</b>	<b>1 142 807</b>	<b>-</b>	<b>100.0%</b>	<b>1 627 145</b>	<b>1 603 851</b>	<b>1 702 027</b>	<b>14.2%</b>	<b>100.0%</b>
Change to 2012 Budget estimate				(13 565)			309 483	164 036	(100 000)		

### Economic classification

	2009/10	2010/11	2011/12	2012/13	2009/10 - 2012/13	2009/10 - 2012/13	2013/14	2014/15	2015/16	2012/13 - 2015/16	2012/13 - 2015/16
<b>Current payments</b>	<b>32 510</b>	<b>37 232</b>	<b>43 110</b>	<b>50 018</b>	<b>15.4%</b>	<b>4.1%</b>	<b>57 510</b>	<b>60 960</b>	<b>63 764</b>	<b>8.4%</b>	<b>3.8%</b>
Compensation of employees	17 136	21 156	25 227	32 617	23.9%	2.4%	35 280	39 036	40 832	7.8%	2.4%
Goods and services	15 374	16 036	17 835	17 401	4.2%	1.7%	22 230	21 924	22 932	9.6%	1.4%
of which:											
Administration fees	116	102	52	100	-4.8%	-	107	113	119	6.0%	-
Advertising	956	506	239	364	-27.5%	0.1%	365	387	405	3.6%	-
Assets less than the capitalisation threshold	17	156	108	94	76.8%	-	97	103	110	5.4%	-
Audit cost: External	450	79	-	-	-100.0%	-	-	-	-	-	-
Bursaries: Employees	-	-	-	22	-	-	22	23	24	2.9%	-
Catering: Departmental activities	181	247	105	179	-0.4%	-	175	186	195	2.9%	-
Communication	789	801	839	519	-13.0%	0.1%	529	560	586	4.1%	-
Computer services	240	403	580	350	13.4%	-	360	381	400	4.6%	-
Consultants and professional services:	51	1 428	1 032	853	155.7%	0.1%	877	929	971	4.4%	0.1%
Business and advisory services											
Contractors	585	140	18	828	12.3%	-	843	894	936	4.2%	0.1%
Agency and support / outsourced services	5 798	3 067	6 171	5 335	-2.7%	0.5%	7 639	6 460	6 752	8.2%	0.4%
Entertainment	20	12	519	4 107	490.0%	0.1%	5 633	5 971	6 246	15.0%	0.4%
Inventory: Materials and supplies	-	-	23	-	-	-	-	-	-	-	-
Inventory: Other consumables	1	7	9	63	297.9%	-	64	68	69	3.1%	-
Inventory: Stationery and printing	430	690	513	413	-1.3%	0.1%	423	448	468	4.3%	-
Operating leases	195	416	673	257	9.6%	-	264	280	293	4.5%	-
Property payments	1	1 542	123	-	-100.0%	-	-	-	-	-	-
Travel and subsistence	4 408	4 555	4 587	2 903	-13.0%	0.4%	3 799	4 027	4 212	13.2%	0.2%
Training and development	56	-	-	456	101.2%	-	468	496	519	4.4%	-
Operating payments	442	320	409	273	-14.8%	-	273	289	303	3.5%	-
Venues and facilities	638	1 565	1 768	285	-23.6%	0.1%	292	309	324	4.4%	-
Rental and hiring	-	-	67	-	-	-	-	-	-	-	-
Interest and rent on land	-	40	48	-	-	-	-	-	-	-	-

Table 34.7 Research, Development and Innovation (continued)

Economic classification	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
<b>Transfers and subsidies</b>	<b>1 108 500</b>	<b>763 848</b>	<b>811 139</b>	<b>1 092 558</b>	<b>-0.5%</b>	<b>95.8%</b>	<b>1 569 635</b>	<b>1 542 891</b>	<b>1 638 263</b>	<b>14.5%</b>	<b>96.2%</b>
Departmental agencies and accounts	748 945	513 549	640 282	914 221	6.9%	71.5%	1 389 354	1 351 852	1 438 545	16.3%	83.8%
Higher education institutions	82 853	124 774	105 064	-	-100.0%	7.9%	-	-	-	-	-
Public corporations and private enterprises	103 423	124 754	60 096	-	-100.0%	7.3%	-	-	-	-	-
Non-profit institutions	173 279	759	5 697	178 337	1.0%	9.1%	180 281	191 039	199 718	3.8%	12.3%
Households	-	12	-	-	-	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>340</b>	<b>1 688</b>	<b>695</b>	<b>231</b>	<b>-12.1%</b>	<b>0.1%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>
Machinery and equipment	340	1 688	695	231	-12.1%	0.1%	-	-	-	-100.0%	-
<b>Payments for financial assets</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>1 141 350</b>	<b>802 774</b>	<b>854 944</b>	<b>1 142 807</b>	<b>-</b>	<b>100.0%</b>	<b>1 627 145</b>	<b>1 603 851</b>	<b>1 702 027</b>	<b>14.2%</b>	<b>100.0%</b>
<b>Proportion of total programme expenditure to vote expenditure</b>	<b>27.3%</b>	<b>19.8%</b>	<b>19.4%</b>	<b>22.9%</b>			<b>26.3%</b>	<b>24.3%</b>	<b>22.3%</b>		

## Details of transfers and subsidies

Departmental agencies and accounts											
Departmental agencies (non-business entities)											
Current	256 720	513 549	640 282	695 483	39.4%	53.4%	761 247	704 059	737 463	2.0%	47.7%
Biofuels	-	5 000	5 000	-	-	0.3%	-	-	-	-	-
Biotechnology strategy	50 383	15 840	19 450	-	-100.0%	2.2%	-	-	-	-	-
Energy grand challenge	500	200	11 803	45 440	349.6%	1.5%	41 728	44 011	45 925	0.4%	2.9%
Health innovation	15 978	12 386	28 529	-	-100.0%	1.4%	-	-	-	-	-
HIV and AIDS prevention and treatment technologies	-	18 206	4 298	20 263	-	1.1%	21 317	22 596	23 635	5.3%	1.4%
Innovation projects	7 000	5 462	2 983	19 187	39.9%	0.9%	37 019	43 640	44 957	32.8%	2.4%
Innovation fund	149 229	-	-	-	-100.0%	3.8%	-	-	-	-	-
International Centre for Generic Engineering and Biotechnology	9 930	9 900	-	10 395	1.5%	0.8%	10 936	11 592	12 125	5.3%	0.7%
Space science	-	6 104	-	36 000	-	1.1%	45 000	40 000	37 466	1.3%	2.6%
Square Kilometre Array	12 000	12 624	10 787	11 842	-0.4%	1.2%	12 458	13 205	13 812	5.3%	0.8%
Technology Innovation Agency	-	410 628	433 816	456 325	-	33.0%	481 081	410 717	435 188	-1.6%	29.4%
South African National Space Agency	-	-	106 719	96 031	-	5.1%	111 708	118 298	124 355	9.0%	7.4%
Hydrogen strategy	11 700	17 199	16 897	-	-100.0%	1.2%	-	-	-	-	-
<b>Capital</b>	<b>492 225</b>	<b>-</b>	<b>-</b>	<b>218 738</b>	<b>-23.7%</b>	<b>18.0%</b>	<b>628 107</b>	<b>647 793</b>	<b>701 082</b>	<b>47.4%</b>	<b>36.1%</b>
Space science	1 932	-	-	-	-100.0%	-	-	-	-	-	-
Square Kilometre Array	490 293	-	-	218 738	-23.6%	18.0%	628 107	647 793	701 082	47.4%	36.1%
Households											
Social benefits											
<b>Current</b>	<b>-</b>	<b>12</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Households	-	12	-	-	-	-	-	-	-	-	-
Non-profit institutions											
<b>Current</b>	<b>173 279</b>	<b>759</b>	<b>5 697</b>	<b>123 839</b>	<b>-10.6%</b>	<b>7.7%</b>	<b>122 949</b>	<b>130 267</b>	<b>136 150</b>	<b>3.2%</b>	<b>8.4%</b>
Biofuels	5 000	-	-	5 565	3.6%	0.3%	5 854	6 205	6 490	5.3%	0.4%
Biotechnology strategy	123 946	-	-	42 758	-29.9%	4.2%	37 728	39 944	41 672	-0.9%	2.7%
Energy grand challenge	5 000	-	2 500	-	-100.0%	0.2%	-	-	-	-	-
Health innovation	17 570	-	2 800	41 635	33.3%	1.6%	43 725	46 337	48 469	5.2%	3.0%
HIV and AIDS prevention and treatment technologies	17 228	-	-	-	-100.0%	0.4%	-	-	-	-	-
Innovation projects	3 000	-	197	-	-100.0%	0.1%	-	-	-	-	-
Space science	735	759	-	-	-100.0%	-	-	-	-	-	-
Technology top 100	-	-	-	3 007	-	0.1%	3 163	3 353	3 507	5.3%	0.2%
Hydrogen strategy	800	-	200	30 874	237.9%	0.8%	32 479	34 428	36 012	5.3%	2.2%
<b>Capital</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>54 498</b>	<b>-</b>	<b>1.4%</b>	<b>57 332</b>	<b>60 772</b>	<b>63 568</b>	<b>5.3%</b>	<b>3.9%</b>
Hydrogen strategy	-	-	-	54 498	-	1.4%	57 332	60 772	63 568	5.3%	3.9%
Public corporations and private enterprises											
Private enterprises											
Other transfers to private enterprises											
<b>Current</b>	<b>-</b>	<b>-</b>	<b>10 592</b>	<b>-</b>	<b>-</b>	<b>0.3%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Innovation projects	-	-	5 298	-	-	0.1%	-	-	-	-	-
For Technology top 100	-	-	5 294	-	-	0.1%	-	-	-	-	-

Table 34.7 Research, Development and Innovation (continued)

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
<b>Details of transfers and subsidies</b>											
<b>Public corporations and private enterprises</b>											
<b>Public corporations</b>											
<b>Other transfers to public corporations</b>											
<b>Current</b>	69 423	89 322	49 504	-	-100.0%	5.3%	-	-	-	-	-
Biofuels	-	-	300	-	-	-	-	-	-	-	-
Biotechnology strategy	1 699	18 164	5 350	-	-100.0%	0.6%	-	-	-	-	-
Energy grand challenge	34 000	23 000	12 503	-	-100.0%	1.8%	-	-	-	-	-
Health innovation	2 000	13 636	6 964	-	-100.0%	0.6%	-	-	-	-	-
HIV and AIDS prevention and treatment technologies	-	-	15 000	-	-	0.4%	-	-	-	-	-
Innovation projects	-	1 094	4 728	-	-	0.1%	-	-	-	-	-
Innovation fund	2 000	-	-	-	-100.0%	0.1%	-	-	-	-	-
Space science	23 127	21 628	-	-	-100.0%	1.1%	-	-	-	-	-
Hydrogen strategy	6 597	11 800	4 659	-	-100.0%	0.6%	-	-	-	-	-
<b>Capital</b>	34 000	35 432	-	-	-100.0%	1.8%	-	-	-	-	-
Space science	34 000	35 432	-	-	-100.0%	1.8%	-	-	-	-	-
<b>Higher education institutions</b>											
<b>Current</b>	38 624	85 775	53 164	-	-100.0%	4.5%	-	-	-	-	-
Biofuels	-	-	-	-	-	-	-	-	-	-	-
Biotechnology strategy	3 976	41 980	10 590	-	-100.0%	1.4%	-	-	-	-	-
Energy grand challenge	328	18 758	21 821	-	-100.0%	1.0%	-	-	-	-	-
Health innovation	-	11 850	-	-	-	0.3%	-	-	-	-	-
Innovation projects	-	4 187	11 658	-	-	0.4%	-	-	-	-	-
Space science	2 477	-	-	-	-100.0%	0.1%	-	-	-	-	-
Square Kilometre Array	-	-	495	-	-	-	-	-	-	-	-
Hydrogen strategy	31 843	9 000	8 600	-	-100.0%	1.3%	-	-	-	-	-
<b>Capital</b>	44 229	38 999	51 900	-	-100.0%	3.4%	-	-	-	-	-
Hydrogen strategy	44 229	38 999	51 900	-	-100.0%	3.4%	-	-	-	-	-

## Personnel information

Table 34.8 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>

Post status as at 30 September 2012		Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment												Number					
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate <sup>3</sup>			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)				
		2011/12		Unit Cost	2012/13		Unit Cost	2013/14		2014/15		2015/16				2012/13 - 2015/16			
		Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost			
<b>Research, Development and Innovation</b>																			
<b>Salary level</b>	49	-	45	25.2	0.6	42	32.6	0.8	49	35.3	0.7	49	39.0	0.8	49	40.8	0.8	5.3%	100.0%
1-6	4	-	4	0.9	0.2	4	1.1	0.3	4	1.0	0.2	4	1.1	0.3	4	1.1	0.3	-	8.5%
7-10	7	-	7	1.9	0.3	6	2.7	0.4	7	2.6	0.4	7	2.9	0.4	7	3.0	0.4	5.3%	14.3%
11-12	20	-	20	9.8	0.5	18	13.1	0.7	20	13.6	0.7	20	15.1	0.8	20	15.8	0.8	3.6%	41.3%
13-16	18	-	14	12.7	0.9	14	15.8	1.1	18	18.0	1.0	18	20.0	1.1	18	20.9	1.2	8.7%	36.0%

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

2. Rand million.

3. As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term will continue to be on expanding the South African space agenda by expanding the reach of the South African National Space Agency. This will be done through the South Africa-Ghana partnership project, which aims to set up a radio telescope in Ghana; and by producing the first of the 4 MeerKAT antennae in 2013/14. The focus will also be on expanding the National Intellectual Property Management Office to drive intellectual property generation in South Africa.

Between 2009/10 and 2012/13, expenditure fluctuated due to the creation of the Technology Innovation Agency in 2010/11, the creation of the South African National Space Agency in 2011/12, and the increase in funding for the Square Kilometre Array bid project. Most of the expenditure in 2012/13 went towards the *Innovation*

*Planning and Instruments* subprogramme, largely in the form of transfers to the Technology Innovation Agency, which constituted 40 per cent of the programme's total budget. Other key spending areas over this period were on items related to the Square Kilometre Array and transfers to the South African National Space Agency.

Over the medium term, spending is expected to increase because of additional allocations of R300 million in 2013/14 and 2014/15 each and R540 million in 2015/16 for the Square Kilometre Array project. The increase is also due to further allocations of R10 million in 2013/14, R15 million in 2014/15 and R15 million in 2015/16 for the support of technology transfer offices of the National Intellectual Property Management Office. The increase is evident in transfers and subsidies to innovation projects. The expansion and rollout of the technology transfers office support is essential to the promotion of effective intellectual property generation and management.

The following amounts were reprioritised in 2012/13 from this programme to the *Administration* programme: R595 000 from the *Space Science* subprogramme, R1.9 million from the *Hydrogen and Energy* subprogramme, R1.4 million from the *Biotechnology and Health* subprogramme and R3.4 million from the *Innovation Planning and Instruments* subprogramme, mostly in spending on goods and services; and transfers to departmental agencies. These amounts will be carried forward over the medium term.

The transfer to the Technology Innovation Agency decreases by R100 million in 2014/15 due to Cabinet approved reductions.

Consultants are used in this programme to provide technical expertise that cannot be furnished by officials in the department. Spending on consultants is equivalent to 2.6 per cent of total spending on compensation of employees in 2013/14. The programme has a funded establishment of 49 posts, 7 of which were vacant as at 30 September 2012. These vacancies are mostly as a result of natural attrition and are in the process of being filled.

## **Programme 3: International Cooperation and Resources**

### **Objectives**

- Stimulate international technology transfer, knowledge production and enhanced innovation in research by securing R990 million in foreign science technology and innovation funds for science and technology based socioeconomic development in South Africa by 31 March 2016.
- Enhance knowledge production, technology transfer, research innovation, and science and technology human capital development by securing R253.3 million in South African and foreign funds by 31 March 2016.
- Increase access to global knowledge and science technology and innovation networks by exposing South African researchers to cooperation opportunities with 12 565 foreign participants by 31 March 2016.
- Promote the next generation of researchers in the international scientific knowledge network to broaden the scope of research and create new knowledge and opportunities by increasing the number of postgraduate students participating in international cooperative science and technology, and human capital development research projects, in support of the national system of innovation, to 2 565 by 31 March 2016.

### **Subprogrammes**

- *Multilateral Cooperation and Africa* seeks to advance African bilateral and multilateral partnerships and global multilateral science, technology and innovation organisations so as to strengthen the national system of innovation and achieve shared economic and social development in the Southern African Development Community (SADC) region and the continent. In 2012/13, R33.6 million was transferred to the Africa Institute of South Africa for the entity's operational expenditure. This subprogramme had a staff complement of 19 in 2012/13.
- *International Resources* works to increase the flow of international resources by creating conditions for access to international science, technology and innovation skills and global projects. This entails promoting the hosting of global research infrastructure in South Africa, the SADC region and the rest of Africa; and facilitating access to international research facilities to benefit researchers and students through the national

system of innovation. Activities in 2012/13 focused on outputs relating to the Square Kilometre Array, the European Organisation for Nuclear Research and the Joint Institute for Nuclear Research. This subprogramme had a staff complement of 14 in 2012/13.

- *Overseas Bilateral Cooperation* promotes and facilitates collaborative activities and leverages off resources in support of the national system of innovation from countries outside Africa, with specific focus on accelerating the development of a knowledge driven economy. In 2013/14, a strategic partnership with Germany titled German-South African Year of Science will conclude; science and technology will form part of the French-South African culture seasons, and new phases of cooperation will be implemented with partners such as Norway and Switzerland. This subprogramme had a staff complement of 23 in 2012/13.

## Expenditure estimates

**Table 34.9 International Cooperation and Resources**

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	
	2009/10	2010/11	2011/12		2012/13	2009/10 - 2012/13	2013/14	2014/15	2015/16	2012/13 - 2015/16	Expenditure/total: Average (%)
R thousand											
Multilateral Cooperation and Africa	54 601	58 236	59 132	57 865	2.0%	44.2%	61 282	64 973	67 944	5.5%	41.4%
International Resources	39 238	39 853	42 610	50 934	9.1%	33.2%	51 948	54 983	57 494	4.1%	35.3%
Overseas Bilateral Cooperation	23 635	33 295	30 534	30 518	8.9%	22.7%	35 200	37 230	38 924	8.4%	23.3%
<b>Total</b>	<b>117 474</b>	<b>131 384</b>	<b>132 276</b>	<b>139 317</b>	<b>5.8%</b>	<b>100.0%</b>	<b>148 430</b>	<b>157 186</b>	<b>164 362</b>	<b>5.7%</b>	<b>100.0%</b>
Change to 2012 Budget estimate				(1 909)			(3 694)	(3 919)	-		
<b>Economic classification</b>											
<b>Current payments</b>	<b>41 596</b>	<b>51 118</b>	<b>48 222</b>	<b>59 915</b>	<b>12.9%</b>	<b>38.6%</b>	<b>61 640</b>	<b>65 095</b>	<b>64 102</b>	<b>2.3%</b>	<b>41.2%</b>
Compensation of employees	27 915	31 154	31 836	35 467	8.3%	24.3%	40 959	43 418	45 415	8.6%	27.1%
Goods and services	13 681	19 924	16 324	24 448	21.4%	14.3%	20 681	21 677	18 687	-8.6%	14.0%
of which:											
Administration fees	275	191	76	124	-23.3%	0.1%	129	137	144	5.1%	0.1%
Advertising	296	341	116	393	9.9%	0.2%	415	440	457	5.2%	0.3%
Assets less than the capitalisation threshold	9	29	29	45	71.0%	-	47	50	54	6.3%	-
Catering: Departmental activities	414	271	369	387	-2.2%	0.3%	409	432	351	-3.2%	0.3%
Communication	1 165	1 150	956	1 424	6.9%	0.9%	1 674	1 775	1 557	3.0%	1.1%
Computer services	313	425	354	138	-23.9%	0.2%	146	156	163	5.7%	0.1%
Consultants and professional services:											
Business and advisory services	2	143	158	219	378.4%	0.1%	231	245	256	5.3%	0.2%
Consultants and professional services:											
Legal costs	-	1 703	174	449	-	0.4%	474	502	-	-100.0%	0.2%
Contractors	2	25	74	476	519.7%	0.1%	502	532	557	5.4%	0.3%
Agency and support / outsourced services	923	794	684	4 042	63.6%	1.2%	789	755	64	-74.9%	0.9%
Entertainment	194	98	111	762	57.8%	0.2%	803	852	740	-1.0%	0.5%
Inventory: Materials and supplies	-	-	1 168	-	-	0.2%	-	-	-	-	-
Inventory: Other consumables	2	12	8	172	341.4%	-	183	195	204	5.9%	0.1%
Inventory: Stationery and printing	357	415	259	642	21.6%	0.3%	678	719	753	5.5%	0.5%
Operating leases	433	226	-	577	10.0%	0.2%	608	643	673	5.3%	0.4%
Property payments	180	157	250	405	31.0%	0.2%	427	453	474	5.4%	0.3%
Travel and subsistence	6 885	10 000	8 235	9 187	10.1%	6.6%	9 508	9 913	8 432	-2.8%	6.1%
Operating payments	215	317	821	898	61.0%	0.4%	945	1 003	1 050	5.4%	0.6%
Venues and facilities	2 016	3 627	2 471	4 108	26.8%	2.3%	2 713	2 875	2 758	-12.4%	2.0%
Rental and hiring	-	-	11	-	-	-	-	-	-	-	-
Interest and rent on land	-	40	62	-	-	-	-	-	-	-	-
<b>Transfers and subsidies</b>	<b>75 642</b>	<b>79 786</b>	<b>83 552</b>	<b>79 402</b>	<b>1.6%</b>	<b>61.2%</b>	<b>86 790</b>	<b>92 091</b>	<b>100 260</b>	<b>8.1%</b>	<b>58.8%</b>
Departmental agencies and accounts	42 793	50 868	52 278	33 643	-7.7%	34.5%	35 237	37 487	39 211	5.2%	23.9%
Higher education institutions	3 805	6 417	5 612	-	-100.0%	3.0%	-	-	-	-	-
Public corporations and private enterprises	26 938	18 235	22 545	-	-100.0%	13.0%	-	-	-	-	-
Non-profit institutions	2 106	4 251	2 886	45 759	179.0%	10.6%	51 553	54 604	61 049	10.1%	35.0%
Households	-	15	231	-	-	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>236</b>	<b>480</b>	<b>502</b>	<b>-</b>	<b>-100.0%</b>	<b>0.2%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Machinery and equipment	236	480	502	-	-100.0%	0.2%	-	-	-	-	-
<b>Total</b>	<b>117 474</b>	<b>131 384</b>	<b>132 276</b>	<b>139 317</b>	<b>5.8%</b>	<b>100.0%</b>	<b>148 430</b>	<b>157 186</b>	<b>164 362</b>	<b>5.7%</b>	<b>100.0%</b>
<b>Proportion of total programme expenditure to vote expenditure</b>	<b>2.8%</b>	<b>3.2%</b>	<b>3.0%</b>	<b>2.8%</b>			<b>2.4%</b>	<b>2.4%</b>	<b>2.2%</b>		

Table 34.9 International Cooperation and Resources (continued)

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)			
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14			2014/15	2015/16	2012/13 - 2015/16
<b>Details of transfers and subsidies</b>														
<b>Departmental agencies and accounts</b>														
<b>Departmental agencies (non-business entities)</b>														
<b>Current</b>	42 793	50 868	52 278	33 643	-7.7%	34.5%	35 237	37 487	39 211	5.2%	23.9%			
Africa Institute of South Africa	29 280	30 594	32 440	33 643	4.7%	24.2%	35 237	37 487	39 211	5.2%	23.9%			
Global science: Bilateral cooperation	7 734	9 500	11 500	-	-100.0%	5.5%	-	-	-	-	-			
Global science: International resources	3 329	4 686	3 138	-	-100.0%	2.1%	-	-	-	-	-			
Global science: African multilateral agreements	2 450	6 088	5 200	-	-100.0%	2.6%	-	-	-	-	-			
<b>Households</b>														
<b>Social benefits</b>														
<b>Current</b>	-	15	231	-	-	-	-	-	-	-	-			
Households	-	15	231	-	-	-	-	-	-	-	-			
<b>Non-profit institutions</b>														
<b>Current</b>	2 106	4 251	2 886	45 759	179.0%	10.6%	51 553	54 604	61 049	10.1%	35.0%			
Global science: Bilateral cooperation	-	-	-	11 600	-	2.2%	12 203	12 935	13 530	5.3%	8.3%			
Global science: International resources	1 706	4 143	2 886	26 759	150.3%	6.8%	31 650	33 549	39 025	13.4%	21.5%			
Global science: African multilateral agreements	400	108	-	7 400	164.5%	1.5%	7 700	8 120	8 494	4.7%	5.2%			
<b>Public corporations and private enterprises</b>														
<b>Private enterprises</b>														
<b>Other transfers to private enterprises</b>														
<b>Current</b>	-	-	508	-	-	0.1%	-	-	-	-	-			
Global science: International resources	-	-	508	-	-	0.1%	-	-	-	-	-			
<b>Public corporations and private enterprises</b>														
<b>Public corporations</b>														
<b>Other transfers to public corporations</b>														
<b>Current</b>	26 938	18 235	22 037	-	-100.0%	12.9%	-	-	-	-	-			
Gifts and donations	-	-	-	-	-	-	-	-	-	-	-			
Global science: Bilateral cooperation	1 266	1 700	1 500	-	-100.0%	0.9%	-	-	-	-	-			
Global science: International resources	20 672	11 527	16 937	-	-100.0%	9.4%	-	-	-	-	-			
Global science: African multilateral agreements	5 000	5 008	3 600	-	-100.0%	2.6%	-	-	-	-	-			
<b>Higher education institutions</b>														
<b>Current</b>	3 805	6 417	5 612	-	-100.0%	3.0%	-	-	-	-	-			
Global science: International resources	1 305	4 549	3 112	-	-100.0%	1.7%	-	-	-	-	-			
Global science: African multilateral agreements	2 500	1 868	2 500	-	-100.0%	1.3%	-	-	-	-	-			

## Personnel information

Table 34.10 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>

International Cooperation and Resources	Post status as at 30 September 2012		Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment															Number				
	Number of funded posts	Number of posts additional to the establishment	Actual						Revised estimate <sup>3</sup>						Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)
			2011/12			2012/13			2013/14			2014/15			2015/16			2012/13 - 2015/16				
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost					
Salary level 1-6	56	-	53	31.8	0.6	53	35.5	0.7	56	41.0	0.7	56	43.4	0.8	56	45.4	0.8	1.9%	100.0%			
7-10	22	-	22	8.6	0.4	20	9.4	0.5	22	11.0	0.5	22	11.5	0.5	22	11.9	0.5	3.2%	38.9%			
11-12	16	-	14	9.5	0.7	15	10.9	0.7	16	12.4	0.8	16	13.3	0.8	16	13.9	0.9	2.2%	28.5%			
13-16	16	-	15	13.3	0.9	16	14.6	0.9	16	17.0	1.1	16	18.0	1.1	16	18.9	1.2	-	29.0%			

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

<sup>2</sup> Rand million.

<sup>3</sup> As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term continues to be on managing the engagement with the European Union (EU) in pursuit of significant new financial support through the EU sector budget support and their research and innovation programmes; and managing bilateral relations and Africa-to-Africa engagements. Over this period, the bulk of spending goes towards transfers and subsidies to agencies and non-profit institutions. Transfers and subsidies constitute 59 per cent of the programme's total budget over the medium term.

Between 2009/10 and 2012/13, expenditure increased due to the maintenance of projects aimed at strengthening bilateral and multilateral cooperation and leveraging off international resources, specifically for transfers for global science in the *International Resources* and the *Multilateral Cooperation and Africa* subprogrammes.

In 2012/13, the following amounts were reprioritised from this programme to the *Administration* programme: R1.2 million from the *Multilateral Cooperation and Africa* subprogramme, R1.2 million from the *International Resources* subprogramme, and R1.2 million from the *Overseas Bilateral Cooperation* subprogramme. These amounts will be carried forward over the medium term.

The substantial increase in expenditure on consultants in 2012/13 was due to the outstanding arbitration for the regional initiative for the capacity development project as a result of an unsuccessful bid. Over the medium term, expenditure on consultants is expected to decrease once the arbitration has been completed.

The programme has a funded establishment of 56 posts, 3 of which were vacant as at 30 September 2012. These vacancies were mostly as a result of natural attrition and are in the process of being filled.

## Programme 4: Human Capital and Knowledge System

### Objectives

- Build and develop high level human capital capable of pursuing locally relevant, globally competitive enquiry and innovation activities by:
  - increasing the total number of postgraduate research students awarded bursaries, as reflected in National Research Foundation reports, from 8 933 in 2013/14 to 8 856 in 2014/15 and to 12 920 in 2015/16
  - increasing the total number of graduates and postgraduate students placed in department funded work programmes in science engineering technology institutions from 520 in 2013/14, to 840 in 2014/15 and 840 in 2015/16.
- Ensure access to internationally comparative research and innovation infrastructure to generate new knowledge and train new researchers by:
  - maintaining the number of research infrastructure grants awarded at 60 per year in 2013/14, 2014/15 and 2015/16
  - increasing the availability of bandwidth per South African National Research Network site from 2 200Mbps in 2013/14 to 3 200Mbps in 2014/15 and to 4 200Mbps in 2015/16.
- Promote and enhance research productivity through new knowledge and relevant training opportunities by:
  - increasing the total number of awarded research grants through National Research Foundation managed programmes from 3 650 in 2013/14 to 3 820 in 2014/15 and in 2015/16
  - increasing the number of Institute for Scientific Information accredited research articles published by National Research Foundation funded researchers from 4 100 in 2013/14 to 4 200 in 2014/15 and a further 4 200 in 2015/16.
- Promote public engagement in science, technology and innovation by increasing the total number of participants in science awareness and engagement programmes from 904 646 in 2013/14, to 942 160 in 2014/15, and to 979 000 in 2015/16.

### Subprogrammes

- *Human Capital and Science Platforms* conceptualises, formulates and implements programmes that address the availability of human capital for science, technology and innovation; produces new knowledge to build the country's knowledge resources; and interfaces positively with key institutions in the production of

science and technology knowledge and human resources for the national system of innovation. Focus areas include astronomy, archaeology and palaeontology. In 2012/13, R1.1 billion was transferred to the National Research Foundation as its core grant, the bulk of which was distributed as bursaries for postgraduate students. This subprogramme had a staff complement of 19 in 2012/13.

- *Indigenous Knowledge Systems* promotes the role of indigenous knowledge systems in national research and development programmes to strengthen their contribution to science, technology and innovation. This entails providing an appropriate regulatory and policy environment; and developing a national recordal system, an appropriate accreditation and certification system for indigenous knowledge holders, and a bioprospecting and product development platform for indigenous knowledge. Ongoing activities include: administering technology transfer projects for 3 farming communities (Tooseng in Limpopo, Atteridgeville in Gauteng and KwaMashu in KwaZulu-Natal); transferring 200 basic farming skills to create 500 farming jobs by 31 March 2016; and supporting 100 postgraduate students (masters and doctoral), who are expected to graduate by 31 March 2016. In 2013/14, 1 cosmeceutical product and 1 nutraceutical product will be commercialised. Over the medium term, work will be done on developing and introducing a bachelor's degree in indigenous knowledge systems aimed at establishing a cohort of young academics, developing African languages and incorporating indigenous knowledge systems in all facets of the curriculum. This subprogramme had a staff complement of 13 in 2012/13.
- *Emerging Research Areas and Infrastructure* facilitates the strategic implementation of research equipment and infrastructure to promote knowledge production in areas of national priority and to sustain research and development led innovation; and promotes the development of new and emerging research areas by supporting the requisite research and infrastructure capacity in these areas. In 2012/13, funding was provided to institutions and national programmes such as the South African National Research Network, (R130 million); the Centre for High Performance Computing (R86 million); the national nanotechnology innovation centres (R44.5 million); the national equipment programme; and programmes related to emerging research areas such as nanotechnology, photonics, robotics and synthetic biology as well as new research areas such as aptamers. This subprogramme had a staff complement of 10 in 2012/13.

## Expenditure estimates

**Table 34.11 Human Capital and Knowledge Systems**

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
Human Capital and Science Platforms	1 119 136	1 243 722	1 408 028	1 433 836	8.6%	70.7%	1 706 855	1 857 855	2 346 474	17.8%	69.0%
Indigenous Knowledge Systems	23 525	25 259	17 446	27 551	5.4%	1.3%	31 715	33 497	35 045	8.4%	1.2%
Emerging Research Areas and Infrastructure	448 696	485 163	530 860	603 286	10.4%	28.1%	738 251	792 185	1 036 317	19.8%	29.8%
<b>Total</b>	<b>1 591 357</b>	<b>1 754 144</b>	<b>1 956 334</b>	<b>2 064 673</b>	<b>9.1%</b>	<b>100.0%</b>	<b>2 476 821</b>	<b>2 683 537</b>	<b>3 417 836</b>	<b>18.3%</b>	<b>100.0%</b>
Change to 2012 Budget estimate				28 777			97 919	94 563	(200 000)		

### Economic classification

	25 689	29 633	28 331	30 013	5.3%	1.5%	35 596	36 506	38 225	8.4%	1.3%
<b>Current payments</b>											
Compensation of employees	18 112	19 369	20 565	24 647	10.8%	1.1%	25 596	26 506	27 725	4.0%	1.0%
Goods and services	7 577	10 251	7 725	5 366	-10.9%	0.4%	10 000	10 000	10 500	25.1%	0.3%
of which:											
Administration fees	168	92	62	38	-39.1%	-	53	104	115	44.6%	-
Advertising	638	518	266	33	-62.7%	-	59	35	37	3.9%	-
Assets less than the capitalisation threshold	18	4	22	2	-51.9%	-	2	2	2	-	-
Audit cost: External	-	-	-	-	-	-	40	-	-	-	-
Bursaries: Employees	-	-	-	-	-	-	186	-	-	-	-
Catering: Departmental activities	189	73	53	292	15.6%	-	423	339	356	6.8%	-
Communication	888	736	418	580	-13.2%	-	652	719	773	10.0%	-
Computer services	209	289	366	108	-19.8%	-	154	135	144	10.1%	-
Consultants and professional services: Business and advisory services	195	2 043	351	392	26.2%	-	673	692	697	21.1%	-
Consultants and professional services: Infrastructure and planning	-	-	-	-	-	-	4	-	-	-	-
Consultants and professional services: Laboratory services	-	-	-	-	-	-	22	-	-	-	-
Consultants and professional services: Legal costs	-	-	-	-	-	-	40	-	-	-	-

Table 34.11 Human Capital and Knowledge Systems (continued)

Economic classification	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
Contractors	189	259	3	184	-0.9%	-	271	202	211	4.7%	-
Agency and support / outsourced services	429	260	37	275	-13.8%	-	338	379	408	14.1%	-
Entertainment	164	102	21	23	-48.0%	-	25	24	26	4.2%	-
Inventory: Materials and supplies	-	-	1	-	-	-	-	-	-	-	-
Inventory: Other consumables	1	-	-	14	141.0%	-	15	16	17	6.7%	-
Inventory: Stationery and printing	1 055	739	245	421	-26.4%	-	1 254	899	948	31.1%	-
Operating leases	117	38	1 161	155	9.8%	-	180	330	350	31.2%	-
Travel and subsistence	2 581	3 854	2 169	2 390	-2.5%	0.1%	4 924	4 928	5 199	29.6%	0.2%
Operating payments	58	355	50	278	68.6%	-	368	418	435	16.1%	-
Venues and facilities	678	889	2 500	181	-35.6%	0.1%	317	778	782	62.9%	-
Interest and rent on land	-	13	41	-	-	-	-	-	-	-	-
<b>Transfers and subsidies</b>	<b>1 565 430</b>	<b>1 724 332</b>	<b>1 927 690</b>	<b>2 034 544</b>	<b>9.1%</b>	<b>98.4%</b>	<b>2 441 225</b>	<b>2 647 031</b>	<b>3 379 611</b>	<b>18.4%</b>	<b>98.7%</b>
Departmental agencies and accounts	1 237 027	1 341 912	1 509 605	1 621 105	9.4%	77.5%	2 049 911	2 232 010	2 945 726	22.0%	83.1%
Higher education institutions	18 524	34 688	27 965	-	-100.0%	1.1%	-	-	-	-	-
Public corporations and private enterprises	262 519	315 037	352 659	129 946	-20.9%	14.4%	101 943	108 252	113 279	-4.5%	4.3%
Non-profit institutions	47 110	32 401	37 261	283 493	81.9%	5.4%	289 371	306 769	320 606	4.2%	11.3%
Households	250	294	200	-	-100.0%	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>238</b>	<b>179</b>	<b>313</b>	<b>116</b>	<b>-21.3%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>
Machinery and equipment	238	179	313	116	-21.3%	-	-	-	-	-100.0%	-
<b>Total</b>	<b>1 591 357</b>	<b>1 754 144</b>	<b>1 956 334</b>	<b>2 064 673</b>	<b>9.1%</b>	<b>100.0%</b>	<b>2 476 821</b>	<b>2 683 537</b>	<b>3 417 836</b>	<b>18.3%</b>	<b>100.0%</b>
<b>Proportion of total programme expenditure to vote expenditure</b>	<b>38.0%</b>	<b>43.3%</b>	<b>44.4%</b>	<b>41.3%</b>			<b>40.0%</b>	<b>40.7%</b>	<b>44.7%</b>		

## Details of transfers and subsidies

<b>Households</b>											
<b>Other transfers to households</b>											
<b>Current</b>	<b>250</b>	<b>250</b>	<b>200</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Human resources development	-	-	125	-	-	-	-	-	-	-	-
Indigenous knowledge system	50	50	75	-	-100.0%	-	-	-	-	-	-
Science themes	50	-	-	-	-100.0%	-	-	-	-	-	-
Women in science	150	200	-	-	-100.0%	-	-	-	-	-	-
<b>Departmental agencies and accounts</b>											
<b>Departmental agencies (non-business entities)</b>											
<b>Current</b>	<b>1 076 659</b>	<b>1 191 040</b>	<b>1 357 946</b>	<b>1 341 598</b>	<b>7.6%</b>	<b>67.4%</b>	<b>1 607 071</b>	<b>1 753 653</b>	<b>2 236 832</b>	<b>18.6%</b>	<b>65.2%</b>
Emerging research areas	17 000	3 500	18 500	-	-100.0%	0.5%	-	-	-	-	-
Frontier science and technology	-	-	-	-	-	-	-	-	-	-	-
Human resources development	273 322	335 332	146 209	201 924	-9.6%	13.0%	410 585	479 418	901 318	64.7%	18.7%
Indigenous knowledge system	11 310	11 380	1 300	-	-100.0%	0.3%	-	-	-	-	-
Learnerships	4 466	-	-	-	-100.0%	0.1%	-	-	-	-	-
National Research Foundation	692 131	749 142	1 099 035	1 073 757	15.8%	49.1%	1 112 879	1 186 391	1 243 227	5.0%	43.4%
Science and youth	20 691	33 924	32 847	-	-100.0%	1.2%	-	-	-	-	-
Science themes	57 739	57 677	60 055	65 917	4.5%	3.3%	83 607	87 844	92 287	11.9%	3.1%
Women in science	-	85	-	-	-	-	-	-	-	-	-
<b>Capital</b>	<b>160 368</b>	<b>150 872</b>	<b>151 659</b>	<b>279 507</b>	<b>20.3%</b>	<b>10.1%</b>	<b>442 840</b>	<b>478 357</b>	<b>708 894</b>	<b>36.4%</b>	<b>17.9%</b>
Research and development infrastructure	160 368	150 872	151 659	279 507	20.3%	10.1%	442 840	478 357	708 894	36.4%	17.9%
<b>Households</b>											
<b>Social benefits</b>											
<b>Current</b>	<b>-</b>	<b>44</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Households	-	44	-	-	-	-	-	-	-	-	-
<b>Non-profit institutions</b>											
<b>Current</b>	<b>47 110</b>	<b>29 401</b>	<b>37 261</b>	<b>199 364</b>	<b>61.8%</b>	<b>4.3%</b>	<b>200 867</b>	<b>212 955</b>	<b>222 477</b>	<b>3.7%</b>	<b>7.9%</b>
Academy of Science of South Africa	9 893	10 554	13 952	13 584	11.1%	0.7%	20 744	21 577	22 991	19.2%	0.7%
Centre for High Performance Computing	-	-	-	1 939	-	-	1 935	1 979	2 071	2.2%	0.1%
Emerging research areas	-	5 925	3 000	58 179	-	0.9%	49 204	52 876	54 860	-1.9%	2.0%
Human resources development	5 592	3 710	7 926	-	-100.0%	0.2%	-	-	-	-	-
Indigenous knowledge system	10	99	800	19 160	1142.0%	0.3%	20 682	21 923	22 931	6.2%	0.8%
Learnerships	-	3 029	-	-	-	-	-	-	-	-	-
National nanotechnology centres	-	-	-	44 520	-	0.6%	45 835	48 645	50 429	4.2%	1.8%
Science and youth	30 434	4 231	9 918	61 982	26.8%	1.4%	62 467	65 955	69 195	3.7%	2.4%
Science themes	1 181	1 853	1 665	-	-100.0%	0.1%	-	-	-	-	-
<b>Capital</b>	<b>-</b>	<b>3 000</b>	<b>-</b>	<b>84 129</b>	<b>-</b>	<b>1.2%</b>	<b>88 504</b>	<b>93 814</b>	<b>98 129</b>	<b>5.3%</b>	<b>3.4%</b>
Centre for High Performance Computing	-	-	-	84 129	-	1.1%	88 504	93 814	98 129	5.3%	3.4%
Research and development infrastructure	-	3 000	-	-	-	-	-	-	-	-	-

Table 34.11 Human Capital and Knowledge Systems (continued)

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
<b>Details of transfers and subsidies</b>											
<b>Public corporations and private enterprises</b>											
<b>Private enterprises</b>											
<b>Other transfers to private enterprises</b>											
<b>Current</b>	2 500	270	8 000	-	-100.0%	0.1%	-	-	-	-	-
Technology top 100	2 500	270	-	-	-100.0%	-	-	-	-	-	-
Science and youth	-	-	8 000	-	-	0.1%	-	-	-	-	-
<b>Capital</b>	-	-	13 851	-	-	0.2%	-	-	-	-	-
Research and development infrastructure	-	-	13 851	-	-	0.2%	-	-	-	-	-
<b>Public corporations and private enterprises</b>											
<b>Public corporations</b>											
<b>Other transfers to public corporations</b>											
<b>Current</b>	101 355	57 565	37 571	-	-100.0%	2.7%	-	-	-	-	-
Centre for High Performance Computing	61 349	1 623	1 847	-	-100.0%	0.9%	-	-	-	-	-
Emerging research areas	30 399	35 500	28 545	-	-100.0%	1.3%	-	-	-	-	-
Human resources development	6 188	6 500	4 001	-	-100.0%	0.2%	-	-	-	-	-
Indigenous knowledge system	1 139	742	850	-	-100.0%	-	-	-	-	-	-
Learnerships	2 280	-	-	-	-100.0%	-	-	-	-	-	-
Science and youth	-	13 200	-	-	-	0.2%	-	-	-	-	-
Science themes	-	-	2 328	-	-	-	-	-	-	-	-
<b>Capital</b>	158 664	257 202	293 237	129 946	-6.4%	11.4%	101 943	108 252	113 279	-4.5%	4.3%
Centre for High Performance Computing	1 414	70 397	80 123	-	-100.0%	2.1%	-	-	-	-	-
National nanotechnology centres	34 905	38 337	42 400	-	-100.0%	1.6%	-	-	-	-	-
Research and development infrastructure	28 871	49 685	66 004	-	-100.0%	2.0%	-	-	-	-	-
South African National Research Network	93 474	98 783	104 710	129 946	11.6%	5.8%	101 943	108 252	113 279	-4.5%	4.3%
<b>Higher education institutions</b>											
<b>Current</b>	5 948	19 117	20 353	-	-100.0%	0.6%	-	-	-	-	-
Technology top 100	100	-	-	-	-100.0%	-	-	-	-	-	-
Emerging research areas	1 900	4 000	5 501	-	-100.0%	0.2%	-	-	-	-	-
Human resources development	78	7 087	590	-	-100.0%	0.1%	-	-	-	-	-
Indigenous knowledge system	3 420	4 701	5 701	-	-100.0%	0.2%	-	-	-	-	-
Science and youth	200	3 000	8 500	-	-100.0%	0.2%	-	-	-	-	-
Science themes	-	179	61	-	-	-	-	-	-	-	-
Women in science	250	150	-	-	-100.0%	-	-	-	-	-	-
<b>Capital</b>	12 576	15 571	7 612	-	-100.0%	0.5%	-	-	-	-	-
Research and development infrastructure	12 576	15 571	7 612	-	-100.0%	0.5%	-	-	-	-	-

## Personnel information

Table 34.12 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>

Post status as at 30 September 2012	Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment															Number			
	Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate <sup>3</sup>			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)			
			2011/12			2012/13			2013/14		2014/15		2015/16				2012/13 - 2015/16		
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost				Number	Cost
<b>Human Capital and Knowledge Systems</b>	42	-	39	20.6	0.5	40	24.6	0.6	42	25.6	0.6	42	26.5	0.6	42	27.7	0.7	1.6%	100.0%
<b>Salary level</b>																			
1-6	3	-	3	0.6	0.2	3	0.6	0.2	3	0.7	0.2	3	0.7	0.2	3	0.7	0.2	-	7.2%
7-10	5	-	6	1.3	0.2	6	1.3	0.2	5	1.5	0.3	5	1.6	0.3	5	1.7	0.3	-5.9%	12.7%
11-12	22	-	19	10.5	0.6	20	13.1	0.7	22	13.2	0.6	22	13.6	0.6	22	14.3	0.6	3.2%	51.8%
13-16	12	-	11	8.2	0.7	11	9.6	0.9	12	10.2	0.8	12	10.6	0.9	12	11.1	0.9	2.9%	28.3%

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

2. Rand million.

3. As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term will be on increasing the bursary amounts awarded to postgraduate students and attracting more students, especially in fields of astronomy, archaeology and palaeontology. The spending focus will also be on upgrading the national system of innovation infrastructure and equipment to

attract a high level of interest in research and development. This will be done through the additional funds received of R600 million in 2015/16 for postgraduate students, as well as the R605 million received over the MTEF period for science and technology infrastructure.

The main area of expenditure between 2009/10 and 2012/13 was on human capital development in terms of transfers to human resources development, mainly to support researchers and students pursuing postgraduate studies at honours, masters, doctoral and postdoctoral levels. These activities are managed by the National Research Foundation, which accounts for the increase in transfer payments between 2009/10 and 2012/13. Spending on research and development infrastructure and cyber infrastructure also increased, includes for the Centre for High Performance Computing and the South African National Research Network.

Over the medium term, expenditure is expected to increase significantly due to additional allocations of R120 million in 2013/14, R135 million in 2014/15 and R350 million in 2015/16 for the modernisation of infrastructure of the National Research Foundation and other science councils' infrastructure, and R400 million in 2015/16 for postgraduate student bursaries. The additional funding for the modernisation of research facilities will go towards renewing aging equipment and infrastructure, acquiring the necessary equipment to meet commitments and mandates, and maintaining and acquiring infrastructure to keep up with advancing technology. The additional funding for postgraduate students is to increase the bursary amounts to incentivise graduates to study further.

The following amounts were reprioritised in 2012/13 from this programme to the *Administration* programme, mostly from transfers to departmental agencies: R2.8 million from the *Human Capital and Science Platforms* subprogramme, R886 000 from the *Indigenous Knowledge Systems* subprogramme and R612 000 from the *Emerging Research Areas and Infrastructure* subprogramme. These amounts will be carried forward over the medium term.

Expenditure on consultants increased significantly in 2010/11. These consultants were appointed to support critical skills and provide technical expertise. The programme has a funded establishment of 42 posts, 2 of which were vacant as at 30 September 2012. These vacancies are mostly as a result of natural attrition and are in the process of being filled.

## **Programme 5: Socio Economic Partnerships**

### **Objectives**

- Inform and influence how science and technology can be used to transform and enhance rural and social economic development, government planning and service delivery, and the building of sustainable human settlements by:
  - creating, sustaining or improving 420 livelihood opportunities by 31 March 2016
  - publishing 7 knowledge products on technology led opportunities for sustainable livelihoods by 31 March 2016
  - publishing a knowledge product on innovations in water usage for government planning and service delivery improvement by 31 March 2016
  - maintaining 5 decision support interventions for technological decision making by 31 March 2016.
- Identify, grow and sustain a portfolio of niche high potential science technology and innovation capabilities for sustainable development and the greening of society and the economy by:
  - funding or co-funding 600 masters and PhD students by 31 March 2016
  - funding the development of 6 additional knowledge and innovation products (patents, prototypes, technology demonstrators and technology transfer packages) by 31 March 2016
  - supporting 185 scientific and technical papers for publication by 31 March 2016.
- Enhance understanding and analysis that supports improvements in the functioning and performance of the national system of innovation by publishing 16 reports and policy briefings by 31 March 2016.

- Identify, grow and sustain niche high potential research and development capabilities to improve the competitiveness of existing and emerging economic sectors and to facilitate the development of new targeted industries in aerospace, advanced manufacturing, chemicals, advanced metals and ICTs by:
  - funding or co-funding 782 masters and doctoral students in designated niche areas by 31 March 2016
  - funding or co-funding 460 interns in designated niche areas by 31 March 2016
  - funding or co-funding 60 knowledge and innovation products (patents, prototypes, technology demonstrators and technology transfer packages) to be added to the intellectual property portfolio by 31 March 2016
  - increasing the number of companies receiving a technology assistance package to 160 by 31 March 2016
  - providing technology support to 7 120 small and medium enterprises through a technology stations programme between 1 April 2013 and 31 March 2016.

## Subprogrammes

- Science and Technology for Economic Impact is discussed in more detail below.
- Science and Technology for Social Impact* leads and supports knowledge generation in human and social dynamics in development, promotes technology transfers for poverty reduction to support the creation of sustainable job and wealth opportunities, and contributes to creating sustainable human settlements in areas of deprivation. In 2012/13, the following transfers were made to fund initiatives that generate practical knowledge and insights, produce suitable policy evidence, introduce decision support tools and build capacities that facilitate a more widespread adoption of promising innovations and technology based solutions: R214 million to the Human Sciences Research Council, R58.5 million for research and development, and R35.6 million for initiatives that support technology for sustainable livelihoods. This subprogramme had a staff complement of 13 in 2012/13.
- Science and Technology Investment* leads and supports the development of science and technology indicators, monitors national science and technology expenditure and planning, leads the implementation of a web based tool to capture statistical information on research and development activities by public research institutions, and implements section 11D of the Income Tax Act (1962). This entails conducting an annual research and development survey, measuring innovation, developing science and technology indicators, developing databases and information systems such as the research information management system and national science and technology expenditure tables, and implementing section 11D of the act to promote private sector research and development investment. In 2012/13, R10 million was used for policy indicator activities, while R18 million was spent on research and development planning. This subprogramme had a staff complement of 15 in 2012/13.

## Expenditure estimates

**Table 34.13 Socio Economic Partnerships**

Subprogramme	Audited outcome			Adjusted appropriation	Average growth rate (%)		Medium-term expenditure estimate			Average growth rate (%)	
	2009/10	2010/11	2011/12		2009/10 - 2012/13	Average (%)	2013/14	2014/15	2015/16	2012/13 - 2015/16	
R thousand											
Science and Technology for Economic Impact	899 209	888 272	939 938	1 030 296	4.6%	74.6%	1 268 389	1 428 801	1 595 039	15.7%	75.9%
Science and Technology for Social Impact	264 910	254 274	293 564	357 951	10.6%	23.2%	384 566	407 514	426 336	6.0%	22.5%
Science and Technology Investment	10 435	32 196	30 860	35 137	49.9%	2.2%	24 646	28 341	29 537	-5.6%	1.7%
<b>Total</b>	<b>1 174 554</b>	<b>1 174 742</b>	<b>1 264 362</b>	<b>1 423 384</b>	<b>6.6%</b>	<b>100.0%</b>	<b>1 677 601</b>	<b>1 864 656</b>	<b>2 050 912</b>	<b>12.9%</b>	<b>100.0%</b>
Change to 2012 Budget estimate				3 599			160 935	264 192	-		
<b>Economic classification</b>	<b>32 868</b>	<b>34 234</b>	<b>36 514</b>	<b>43 010</b>	<b>9.4%</b>	<b>2.9%</b>	<b>44 899</b>	<b>48 118</b>	<b>49 897</b>	<b>5.1%</b>	<b>2.6%</b>
<b>Current payments</b>											
Compensation of employees	21 688	24 696	26 620	33 961	16.1%	2.1%	35 676	37 817	39 557	5.2%	2.1%
Goods and services	11 180	9 509	9 856	9 049	-6.8%	0.8%	9 223	10 301	10 340	4.5%	0.6%
of which:											
Administration fees	66	88	32	104	16.4%	-	103	112	116	3.7%	-
Advertising	519	714	471	1 063	27.0%	0.1%	301	324	333	-32.1%	-
Assets less than the capitalisation threshold	44	1	19	10	-39.0%	-	6	6	6	-15.7%	-
Catering: Departmental activities	142	88	92	255	21.5%	-	267	283	296	5.1%	-
Communication	784	852	772	913	5.2%	0.1%	869	933	975	2.2%	0.1%
Computer services	351	409	501	57	-45.4%	-	62	66	69	6.6%	-
Consultants and professional services: Business and advisory services	3 450	1 135	165	3 012	-4.4%	0.2%	3 875	4 438	4 417	13.6%	0.2%

Table 34.13 Socio Economic Partnerships (continued)

Economic classification	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
Contractors	30	374	6	135	65.1%	-	130	138	144	2.2%	-
Agency and support / outsourced services	2 783	2 498	4 520	59	-72.3%	0.2%	61	65	70	5.9%	-
Entertainment	15	10	12	61	59.6%	-	59	63	67	3.2%	-
Inventory: Other consumables	18	-	23	5	-34.8%	-	6	6	5	-	-
Inventory: Stationery and printing	197	104	384	272	11.4%	-	252	272	278	0.7%	-
Operating leases	149	90	-	200	10.3%	-	196	207	216	2.6%	-
Travel and subsistence	2 376	2 816	2 441	2 493	1.6%	0.2%	2 631	2 960	2 973	6.0%	0.2%
Operating payments	33	50	33	38	4.8%	-	34	36	39	0.9%	-
Venues and facilities	223	280	385	372	18.6%	-	371	392	336	-3.3%	-
Interest and rent on land	-	29	38	-	-	-	-	-	-	-	-
<b>Transfers and subsidies</b>	<b>1 141 296</b>	<b>1 140 191</b>	<b>1 227 009</b>	<b>1 380 216</b>	<b>6.5%</b>	<b>97.1%</b>	<b>1 632 702</b>	<b>1 816 538</b>	<b>2 001 015</b>	<b>13.2%</b>	<b>97.3%</b>
Departmental agencies and accounts	289 550	336 725	397 086	494 422	19.5%	30.1%	700 446	842 002	977 578	25.5%	43.0%
Higher education institutions	8 130	7 241	12 188	-	-100.0%	0.5%	-	-	-	-	-
Public corporations and private enterprises	792 953	787 970	810 507	885 794	3.8%	65.1%	932 256	974 536	1 023 437	4.9%	54.4%
Non-profit institutions	50 663	8 023	7 103	-	-100.0%	1.3%	-	-	-	-	-
Households	-	232	125	-	-	-	-	-	-	-	-
<b>Payments for capital assets</b>	<b>387</b>	<b>316</b>	<b>656</b>	<b>158</b>	<b>-25.8%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>
Machinery and equipment	387	316	656	158	-25.8%	-	-	-	-	-100.0%	-
<b>Payments for financial assets</b>	<b>3</b>	<b>1</b>	<b>183</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>1 174 554</b>	<b>1 174 742</b>	<b>1 264 362</b>	<b>1 423 384</b>	<b>6.6%</b>	<b>100.0%</b>	<b>1 677 601</b>	<b>1 864 656</b>	<b>2 050 912</b>	<b>12.9%</b>	<b>100.0%</b>
<b>Proportion of total programme expenditure to vote expenditure</b>	<b>28.1%</b>	<b>29.0%</b>	<b>28.7%</b>	<b>28.5%</b>			<b>27.1%</b>	<b>28.3%</b>	<b>26.8%</b>		

## Details of transfers and subsidies

<b>Households</b>											
<b>Other transfers to households</b>											
<b>Current</b>	-	200	125	-	-	-	-	-	-	-	-
Human and social development dynamics	-	200	125	-	-	-	-	-	-	-	-
<b>Departmental agencies and accounts</b>											
<b>Departmental agencies (non-business entities)</b>											
<b>Current</b>	<b>289 550</b>	<b>336 725</b>	<b>397 086</b>	<b>494 422</b>	<b>19.5%</b>	<b>30.1%</b>	<b>700 446</b>	<b>842 002</b>	<b>977 578</b>	<b>25.5%</b>	<b>43.0%</b>
Advanced manufacturing technology strategy	-	23 181	25 526	-	-	1.0%	-	-	-	-	-
Global change science and technology	15 617	12 148	25 775	63 853	59.9%	2.3%	67 586	71 315	74 595	5.3%	4.0%
Human and social development dynamics	3 013	26 006	17 059	10 297	50.6%	1.1%	11 298	9 976	10 435	0.4%	0.6%
Local manufacturing capacity	-	6 050	8 166	20 862	-	0.7%	101 947	113 264	224 334	120.7%	6.6%
Local systems of innovation	5 000	-	-	8 076	17.3%	0.3%	108 022	207 563	208 003	195.3%	7.6%
Natural resources and public assets	55 296	50 521	61 947	66 079	6.1%	4.6%	69 463	73 571	76 955	5.2%	4.1%
Quality of life nuclear technologies	3 765	660	660	-	-100.0%	0.1%	-	-	-	-	-
Resource based industries	1 666	500	-	-	-100.0%	-	-	-	-	-	-
Research information management system	-	13 870	10 606	14 055	-	0.8%	4 519	6 850	7 165	-20.1%	0.5%
Science and technology indicators	2 000	7 900	8 494	9 019	65.2%	0.5%	9 488	10 057	10 520	5.3%	0.6%
South African Research Chairs Initiative	21 349	-	19 414	60 385	41.4%	2.0%	74 045	78 488	82 098	10.8%	4.2%
Technology for poverty alleviation	-	596	2 192	27 619	-	0.6%	30 448	32 395	33 978	7.2%	1.8%
Technology for sustainable livelihoods	15 659	-	11 078	-	-100.0%	0.5%	-	-	-	-	-
Human Sciences Research Council	166 185	194 293	206 169	214 177	8.8%	15.5%	223 630	238 523	249 495	5.2%	13.2%
ICT	-	1 000	-	-	-	-	-	-	-	-	-
<b>Public corporations and private enterprises</b>											
<b>Public corporations</b>											
<b>Public corporations - subsidies on products and production</b>											
<b>Current</b>	<b>599 384</b>	<b>685 784</b>	<b>687 169</b>	<b>742 752</b>	<b>7.4%</b>	<b>53.9%</b>	<b>781 996</b>	<b>825 740</b>	<b>867 704</b>	<b>5.3%</b>	<b>45.9%</b>
Council for Scientific and Industrial Research	599 384	685 784	687 169	742 752	7.4%	53.9%	781 996	825 740	867 704	5.3%	45.9%
<b>Households</b>											
<b>Social benefits</b>											
<b>Current</b>	-	32	-	-	-	-	-	-	-	-	-
Households	-	32	-	-	-	-	-	-	-	-	-
<b>Non-profit institutions</b>											
<b>Current</b>	<b>50 663</b>	<b>8 023</b>	<b>7 103</b>	<b>-</b>	<b>-100.0%</b>	<b>1.3%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Advanced manufacturing technology strategy	-	-	80	-	-	-	-	-	-	-	-
Global change science and technology	-	1 000	-	-	-	-	-	-	-	-	-
Local manufacturing capacity	13 500	917	-	-	-100.0%	0.3%	-	-	-	-	-
Local systems of innovation	120	5 150	6 000	-	-100.0%	0.2%	-	-	-	-	-
Resource based industries	606	956	1 023	-	-100.0%	0.1%	-	-	-	-	-
Tshumisano trust	36 437	-	-	-	-100.0%	0.7%	-	-	-	-	-

Table 34.13 Socio Economic Partnerships (continued)

R thousand	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
<b>Details of transfers and subsidies</b>											
<b>Public corporations and private enterprises</b>											
<b>Private enterprises</b>											
<b>Other transfers to private enterprises</b>											
<b>Current</b>	-	-	11 158	-	-	0.2%	-	-	-	-	-
Advanced manufacturing technology strategy	-	-	9 414	-	-	0.2%	-	-	-	-	-
Local systems of innovation	-	-	1 203	-	-	-	-	-	-	-	-
Resource based industries	-	-	541	-	-	-	-	-	-	-	-
<b>Public corporations and private enterprises</b>											
<b>Public corporations</b>											
<b>Other transfers to public corporations</b>											
<b>Current</b>	193 569	102 186	112 180	143 042	-9.6%	10.9%	150 260	148 796	155 733	2.9%	8.5%
Advanced manufacturing technology strategy	47 229	22 234	12 262	43 135	-3.0%	2.5%	45 548	48 281	50 502	5.4%	2.7%
Global change science and technology	4 685	6 048	7 716	-	-100.0%	0.4%	-	-	-	-	-
Human and social development dynamics	8 400	2 000	-	-	-100.0%	0.2%	-	-	-	-	-
Local manufacturing capacity	10 000	907	14 377	-	-100.0%	0.5%	10 000	-	-	-	0.1%
Local systems of innovation	405	650	-	-	-100.0%	-	-	-	-	-	-
Resource based industries	28 326	35 941	36 980	47 014	18.4%	2.9%	41 043	43 506	45 507	-1.1%	2.5%
Technology for poverty alleviation	25 558	9 544	16 136	-	-100.0%	1.0%	-	-	-	-	-
Technology for sustainable livelihoods	13 380	13 662	6 357	35 623	38.6%	1.4%	35 501	37 751	39 580	3.6%	2.1%
ICT	55 586	11 200	18 352	17 270	-32.3%	2.0%	18 168	19 258	20 144	5.3%	1.1%
<b>Higher education institutions</b>											
<b>Current</b>	8 130	7 241	12 188	-	-100.0%	0.5%	-	-	-	-	-
Advanced manufacturing technology strategy	-	-	1 505	-	-	-	-	-	-	-	-
Global change science and technology	72	-	-	-	-100.0%	-	-	-	-	-	-
Local manufacturing capacity	1 611	5 606	-	-	-100.0%	0.1%	-	-	-	-	-
Local systems of innovation	1 680	1 535	1 700	-	-100.0%	0.1%	-	-	-	-	-
Resource based industries	950	100	515	-	-100.0%	-	-	-	-	-	-
Technology for sustainable livelihoods	3 817	-	8 468	-	-100.0%	0.2%	-	-	-	-	-

## Personnel information

Table 34.14 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>

Post status as at 30 September 2012		Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment												Number					
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate <sup>3</sup>			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)				
		2011/12		2012/13		2013/14		2014/15		2015/16		2012/13 - 2015/16							
		Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost			
<b>Socio Economic Partnerships</b>		54	26.6	0.5	57	34.0	0.6	64	35.7	0.6	64	37.8	0.6	64	39.6	0.6	3.9%	100.0%	
<b>Salary level</b>	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 - 6	7	-	4	1.0	0.2	7	1.4	0.2	7	1.5	0.2	7	1.5	0.2	7	1.5	0.2	-	11.2%
7 - 10	10	-	8	2.4	0.3	8	3.2	0.4	10	3.4	0.3	10	3.6	0.4	10	3.7	0.4	7.7%	15.3%
11 - 12	29	-	26	12.4	0.5	26	15.7	0.6	29	16.5	0.6	29	17.6	0.6	29	18.4	0.6	3.7%	45.4%
13 - 16	18	-	16	10.8	0.7	16	13.6	0.8	18	14.2	0.8	18	15.2	0.8	18	15.9	0.9	4.0%	28.1%

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

2. Rand million.

3. As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term will be on developing technologies that have the potential to advance development objectives. This will be done through investments that develop a variety of intellectual property that can be used by firms or industries which have the potential to create new firms or industries. The expenditure related to the development of such intellectual property to achieve an economic impact, which is where the bulk of this programme's spending goes, is discussed further detail in the following section.

Expenditure in the *Science and Technology Investment* subprogramme increased substantially in 2010/11 due to the research information management systems project initiated in that year, as well as additional resources being

allocated to the science and technology indicators project. Both of these projects aim to improve the management and tracking of research and development projects in the science system. The decrease in this subprogramme over the medium term is due to reprioritisations.

The following amounts were reprioritised in 2012/13 from this programme to the *Administration* programme, mostly from transfers and subsidies: R3.1 million from the *Science and Technology for Social Impact* subprogramme, R1.4 million from the *Science and Technology Investment* subprogramme and R5.1 million from the *Science and Technology for Economic Impact* subprogramme. These amounts will be carried forward over the medium term.

Expenditure on consultants is expected to increase over the medium term due to the following activities that require outside expertise: conducting impact studies on all projects that are six years and older to inform improvements, introducing technology localisation activities in the programme, and conducting policy analysis to inform the research interventions required for the country. The programme has a funded establishment of 64 posts, 7 of which were vacant as at 30 September 2012. These vacancies were mostly as a result of natural attrition and are in the process of being filled.

### Subprogramme: Science and Technology for Economic Impact

This subprogramme advances strategic economic growth and sector development priorities, as well as government service delivery, by carrying out value adding functions. This entails investing in the long term knowledge generation capabilities of the national system of innovation in targeted innovation areas in partnership with other government departments and economic actors, spearheading focused efforts that exploit knowledge capabilities for economic benefit, and providing strategic innovation policy and planning support to economic stakeholders in priority economic sectors and provincial and local governments. Developing technologies to maturity requires the department to support the development of technology demonstrators, prototypes, laboratory test benches, pilot plants, and semi-commercial plants.

Key activities undertaken in supporting the development of priority economic sectors include: project Aeroswift, which involves additive manufacturing, a process based on the layer-by-layer fusion of metal powder to build a component from scratch; titanium powder processing, which develops a process for the direct manufacturing of titanium metal powder; and ICT, which aims to develop the ICT sector in South Africa through building critical mass research capability, particularly in niche areas.

**Table 34.15 Science and Technology for Economic Impact**

Economic classification	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
<b>Current payments</b>	<b>17 142</b>	<b>15 960</b>	<b>18 623</b>	<b>21 255</b>	<b>7.4%</b>	<b>1.9%</b>	<b>24 616</b>	<b>26 303</b>	<b>27 295</b>	<b>8.7%</b>	<b>1.9%</b>
Compensation of employees	10 302	11 788	13 298	17 322	18.9%	1.4%	18 173	19 263	20 149	5.2%	1.4%
Goods and services	6 840	4 150	5 313	3 933	-16.8%	0.5%	6 443	7 040	7 146	22.0%	0.5%
of which:											
Administration fees	34	58	24	48	12.2%	-	53	56	59	7.1%	-
Advertising	159	59	56	102	-13.8%	-	111	118	123	6.4%	-
Assets less than the capitalisation threshold	5	-	14	-	-100.0%	-	-	-	-	-	-
Catering: Departmental activities	61	28	63	119	25.0%	-	130	138	144	6.6%	-
Communication	377	414	368	458	6.7%	-	499	529	553	6.5%	-
Computer services	136	228	282	57	-25.2%	-	62	66	69	6.6%	-
Consultants and professional services:	3 187	551	-	1 051	-30.9%	0.1%	3 092	3 487	3 429	48.3%	0.2%
Business and advisory services											
Contractors	-	85	4	-	-	-	-	-	-	-	-
Agency and support / outsourced services	1 244	1 060	2 954	54	-64.9%	0.1%	59	63	68	8.0%	-
Entertainment	8	8	8	15	23.3%	-	17	18	19	8.2%	-
Inventory: Other consumables	-	-	23	5	-	-	6	6	5	-	-
Inventory: Stationery and printing	71	21	93	134	23.6%	-	145	154	161	6.3%	-
Operating leases	80	57	-	99	7.4%	-	107	113	118	6.0%	-
Travel and subsistence	1 325	1 441	1 351	1 659	7.8%	0.2%	2 018	2 139	2 237	10.5%	0.2%
Operating payments	21	40	15	13	-14.8%	-	14	15	17	9.4%	-
Venues and facilities	132	100	58	119	-3.4%	-	130	138	144	6.6%	-
Interest and rent on land	-	22	12	-	-	-	-	-	-	-	-

**Table 34.15 Science and Technology for Economic Impact (continued)**

Economic classification	Audited outcome			Adjusted appropriation	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term expenditure estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand	881 935	872 088	920 911	1 009 041	4.6%	98.0%	1 243 773	1 402 498	1 567 744	15.8%	98.1%
<b>Transfers and subsidies</b>											
Departmental agencies and accounts	81 344	94 060	122 074	158 870	25.0%	12.1%	347 018	465 713	583 887	54.3%	29.2%
Higher education institutions	4 313	7 241	3 720	-	-100.0%	0.4%	-	-	-	-	-
Public corporations and private enterprises	745 615	762 764	788 014	850 171	4.5%	83.7%	896 755	936 785	983 857	5.0%	68.9%
Non-profit institutions	50 663	8 023	7 103	-	-100.0%	1.8%	-	-	-	-	-
<b>Payments for capital assets</b>	<b>129</b>	<b>224</b>	<b>404</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Machinery and equipment	129	224	404	-	-100.0%	-	-	-	-	-	-
<b>Payments for financial assets</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total</b>	<b>899 209</b>	<b>888 272</b>	<b>939 938</b>	<b>1 030 296</b>	<b>4.6%</b>	<b>100.0%</b>	<b>1 268 389</b>	<b>1 428 801</b>	<b>1 595 039</b>	<b>15.7%</b>	<b>100.0%</b>
Proportion of total subprogramme expenditure to programme expenditure	76.6%	75.6%	74.3%	72.4%			75.6%	76.6%	77.8%		

## Personnel information

**Table 34.16 Details of approved establishment and personnel numbers according to salary level<sup>1</sup>**

Post status as at 30 September 2012		Number and cost <sup>2</sup> of personnel posts filled / planned for on funded establishment												Number					
Number of funded posts	Number of posts additional to the establishment	Actual			Revised estimate <sup>3</sup>			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)				
		2011/12		Unit Cost	2012/13		Unit Cost	2013/14		Unit Cost	2014/15		Unit Cost			2015/16		Unit Cost	
		Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	2012/13 - 2015/16		
<b>Science and Technology for Economic Impact</b>																			
Salary level	36	-	31	13.3	0.4	33	17.3	0.5	36	18.2	0.5	36	19.3	0.5	36	20.2	0.6	2.9%	100.0%
1-6	5	-	3	0.8	0.3	5	1.0	0.2	5	1.1	0.2	5	1.0	0.2	5	1.0	0.2	-	14.2%
7-10	4	-	4	0.7	0.2	4	0.9	0.2	4	1.0	0.2	4	1.0	0.3	4	1.1	0.3	-	11.3%
11-12	17	-	15	6.5	0.4	15	8.5	0.6	17	8.9	0.5	17	9.5	0.6	17	9.9	0.6	4.3%	46.8%
13-16	10	-	9	5.3	0.6	9	6.9	0.8	10	7.2	0.7	10	7.7	0.8	10	8.1	0.8	3.6%	27.7%

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

2. Rand million.

3. As at 30 September 2012.

## Expenditure trends

The spending focus over the medium term will be on a number of long term technology development mission areas that can provide opportunities for long term industrial and economic advances that are led through research and development. These include advanced manufacturing and minerals beneficiation. Additional funding of R500 million is allocated over the medium term to partner with industry through the industry innovation partnership fund for economic advancement, while R370 million is allocated for local manufacturing capacity.

Transfers to the Council for Scientific and Industrial Research constituted 72 per cent of the subprogramme's expenditure in 2012/13. Over the medium term, expenditure is expected to increase to R1.6 billion due to additional allocations of R180 million in 2013/14, R290 million in 2014/15 and R400 million from the economic competitiveness and support package for the support of technology stations and industry innovation partnerships. This is reflected in spending on transfers to local manufacturing capacity; and in transfers and subsidies to local systems of innovation. R47 million is transferred to the Council of Scientific and Industrial Research for improved conditions of service.

The technology stations programme includes: providing technology assistance packages to qualifying companies that are potential suppliers to large scale public procurement and infrastructure programmes, supporting innovation partnerships with a range of industries and regions in order to enhance economic competitiveness, and funding technology development with short term commercial value.

Over the medium term, expenditure on consultants is expected to increase significantly to provide for expertise required in the local manufacturing capacity programme. The subprogramme has a funded establishment of 36 posts, 3 of which were vacant as at 30 September 2012. These vacancies are mostly as a result of natural attrition and are in the process of being filled.

## Public entities and other agencies

### Council for Scientific and Industrial Research

#### Mandate and goals

The Council for Scientific and Industrial Research was established in terms of the Scientific Research Council Act (1988) and is mandated to foster industrial and scientific development in the national interest through multidisciplinary research and technological innovation.

The council's strategic goals over the medium term are to:

- build a track record of demonstrable impact in research and development through an established programme of relevant research and development in research impact areas and flagship programmes
- build and transform human capital to ensure adequate capacity, and contribute to the national skills base
- strengthen the science, engineering and technology base and perform relevant research and development
- transfer technology and skilled human capital
- enhance financial sustainability and ensure good corporate governance and corporate citizenship.

#### Selected performance indicators

Table 34.17 Council for Scientific and Industrial Research

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Percentage of science engineering and technology staff who are black per year	Built environment	52.2% (1 547)	52.6% (1 560)	54.4% (1 537)	48% (1 540)	49% (1 557)	50% (1 575)	50.25% (1 620)
Total number of staff with doctorates	Meraka Institute	283	299	293	300	310	315	320
Number of publication equivalents per year	Centres and implementation units	502	576	530	575	600	625	630
Number of new technology demonstrator equivalents per year	Materials science manufacturing	39	37	37	26	27	28	30
Private sector and international income per year	Meraka Institute	R311m	R328m	R320m	R364m	R385m	R405m	R420m
Number of new patents granted per year	Materials science manufacturing	13	14	34	15	16	17	18

#### Programmes/activities/objectives

Table 34.18 Council for Scientific and Industrial Research

R thousand	Audited outcome			Revised estimate 2012/13	Average growth rate (%)		Medium-term estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12		2009/10 - 2012/13	2013/14	2014/15	2015/16			
Defence, peace, safety and security	300 811	348 272	376 347	411 929	11.0%	19.2%	434 994	467 701	499 460	6.6%	19.4%
Materials science manufacturing	168 489	169 143	170 139	186 288	3.4%	9.3%	196 549	211 299	225 629	6.6%	8.8%
Biosciences	133 913	127 921	136 295	149 088	3.6%	7.3%	156 667	168 475	179 968	6.5%	7.0%
Natural resources and the environment	139 025	144 721	154 594	169 206	6.8%	8.1%	178 772	192 216	205 267	6.7%	8.0%
Built environment	141 408	136 028	137 994	151 424	2.3%	7.6%	160 925	172 878	184 456	6.8%	7.2%
Meraka Institute	217 219	158 897	209 324	228 500	1.7%	10.9%	240 315	258 628	276 431	6.6%	10.8%
Centres and implementation units	341 108	418 662	425 972	464 295	10.8%	22.1%	484 761	521 951	558 222	6.3%	21.7%
R and development core, shared services and group adjustments	277 094	257 088	267 773	356 900	8.8%	15.5%	385 305	414 728	441 598	7.4%	17.1%
<b>Total expense</b>	<b>1 719 067</b>	<b>1 760 732</b>	<b>1 878 438</b>	<b>2 117 630</b>	<b>7.2%</b>	<b>100.0%</b>	<b>2 238 288</b>	<b>2 407 876</b>	<b>2 571 031</b>	<b>6.7%</b>	<b>100.0%</b>

## Expenditure estimates

Table 34.19 Council for Scientific and Industrial Research

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)	
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14			2014/15
	R thousand											
<b>Revenue</b>												
<b>Non-tax revenue</b>	1 267 552	1 201 905	1 337 546	1 424 526	4.0%	68.3%	1 503 004	1 632 780	1 758 858	7.3%	66.3%	
Sale of goods and services other than capital assets	1 176 895	1 129 717	1 220 406	1 370 468	5.2%	63.9%	1 453 444	1 580 817	1 701 145	7.5%	64.0%	
of which:												
Sales by market establishment	1 176 895	1 129 717	1 220 406	1 370 468	5.2%	63.9%	1 453 444	1 580 817	1 701 145	7.5%	64.0%	
Other non-tax revenue	90 657	72 188	117 140	54 058	-15.8%	4.4%	49 560	51 963	57 713	2.2%	2.2%	
<b>Transfers received</b>	509 122	592 722	606 476	735 734	13.1%	31.7%	781 996	825 740	867 704	5.7%	33.7%	
<b>Total revenue</b>	1 776 674	1 794 627	1 944 022	2 160 260	6.7%	100.0%	2 285 000	2 458 520	2 626 562	6.7%	100.0%	
<b>Expenses</b>												
<b>Current expenses</b>	1 718 945	1 760 672	1 878 438	2 117 630	7.2%	100.0%	2 238 288	2 407 876	2 571 031	6.7%	100.0%	
Compensation of employees	880 745	946 485	1 015 735	1 120 784	8.4%	53.0%	1 220 671	1 309 173	1 393 945	7.5%	54.0%	
Goods and services	788 261	768 057	816 425	946 650	6.3%	44.4%	965 413	1 044 411	1 120 622	5.8%	43.7%	
Depreciation	42 787	42 067	41 859	50 196	5.5%	2.4%	52 204	54 292	56 464	4.0%	2.3%	
Interest, dividends and rent on land	7 152	4 063	4 419	-	-100.0%	0.2%	-	-	-	-	-	
<b>Total expenses</b>	1 719 067	1 760 732	1 878 438	2 117 630	7.2%	100.0%	2 238 288	2 407 876	2 571 031	6.7%	100.0%	
<b>Surplus/(Deficit)</b>	57 607	33 895	65 584	42 630	-9.5%		46 712	50 644	55 531	9.2%		
<b>Statement of financial position</b>												
Carrying value of assets	350 249	392 498	428 960	484 562	11.4%	26.4%	501 485	532 598	564 879	5.2%	33.2%	
of which:												
Acquisition of assets	96 030	91 308	101 132	105 798	3.3%	6.3%	69 127	85 405	88 745	-5.7%	5.6%	
Investments	1 487	1 419	5 372	5 372	53.4%	0.2%	5 372	5 372	5 372	-	0.3%	
Inventory	80 928	89 549	67 501	74 896	-2.5%	5.0%	79 390	94 569	103 589	11.4%	5.6%	
Receivables and prepayments	128 752	118 509	179 250	184 756	12.8%	9.8%	195 841	207 592	223 047	6.5%	12.9%	
Cash and cash equivalents	799 982	1 009 403	969 095	735 829	-2.7%	55.6%	760 372	756 539	753 925	0.8%	48.0%	
Non-current assets held for sale	94 890	94 890	-	-	-100.0%	3.0%	-	-	-	-	-	
Taxation	258	400	-	-	-100.0%	0.0%	-	-	-	-	-	
<b>Total assets</b>	1 456 546	1 706 668	1 650 178	1 485 415	0.7%	100.0%	1 542 460	1 596 670	1 650 812	3.6%	100.0%	
Accumulated surplus/(deficit)	507 152	540 267	580 158	622 788	7.1%	35.9%	669 500	720 144	775 674	7.6%	44.4%	
Capital and reserves	-	763	-	-	-	0.0%	-	-	-	-	-	
Deferred income	42 417	-	-	-	-100.0%	0.7%	-	-	-	-	-	
Trade and other payables	896 721	1 155 168	1 061 760	854 282	-1.6%	62.8%	863 713	866 539	864 575	0.4%	55.0%	
Provisions	10 256	10 470	8 260	8 345	-6.6%	0.6%	9 247	9 987	10 563	8.2%	0.6%	
<b>Total equity and liabilities</b>	1 456 546	1 706 668	1 650 178	1 485 415	0.7%	100.0%	1 542 460	1 596 670	1 650 812	3.6%	100.0%	

## Personnel information

Table 34.20 Council for Scientific and Industrial Research

Salary level	Post status estimated for 31 March 2013	Number of funded posts	Number of vacant posts	Number and cost <sup>1</sup> of personnel posts filled / planned for on funded establishment													Number		
				Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)		
				2011/12		Unit Cost	2012/13		Unit Cost	2013/14		2014/15		2015/16				2012/13 - 2015/16	
				Number	Cost		Number	Cost		Number	Cost	Number	Cost	Number	Cost	Number	Cost		
	2 480	50	2 375	1 015.7	0.4	2 430	1 120.8	0.5	2 440	1 220.7	0.5	2 453	1 309.2	0.5	2 488	1 393.9	0.6	0.8%	100.0%
1 - 6	266	-	254	27.0	0.1	266	29.0	0.1	266	31.6	0.1	266	33.9	0.1	266	36.0	0.1	-	10.8%
7 - 10	901	35	869	205.5	0.2	866	216.1	0.2	866	235.3	0.3	866	252.4	0.3	866	268.7	0.3	-	35.3%
11 - 12	792	13	752	348.9	0.5	779	396.2	0.5	786	431.5	0.5	795	462.8	0.6	820	492.8	0.6	1.7%	32.4%
13 - 16	509	2	490	413.6	0.8	507	453.3	0.9	510	493.7	1.0	514	529.5	1.0	524	563.8	1.1	1.1%	20.9%
17 - 22	12	-	10	20.7	2.1	12	26.2	2.2	12	28.6	2.4	12	30.7	2.6	12	32.6	2.7	-	0.5%

1. Rand million.

## Expenditure trends

The Council for Scientific and Industrial Research derives its revenue from baseline and ringfenced grants from the Department of Science and Technology, contract research and development income from local and international public and private sectors, and income from intellectual property and technology transfer efforts. Contract income is projected to increase over the medium term through additional contract research and development work. Consequently, the council will look to offset grant funding over this period through further increased growth in contract income and a marginal reduction in the level of investment in scientific equipment and infrastructure.

The spending focus over the medium term will be on strengthening the science, engineering and technology base; building and transforming human capital; performing relevant research and development; and transferring skills and technology to produce the 85 new technology demonstrator equivalents and meet the R343 million private sector and international income per year performance targets. Expenditure on compensation of employees constitutes 54 per cent of the total budget allocation over the medium term, while expenditure on goods and services constitutes 43.7 per cent, as the council's work is research driven.

Continued cost reductions will ensure that total expenses increase at a rate less than the projected growth in revenue. An energy efficiency plan was developed in 2006/07 and measures were put in place in 2008/09 to reduce energy usage. Consequently, energy consumption decreased by more than 1.2 per cent each year since 2008/09.

The council has a funded establishment of 2 480 posts, of which 50 were vacant as at 30 September 2012. These vacancies were mainly as a result of a scarcity of the required science, engineering and technical skills in the market. The council plans to fill all vacancies over the medium term. The ratio of support staff to line function staff was 1:2. The council's use of consultants depends on the nature of the research contracts secured, which may require a particular scientific or engineering field of expertise not available within the organisation.

## National Research Foundation

### Mandate and goals

The National Research Foundation was established in terms of the National Research Foundation Act (1998), which mandates the foundation to promote and support research in all fields of humanities, the social and natural sciences, engineering and technology, and indigenous knowledge. The foundation provides research funding and research platforms through national facilities and science awareness activities. It also performs an agency function on behalf of the Department of Science and Technology, and is a service provider to several other government departments.

The foundation's strategic goals over the medium term are to:

- promote internationally competitive research as the basis for a knowledge economy
- grow a representative science and technology workforce in South Africa
- provide cutting edge research, technology and innovation platforms
- operate world class evaluation and funding systems
- contribute to a vibrant national innovation system.

### Selected performance indicators

Table 34.21 National Research Foundation

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Percentage of South African global international science index outputs per year	Research and innovation support and advancement, and corporate	47% (9 201)	52% (9 228)	57% (10 918)	58% (11 500)	59% (12 000)	60% (12 500)	65% (13 000)
Total number of international science index outputs in publications published by the foundation's funded researchers	Research and innovation support and advancement, and corporate	2 753	3 935	4 777	5 000	5 500	5 700	6 000
Number of South African global international science index outputs per year	Research and innovation support and advancement, and corporate	28	28	31	32	32	33	33

**Table 34.21 National Research Foundation (continued)**

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Number of international science index publications published by the foundation's funded researchers per year	South African Agency for Science and Technology Advancement	468 021	618 113	592 607	796 000	641 777	664 247	673 197
Number of doctoral graduations per million of the population per year	South African Agency for Science and Technology Advancement	18 909	21 286	27 608	26 356	18 185	19 863	21 313
Number of learners reached through science advancement activities per year	Research and innovation support and advancement, and corporate	146 482	284 137	269 092	238 000	252 280	267 417	283 462
Number of educators reached through science advancement activities per year	Research and innovation support and advancement, and corporate	131 066	179 829	188 679	673 724	656 115	678 206	571 309
Value of infrastructure investment per year excluding Square Kilometre Array project	Square Kilometre Array project	R419.4m	R438.4m	R394.2m	R400m	R410m	R430m	R450m
Value of investment in the Square Kilometre Array project per year	Research and innovation support and advancement, and corporate	R4.9m	R4.8m	R4.8m	R5.6m	R6.2m	R7.8m	R8.7m
Value of funding leveraged off the foundation's investments per year	Research and innovation support and advancement, and corporate	61% (R1.3m)	75% (R1.7m)	76% (R1.9m)	75% (R1.9m)	75% (R1.9m)	76% (R1.9m)	76% (R2.1m)
Number of grant and rating applications processed through NRF Online per year	Research and innovation support and advancement, and corporate	181	220	233	210	217	228	241
Number of rated researchers funded by foundation per year	National research facilities	446	523	494	523	596	626	640
Number of international science index publications published by national facility researchers per year	National research facilities	5 757	8 626	7 668	7 445	11 208	11 440	11 580

**Programmes/activities/objectives****Table 34.22 National Research Foundation**

	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
Research and innovation support and advancement, and corporate	941 235	1 324 144	1 251 712	1 670 323	21.1%	65.7%	1 830 183	1 908 820	2 063 749	7.3%	69.1%
National Research Facilities	372 327	412 635	437 982	489 423	9.5%	22.2%	472 784	487 520	510 907	1.4%	18.2%
South African Agency for Science and Technology Advancement	47 685	58 489	64 241	95 559	26.1%	3.3%	82 945	54 593	56 065	-16.3%	2.7%
Square Kilometre Array project	78 687	154 346	213 815	274 136	51.6%	8.8%	268 161	264 316	270 746	-0.4%	10.0%
<b>Total expense</b>	<b>1 439 934</b>	<b>1 949 614</b>	<b>1 967 750</b>	<b>2 529 441</b>	<b>20.7%</b>	<b>100.0%</b>	<b>2 654 073</b>	<b>2 715 249</b>	<b>2 901 467</b>	<b>4.7%</b>	<b>100.0%</b>

**Expenditure estimates****Table 34.23 National Research Foundation**

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
R thousand											
<b>Revenue</b>											
<b>Non-tax revenue</b>	<b>809 234</b>	<b>1 269 703</b>	<b>1 085 906</b>	<b>1 847 055</b>	31.7%	58.2%	<b>1 961 729</b>	<b>1 947 853</b>	<b>1 935 409</b>	1.6%	62.5%
Sale of goods and services other than capital assets	703 299	1 157 374	996 331	1 776 711	36.2%	53.4%	1 526 733	1 507 187	1 252 457	-11.0%	49.5%
<i>of which:</i>											
<i>Sales by market establishment</i>	32 021	39 496	35 831	34 468	2.5%	1.8%	32 198	34 682	37 659	3.0%	1.1%
<i>Other sales</i>	671 278	1 117 878	960 500	1 742 243	37.4%	51.6%	1 494 535	1 472 505	1 214 798	-11.3%	48.4%
<i>Other non-tax revenue</i>	105 935	112 329	89 575	70 344	-12.8%	4.8%	434 996	440 666	682 952	113.3%	13.0%
<b>Transfers received</b>	<b>729 325</b>	<b>769 513</b>	<b>895 661</b>	<b>1 073 757</b>	13.8%	41.8%	<b>1 112 879</b>	<b>1 186 391</b>	<b>1 243 227</b>	5.0%	37.5%
<b>Total revenue</b>	<b>1 538 559</b>	<b>2 039 216</b>	<b>1 981 567</b>	<b>2 920 812</b>	<b>23.8%</b>	<b>100.0%</b>	<b>3 074 608</b>	<b>3 134 244</b>	<b>3 178 636</b>	<b>2.9%</b>	<b>100.0%</b>

Table 34.23 National Research Foundation (continued)

Statement of financial performance		Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
		2009/10	2010/11	2011/12				2012/13	2013/14	2014/15		
R thousand												
<b>Expenses</b>												
<b>Current expenses</b>		<b>626 066</b>	<b>739 534</b>	<b>848 475</b>	<b>1 083 491</b>	<b>20.1%</b>	<b>41.8%</b>	<b>950 285</b>	<b>952 433</b>	<b>994 374</b>	<b>-2.8%</b>	<b>37.0%</b>
Compensation of employees		334 947	388 703	425 323	511 479	15.2%	21.3%	516 789	543 323	571 984	3.8%	19.9%
Goods and services		257 909	311 619	382 882	528 714	27.0%	18.6%	387 176	361 151	372 103	-11.0%	15.4%
Depreciation		32 628	38 718	39 999	43 186	9.8%	2.0%	46 228	47 848	50 165	5.1%	1.7%
Interest, dividends and rent on land		582	494	271	112	-42.3%	0.0%	92	111	122	2.9%	0.0%
<b>Transfers and subsidies</b>		<b>813 868</b>	<b>1 210 080</b>	<b>1 119 275</b>	<b>1 445 950</b>	<b>21.1%</b>	<b>58.2%</b>	<b>1 703 788</b>	<b>1 762 816</b>	<b>1 907 093</b>	<b>9.7%</b>	<b>63.0%</b>
<b>Total expenses</b>		<b>1 439 934</b>	<b>1 949 614</b>	<b>1 967 750</b>	<b>2 529 441</b>	<b>20.7%</b>	<b>100.0%</b>	<b>2 654 073</b>	<b>2 715 249</b>	<b>2 901 467</b>	<b>4.7%</b>	<b>100.0%</b>
<b>Surplus/(Deficit)</b>		<b>98 625</b>	<b>89 602</b>	<b>13 817</b>	<b>391 371</b>	<b>58.3%</b>		<b>420 535</b>	<b>418 995</b>	<b>277 169</b>	<b>-10.9%</b>	
<b>Statement of financial position</b>												
Carrying value of assets		428 403	507 429	557 216	976 660	31.6%	32.2%	1 342 124	1 626 836	1 853 659	23.8%	57.5%
<i>of which:</i>												
Acquisition of assets		146 508	119 000	112 852	462 630	46.7%	10.7%	462 594	467 489	326 858	-10.9%	17.8%
Investments		41 172	38 157	35 054	32 054	-8.0%	1.9%	29 054	26 054	26 054	-6.7%	1.2%
Inventory		3 283	3 684	3 384	6 500	25.6%	0.2%	7 000	7 000	7 000	2.5%	0.3%
Receivables and prepayments		270 056	540 282	720 328	712 728	38.2%	29.9%	710 528	704 528	700 832	-0.6%	28.9%
Cash and cash equivalents		1 313 906	795 424	360 062	320 000	-37.6%	35.8%	280 000	280 000	305 000	-1.6%	12.1%
Defined benefit plan assets		-	-	183	-	-	0.0%	-	-	-	-	-
<b>Total assets</b>		<b>2 056 820</b>	<b>1 884 976</b>	<b>1 676 227</b>	<b>2 047 942</b>	<b>-0.1%</b>	<b>100.0%</b>	<b>2 368 706</b>	<b>2 644 418</b>	<b>2 892 545</b>	<b>12.2%</b>	<b>100.0%</b>
Accumulated surplus/(deficit)		50 955	64 549	152	(27 925)	-181.8%	1.1%	(38 056)	(34 701)	(30 226)	2.7%	-1.3%
Capital and reserves		41 168	38 150	44 947	41 947	0.6%	2.2%	38 947	35 947	35 947	-5.0%	1.6%
Capital reserve fund		427 303	506 329	556 112	975 560	31.7%	32.1%	1 341 024	1 625 736	1 852 559	23.8%	57.4%
Finance lease		2 603	1 617	1 728	1 278	-21.1%	0.1%	878	528	228	-43.7%	0.0%
Deferred income		1 359 007	1 095 956	1 001 702	985 427	-10.2%	58.0%	947 786	938 820	956 839	-1.0%	39.2%
Trade and other payables		69 000	68 175	71 586	71 655	1.3%	3.7%	78 127	78 088	77 198	2.5%	3.1%
Provisions		106 784	110 200	-	-	-100.0%	2.8%	-	-	-	-	-
<b>Total equity and liabilities</b>		<b>2 056 820</b>	<b>1 884 976</b>	<b>1 676 227</b>	<b>2 047 942</b>	<b>-0.1%</b>	<b>100.0%</b>	<b>2 368 706</b>	<b>2 644 418</b>	<b>2 892 545</b>	<b>12.2%</b>	<b>100.0%</b>

## Personnel information

Table 34.24 National Research Foundation

Salary level	Post status estimated for 31 March 2013	Number of funded posts	Number of vacant posts	Number and cost <sup>1</sup> of personnel posts filled / planned for on funded establishment												Number			
				Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)		
				2011/12		Unit Cost	2012/13		Unit Cost	2013/14		Unit Cost	2014/15		Unit Cost			2015/16	
				Number	Cost		Number	Cost		Number	Cost		Number	Cost		Number	Cost	Number	Cost
	1 522	58	1 505	421.2	0.3	1 464	446.4	0.3	1 522	473.2	0.3	1 522	501.6	0.3	1 522	531.7	0.3	1.3%	100.0%
1 - 6	485	9	567	55.0	0.1	476	58.3	0.1	485	61.8	0.1	485	65.5	0.1	485	69.4	0.1	0.6%	32.0%
7 - 10	507	30	484	117.0	0.2	477	124.0	0.3	507	131.5	0.3	507	139.3	0.3	507	147.7	0.3	2.1%	33.1%
11 - 12	374	17	329	145.3	0.4	357	154.0	0.4	374	163.2	0.4	374	173.0	0.5	374	183.4	0.5	1.6%	24.5%
13 - 16	142	2	120	94.3	0.8	140	99.9	0.7	142	105.9	0.7	142	112.3	0.8	142	119.0	0.8	0.5%	9.4%
17 - 22	14	-	5	9.6	1.9	14	10.2	0.7	14	10.8	0.8	14	11.5	0.8	14	12.2	0.9	-	0.9%

1. Rand million.

## Expenditure trends

The National Research Foundation receives approximately 60 per cent of its revenue from contract income and sales and interest, while 40 per cent is received in the form of government transfers. The foundation's own revenue increased between 2009/10 and 2012/13, due to increased contract income received. Over the medium term, own revenue is expected to remain steady. Additional funding of R300 million in 2013/14, R300 million

in 2014/15 and R540 million in 2015/16 is allocated for the Square Kilometre Array project, while R400 million is allocated in 2015/16 for postgraduate bursaries.

The spending focus over the medium term will be on increasing the number of postgraduate students and researchers in science, technology and innovation; and modernising infrastructure in the science councils, particularly the national research facilities, to enable high quality facilities to attract international researchers.

The increase in expenditure between 2009/10 and 2012/13 was primarily due to the expansion of directed initiatives and programmes, including the South African Research Chairs Initiative, which receives R300 million per year through the research and innovation support and advancement programme; and the advancement of the Square Kilometre Array project. Other factors influencing increases in expenditure included spending on: urgent infrastructure needs; national research equipment; the broadband roll out to rural universities; and human capacity bursaries and assistance to needy students. The Square Kilometre Array project has maximised the use of the foundation's specialist expertise, where practical, while appropriate services have been procured for the remainder of the project to ensure timeous delivery.

Over the medium term, spending is expected to increase for grants and bursaries, following additional contract funding allocated by the Department of Science and Technology. This was done through a single agreement over three years for human capacity development, and for use in the special category of research chairs. The work on MeerKAT, the current phase of the Square Kilometre Array project, entails the design, testing and construction of 64 Gregorian offset dishes, and includes the costs of appropriate systems, land astronomy, site operations and the telescope array. Capital expenditure on the project represents approximately 85 per cent of the foundation's total capital expenditure over the medium term.

The foundation has a funded establishment of 1 522 posts, of which 58 were vacant at the end of September 2012 due to a scarcity of the requisite skills. The number of posts are expected to increase to 1 522 in 2013/14. The ratio of support staff to line function staff is 1:1. R250 million over the MTEF period has been allocated for spending on consultants who provide specialist services related to the Square Kilometre Array project.

## **Academy of Science of South Africa**

### **Mandate and goals**

The Academy of Science of South Africa was established under the Academy of Science of South Africa Act (2001). Its mandate is to promote the outstanding achievements in all fields of scientific enquiry, grant recognition for excellence, and provide evidence based scientific advice to government and other stakeholders.

The academy's strategic goals over the medium term are to:

- recognise scholarly achievement and excellence in the application of scientific thinking for the benefit of society
- mobilise members to contribute their expertise in the service of society
- conduct systematic and evidence based studies on issues of national importance and producing authoritative reports that have significant impact on policy making
- promote the development of an indigenous system of South African research publications, increasing their quality, visibility, accessibility and impact
- publish science focused periodicals that will showcase the best of Southern African research to a wide national and international audience
- develop productive partnerships with national, regional and international organisations with a view to building capacity in science and its application within the national system of innovation
- create diversified sources of funding for sustainable functioning and the growth of a national academy
- communicate effectively with relevant stakeholders through various media and forums.

## Performance indicators

**Table 34.25 Academy of Science of South Africa**

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Number of consensus panel and committee meetings held year	Policy advisory	15	16	16	16	18	18	18
Number of forum study meetings held per year	Policy advisory	5	5	5	7	7	7	7
Number of national scholarly editors forums held per year	Scholarly publishing	1	1	1	1	1	1	1
Number of evidence based reports produced per year	Policy advisory	5	5	5	2	3	4	4
Number of issues of the South African Journal of Science published per year	Publications	6	6	6	6	6	6	6
Number of issues of Quest magazine published per year	Publications	4	4	4	4	4	4	4
Number of public lectures, symposiums and international conferences held per year	National and international liaison	7	7	7	7	7	7	7
Number of fellowships and awards granted per year	National and international liaison	3	3	3	3	3	3	3

## Programmes/activities/objectives

**Table 34.26 Academy of Science of South Africa**

R thousand	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
Administration and governance	3 610	3 674	4 164	4 382	6.7%	19.6%	5 188	5 268	5 389	7.1%	23.8%
Scholarly publishing programme	2 706	3 800	3 390	3 429	8.2%	16.5%	6 000	6 000	6 600	24.4%	25.4%
Policy advisory	6 269	4 841	3 893	2 348	-27.9%	20.4%	2 093	2 696	2 772	5.7%	11.7%
National and international liaison	7 273	3 969	3 054	2 947	-26.0%	20.2%	3 452	3 314	3 617	7.1%	15.7%
Publications	3 491	2 990	4 208	2 971	-5.2%	16.7%	3 493	3 676	3 776	8.3%	16.3%
Communication	1 497	1 354	1 373	1 231	-6.3%	6.6%	1 484	1 593	1 831	14.2%	7.2%
<b>Total expense</b>	<b>24 846</b>	<b>20 628</b>	<b>20 082</b>	<b>17 308</b>	<b>-11.4%</b>	<b>100.0%</b>	<b>21 710</b>	<b>22 547</b>	<b>23 985</b>	<b>11.5%</b>	<b>100.0%</b>

## Expenditure estimates

**Table 34.27 Academy of Science of South Africa**

Statement of financial performance	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2009/10 - 2012/13	2013/14		
<b>Revenue</b>											
<b>Non-tax revenue</b>	<b>2 047</b>	<b>3 438</b>	<b>2 084</b>	<b>874</b>	<b>-24.7%</b>	<b>9.9%</b>	<b>728</b>	<b>732</b>	<b>736</b>	<b>-5.6%</b>	<b>3.7%</b>
Sale of goods and services other than capital assets	1 157	2 765	1 549	324	-34.6%	6.8%	328	332	336	1.2%	1.6%
<i>of which:</i>											
Administrative fees	42	82	105	74	20.8%	0.4%	78	82	86	5.1%	0.4%
Sales by market establishment	1 115	2 683	1 444	250	-39.3%	6.4%	250	250	250	-	1.2%
Other non-tax revenue	890	673	535	550	-14.8%	3.1%	400	400	400	-10.1%	2.1%
<b>Transfers received</b>	<b>24 085</b>	<b>17 455</b>	<b>18 058</b>	<b>16 434</b>	<b>-12.0%</b>	<b>90.1%</b>	<b>20 982</b>	<b>21 815</b>	<b>23 249</b>	<b>12.3%</b>	<b>96.3%</b>
<b>Total revenue</b>	<b>26 132</b>	<b>20 892</b>	<b>20 142</b>	<b>17 308</b>	<b>-12.8%</b>	<b>100.0%</b>	<b>21 710</b>	<b>22 547</b>	<b>23 985</b>	<b>11.5%</b>	<b>100.0%</b>
<b>Expenses</b>											
<b>Current expenses</b>	<b>24 846</b>	<b>20 628</b>	<b>20 082</b>	<b>17 308</b>	<b>-11.4%</b>	<b>100.0%</b>	<b>21 710</b>	<b>22 547</b>	<b>23 985</b>	<b>11.5%</b>	<b>100.0%</b>
Compensation of employees	8 551	8 557	8 992	8 934	1.5%	43.1%	9 559	10 125	10 618	5.9%	46.2%
Goods and services	16 026	11 710	10 707	8 374	-19.5%	55.7%	12 151	12 422	13 367	16.9%	53.8%
Depreciation	269	361	383	-	-100.0%	1.2%	-	-	-	-	-
<b>Total expenses</b>	<b>24 846</b>	<b>20 628</b>	<b>20 082</b>	<b>17 308</b>	<b>-11.4%</b>	<b>100.0%</b>	<b>21 710</b>	<b>22 547</b>	<b>23 985</b>	<b>11.5%</b>	<b>100.0%</b>
<b>Surplus/(Deficit)</b>	<b>1 286</b>	<b>265</b>	<b>60</b>	<b>-</b>	<b>-100.0%</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Table 34.27 Academy of Science of South Africa (continued)**

Statement of financial position	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2013/14	2014/15		
R thousand											
Carrying value of assets	1 467	1 190	857	845	-16.8%	9.4%	525	304	201	-38.0%	4.6%
of which:											
Acquisition of assets	1 496	83	55	70	-64.0%	3.4%	70	70	-	-100.0%	0.5%
Loans	-	145	145	-	-	0.6%	-	-	-	-	-
Accrued investment interest	-	416	1 074	32	-	3.4%	32	32	32	-	0.3%
Receivables and prepayments	198	-	62	-	-100.0%	0.5%	-	-	-	-	-
Cash and cash equivalents	11 199	9 717	9 065	9 292	-6.0%	86.0%	9 792	9 792	9 792	1.8%	95.1%
<b>Total assets</b>	<b>12 864</b>	<b>11 469</b>	<b>11 203</b>	<b>10 169</b>	<b>-7.5%</b>	<b>100.0%</b>	<b>10 349</b>	<b>10 128</b>	<b>10 025</b>	<b>-0.5%</b>	<b>100.0%</b>
Accumulated surplus/(deficit)	-	5 028	5 088	-	-	22.3%	-	-	-	-	-
Capital and reserves	10 152	5 390	5 390	9 444	-2.4%	66.7%	9 624	9 403	9 300	-0.5%	92.9%
Deferred income	794	496	-	-	-100.0%	2.6%	-	-	-	-	-
Trade and other payables	1 439	77	362	-	-100.0%	3.8%	-	-	-	-	-
Provisions	481	478	363	725	14.7%	4.6%	725	725	725	-	7.1%
<b>Total equity and liabilities</b>	<b>12 865</b>	<b>11 469</b>	<b>11 203</b>	<b>10 169</b>	<b>-7.5%</b>	<b>100.0%</b>	<b>10 349</b>	<b>10 128</b>	<b>10 025</b>	<b>-0.5%</b>	<b>100.0%</b>

## Personnel information

**Table 34.28 Academy of Science of South Africa**

Post status estimated for 31 March 2013	Number and cost <sup>1</sup> of personnel posts filled / planned for on funded establishment															Number						
	Number of funded posts	Number of vacant posts	Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)						
			2011/12			2012/13			2013/14		2014/15		2015/16									
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost			Number	Cost	Unit Cost			
Salary level 1-6	20	-	21	9.0	0.4	20	8.9	0.4	22	9.5	0.4	22	9.9	0.5	22	10.3	0.5	22	10.3	0.5	3.2%	100.0%

1. Rand million.

## Expenditure trends

The Academy of Science of South Africa's main source of revenue is transfers from government, with the balance received from income generated from the sale of research expertise and contract income.

The spending focus over the medium term will be on the academy's administration and governance, scholarly publishing, and policy advisory and liaison programmes. The bulk of the allocation over this period will go towards spending on compensation of employees and the related goods and services. The academy expects to: sustain good corporate governance practices and achieve clean audits, continue the publication of the South African Journal of Science and Quest magazine, implement the open access platform, promote online scientific writing, and recognise and promote excellence in science.

Over the medium term, expenditure is expected to remain constant because of austerity measures that have been undertaken to cut costs. Savings have been made through the following measures: reducing travel costs through greater reliance on teleconferencing and, where possible, combining meetings; reducing catering costs by decreasing the number of people catered for; placing greater reliance on electronic media and less on printed reports for distributing information; and reducing the number of events at which Quest magazine is showcased.

The academy has a funded establishment of 20 posts, all of which were filled as at 30 September 2012. In 2013/14, the academy will add 2 more posts to the establishment to assist with publications. The ratio of support staff to line function staff is 1:6.

## Africa Institute of South Africa

### Mandate and goals

The Africa Institute of South Africa is a statutory body established in terms of the Africa Institute of South Africa Act (2001). It is mandated to focus on political, socioeconomic, international and development issues in contemporary Africa, and contribute to the goals of the national system of innovation through research programmes that impact on knowledge production, human resources development, social science and innovation.

The institute's strategic goals over the medium term are to:

- promote knowledge and understanding of African affairs through leading social scientists acting in concert and across all disciplines, and through training and education on African affairs
- collect, process and disseminate information on African affairs, give effective advice and facilitate appropriate action in relation to the collective needs, opportunities and challenges of all South Africans; and
- promote awareness and consciousness of Africa at the grassroots level.

The institute will be incorporated into the Human Sciences Research Council by the beginning of 2013/14.

### Selected performance indicators

Table 34.29 Africa Institute of South Africa

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Number of high level outputs produced per year	Produce and encourage knowledge production and dissemination on African affairs	130	112	201	64	63	64	63
Number of library holdings to be expanded per year	Produce and encourage knowledge production and dissemination on African affairs	350	592	556	574	504	503	496
Number of library documents digitised per year	Produce and encourage knowledge production and dissemination on African affairs	- <sup>1</sup>	- <sup>1</sup>	528	578	620	660	685
Number of seminars hosted per year	Increase the reservoir and quality of researchers, and develop and implement capacity building programmes	- <sup>1</sup>	3	5	7	7	7	7
Number of interns appointed per year	Increase the reservoir and quality of researchers, and develop and implement capacity building programmes	10	10	10	10	10	10	10
Number of fellows contracted per year	Increase the reservoir and quality of researchers and develop and implement capacity building programmes	8	4	6	6	6	6	6

1. These are new indicators, so no historic information exists for these years.

### Programmes/activities/objectives

Table 34.30 Africa Institute of South Africa

R thousand	Audited outcome				Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12	2012/13				2009/10 - 2012/13	2013/14	2014/15		
Produce and encourage knowledge production and dissemination on African affairs	5 261	6 082	4 172	5 568	1.9%	14.7%	5 672	6 585	6 087	3.0%	14.9%	
Increase the reservoir and quality of researchers and develop and implement capacity building programmes	598	691	1 334	1 433	33.8%	2.9%	1 894	1 995	1 746	6.8%	4.4%	
Build the institute's image and increase its visibility	915	1 058	1 196	1 012	3.4%	2.9%	1 163	1 206	1 120	3.4%	2.8%	
Develop a performance led culture within the institute	-	-	549	-	-	0.4%	975	1 015	945	-	1.8%	
Improve the control and governance environment, and compliance with legislation	27 645	29 879	26 093	29 314	2.0%	79.1%	30 112	31 146	31 719	2.7%	76.2%	
<b>Total expense</b>	<b>34 419</b>	<b>37 710</b>	<b>33 344</b>	<b>37 327</b>	<b>2.7%</b>	<b>100.0%</b>	<b>39 816</b>	<b>41 947</b>	<b>41 617</b>	<b>3.7%</b>	<b>100.0%</b>	

## Expenditure estimates

Table 34.31 Africa Institute of South Africa

Statement of financial performance			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)	
						Audited outcome					Medium-term estimate
R thousand	2009/10	2010/11	2011/12	2012/13	2009/10 - 2012/13	2013/14	2014/15	2015/16	2012/13 - 2015/16		
<b>Revenue</b>											
<b>Non-tax revenue</b>	1 406	2 529	2 394	3 684	37.9%	7.2%	4 579	4 821	2 406	-13.2%	9.6%
Sale of goods and services other than capital assets	60	165	228	140	32.6%	0.4%	180	168	176	7.9%	0.4%
of which:											
Administrative fees	–	81	87	–	–	0.1%	–	–	–	–	–
Sales by market establishment	60	84	141	140	32.6%	0.3%	180	168	176	7.9%	0.4%
Other non-tax revenue	1 346	2 364	2 166	3 544	38.1%	6.8%	4 399	4 653	2 230	-14.3%	9.2%
<b>Transfers received</b>	29 280	30 594	32 440	33 643	4.7%	92.8%	35 237	37 487	39 211	5.2%	90.4%
<b>Total revenue</b>	30 686	33 123	34 834	37 327	6.7%	100.0%	39 816	42 308	41 617	3.7%	100.0%
<b>Expenses</b>											
<b>Current expenses</b>	34 419	37 710	33 344	37 327	2.7%	100.0%	39 816	41 947	41 617	3.7%	100.0%
Compensation of employees	16 387	20 444	18 078	19 706	6.3%	52.2%	21 406	22 131	23 133	5.5%	53.7%
Goods and services	17 153	15 014	14 357	17 621	0.9%	45.0%	17 537	18 092	16 817	-1.5%	43.7%
Depreciation	879	2 252	909	–	-100.0%	2.8%	873	1 724	1 667	–	2.6%
<b>Total expenses</b>	34 419	37 710	33 344	37 327	2.7%	100.0%	39 816	41 947	41 617	3.7%	100.0%
<b>Surplus/(Deficit)</b>	(3 733)	(4 587)	1 490	–	-100.0%		–	361	–	–	
<b>Statement of financial position</b>											
Carrying value of assets	4 513	4 064	3 629	2 274	-20.4%	32.2%	2 746	2 526	2 424	2.2%	33.8%
of which:											
Acquisition of assets	3 313	1 163	313	1 246	-27.8%	12.5%	850	729	–	-100.0%	9.1%
Inventory	1 654	862	839	1 500	-3.2%	11.0%	850	860	870	-16.6%	13.4%
Receivables and prepayments	942	285	627	400	-24.8%	4.8%	637	545	527	9.6%	7.2%
Cash and cash equivalents	5 337	4 558	6 047	–	-100.0%	33.8%	2 847	3 245	3 045	–	32.4%
Non-current assets held for sale	3 202	–	–	4 661	13.3%	18.3%	–	–	–	-100.0%	13.2%
<b>Total assets</b>	15 648	9 769	11 142	8 835	-17.3%	100.0%	7 080	7 176	6 866	-8.1%	100.0%
Accumulated surplus/(deficit)	10 089	5 502	6 993	5 501	-18.3%	61.5%	4 640	4 963	5 042	-2.9%	67.6%
Borrowings	–	–	–	1 835	–	5.2%	–	–	–	-100.0%	5.2%
Trade and other payables	2 898	2 682	1 897	250	-55.8%	16.5%	875	850	840	49.8%	9.8%
Provisions	2 661	1 585	2 252	1 249	-22.3%	16.9%	1 565	1 363	984	-7.6%	17.4%
<b>Total equity and liabilities</b>	15 648	9 769	11 142	8 835	-17.3%	100.0%	7 080	7 176	6 866	-8.1%	100.0%

## Personnel information

Table 34.32 Africa Institute of South Africa

Salary level	Post status estimated for 31 March 2013	Number of funded posts	Number of vacant posts	Number and cost <sup>1</sup> of personnel posts filled/planned for on funded establishment															Number	
				Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)			
				2011/12			2012/13			2013/14		2014/15		2015/16				2012/13 - 2015/16		
				Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost				Number	Cost
58	6	–	52	18.1	0.3	52	19.7	0.4	52	19.9	0.4	52	21.2	0.4	52	22.2	0.4	–	100.0%	
1 – 6	7	–	7	1.4	0.2	7	1.4	0.2	7	1.5	0.2	7	1.5	0.2	7	1.5	0.2	–	13.5%	
7 – 10	26	6	20	5.1	0.3	20	5.5	0.3	20	5.6	0.3	20	6.1	0.3	20	6.4	0.3	–	38.5%	
11 – 12	20	–	20	7.2	0.4	20	8.2	0.4	20	8.8	0.4	20	9.2	0.5	20	9.7	0.5	–	38.5%	
13 – 16	4	–	4	2.8	0.7	4	2.9	0.7	4	3.1	0.8	4	3.3	0.8	4	3.4	0.9	–	7.7%	
17 – 22	1	–	1	1.6	1.6	1	1.7	1.7	1	1.0	1.0	1	1.1	1.1	1	1.1	1.1	–	1.9%	

1. Rand million.

## **Expenditure trends**

The Africa Institute of South Africa derives its revenue mainly from government grants. The remainder is made up of sales of goods and services, which is expected to decrease between 2012/13 and 2015/16.

The spending focus over the medium term will be on efforts to promote excellence in science by giving awards to deserving individuals and institutions, and conducting research. Expenditure increased in 2011/12 as more focus was placed on increasing the reservoir and quality of researchers.

Most of the institute's expenditure is on compensation of employees, as it is a research driven organisation. Expenditure increased significantly in 2010/11 because of increases in the supply of researchers, and capacity development as a result of increases in cooperation agreements. Over the medium term, expenditure is expected to remain relatively at the same level because of the austerity measures that have been instituted to cut costs. In this regard, the institute will endeavour to achieve efficiency savings in the following ways: monitoring expenditure trends and implementing firmer controls, identifying process oriented efficiency savings that will focus on changing policies and procedures to streamline operations and administration, improving cash flow stability and effective use thereof, acquiring professional capacity more economically via new partnership agreements, reducing printing and courier costs, reducing entertainment and refreshment costs, monitoring vacant positions and evaluating the need to fill them, and maintaining an in-house internal audit function with limited outsourcing.

Over the medium term, R18 million will be used to produce and encourage knowledge production and dissemination on African affairs; R5.6 million will be used to increase the reservoir and quality of researchers as well as to develop and implement capacity building programmes; R3.5 million will be used on for marketing the institution; and R93 million will be used on administration, including compensating the institute's 52 employees. This will enable the institute to promote awareness and consciousness of Africa at the grassroots level, and to promote knowledge and understanding of African affairs, through leading social scientists acting in concert and across all disciplines, and through training and education on African affairs.

The institute has also reprioritised its current expenditure, and will leverage off borrowing costs by partnering with similar institutions on projects that would render future potential benefits to assist in delivering on its mandate. Reprioritised funds will be used to provide for expenditure on items such as audit fees, depreciation, lease payments, water and electricity, and rates and taxes.

Cabinet approved budget reductions over the medium term were made in transfers received by the institute as follows: R24 000 in 2013/14, R2.5 million in 2014/15 and R1.3 million in 2015/16. These reductions were mainly effected in spending on goods and services. This will impact on output delivery, especially in the area of the expansion and maintenance of the library holdings.

The institute incurred costs for consultants in connection with legal assistance in the fields of labour and contracts. The institute has 58 funded posts of which 52 are filled. There were 6 vacant positions at the end of September 2012. The number of posts will remain at 52 over the medium term. The ratio of support staff to line function staff is 1:1.

## **Human Sciences Research Council**

### **Mandate and goals**

The Human Sciences Research Council was established in 1968 to undertake, promote and coordinate research in the human and social sciences, and operates in terms of the Human Sciences Research Council Act (2008).

The council is mandated to:

- initiate, undertake and foster strategic, basic and applied research in human sciences, addressing developmental challenges in South Africa and elsewhere by gathering, analysing and publishing data relevant to such challenges, especially by means of projects linked to public sector oriented collaborative programmes
- inform the effective formulation and monitoring of policy, and evaluate how it is implemented
- stimulate public debate through the effective dissemination of fact based research results
- help to build research capacity and infrastructure for the human sciences

- foster research collaboration, networks and institutional linkages
- respond to the needs of vulnerable and marginalised groups in society through research and analysis of developmental issues, thus contributing to the improvement of the quality of their lives
- develop and make available data sets underpinning research, policy development and public discussion of developmental issues
- develop new and improved methodologies for use in the development of this kind of data set.
- undertake or commission research on any subject in the field of the human sciences, and to charge fees for research conducted or services rendered at the request of others.

The council serves as a knowledge hub for research based solutions to inform human and social development, and is one of the statutory research councils operating in the national system of innovation. It also has a cross-cutting responsibility, addressing priorities of several other government departments. The council's priorities are thus aligned with broader national and governmental objectives.

The council's strategic goals over the medium term are to:

- advance social sciences and humanities for public use by initiating, undertaking and fostering basic and applied research in human and social sciences, and geopolitical issues
- contribute to development and social progress in Africa by conducting research and analysing and publishing data that aims to address developmental challenges locally, regionally and globally
- contribute to the development of a skilled and capable workforce in South Africa and elsewhere in Africa by providing opportunities for masters and doctoral candidates as well as postdoctoral fellows on attachment from universities
- preserve its library holdings through digitisation and preserved data sets from data collected by its researchers and share it with others for further analysis
- effect transformation at senior level to reflect race and gender demographics
- improve and implement effective and efficient systems of financial management and good corporate governance.

## Selected performance indicators

**Table 34.33 Human Sciences Research Council**

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Number of peer reviewed publications in an internationally accredited scientific journal, per senior researcher per year	Dissemination of knowledge through public dialogue, policy briefs and publications	2	2	2	2	2	2	2
Number of non-peer reviewed journal articles produced by the council researchers per year	Dissemination of knowledge through public dialogue, policy briefs and publications	- <sup>1</sup>	- <sup>1</sup>	4	5	5	7	8
Number of recognised books with at least one council researcher listed as author or co-author published per year	Dissemination of knowledge through public dialogue, policy briefs and publications	- <sup>1</sup>	- <sup>1</sup>	20	13	13	16	18
Number of book chapters published from commissioning per year	Dissemination of knowledge through public dialogue, policy briefs and publications	4	4	4	4	4	4	4
Number of policy briefs produced by council researchers and published by the council per year	Dissemination of knowledge through public dialogue, policy briefs and publications	- <sup>1</sup>	5	5	5	5	10	15

1. There is no historical information for these years due to these being new indicators.

## Programmes/activities/objectives

**Table 34.34 Human Sciences Research Council**

	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2012/13	2013/14	2014/15		
R thousand											
Dissemination of knowledge through public dialogue, policy briefs and publications	–	–	9 917	12 917	–	1.6%	15 093	14 369	15 030	5.2%	3.5%
Research and analysis of developmental problems to respond to the needs of marginalised groups and contribute to the improvement of their lives	251 824	211 089	226 494	222 932	-4.0%	65.9%	231 323	228 695	247 004	3.5%	56.5%

Table 34.34 Human Sciences Research Council (continued)

R thousand	Audited outcome			Revised estimate 2012/13	Average growth rate (%)		Medium-term estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12		2009/10	2012/13	2013/14	2014/15	2015/16		
Promoting an African research agenda	-	-	3 966	4 538	-	0.6%	-	-	-	-100.0%	0.3%
Skilled and capable workforce	-	-	21 816	24 990	-	3.2%	27 562	31 140	32 572	9.2%	7.0%
Preserved data sets	-	-	1 576	2 320	-	0.3%	2 765	3 021	3 160	10.8%	0.7%
Transformation	-	-	6 232	7 776	-	1.0%	8 240	9 374	9 805	8.0%	2.1%
Financial sustainability	87 897	108 000	75 950	111 037	8.1%	27.6%	116 905	135 392	129 327	5.2%	29.9%
<b>Total expense</b>	<b>339 721</b>	<b>319 089</b>	<b>345 952</b>	<b>386 510</b>	<b>4.4%</b>	<b>100.0%</b>	<b>401 888</b>	<b>421 991</b>	<b>436 898</b>	<b>4.2%</b>	<b>100.0%</b>

## Expenditure estimates

Table 34.35 Human Sciences Research Council

Statement of financial performance	Audited outcome			Revised estimate 2012/13	Average growth rate (%)		Medium-term estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12		2009/10	2012/13	2013/14	2014/15	2015/16		
<b>Revenue</b>											
<b>Non-tax revenue</b>	<b>189 079</b>	<b>149 274</b>	<b>169 683</b>	<b>172 331</b>	<b>-3.0%</b>	<b>48.9%</b>	<b>178 258</b>	<b>183 467</b>	<b>187 403</b>	<b>2.8%</b>	<b>43.8%</b>
Sale of goods and services other than capital assets	155 926	127 799	146 657	151 843	-0.9%	41.8%	156 289	159 902	162 754	2.3%	38.3%
<i>of which:</i>											
<i>Sales by market establishment</i>	153 157	125 231	144 047	148 843	-0.9%	41.1%	152 971	156 269	158 954	2.2%	37.5%
<i>Other sales</i>	2 769	2 568	2 610	3 000	2.7%	0.8%	3 318	3 633	3 800	8.2%	0.8%
<i>Other non-tax revenue</i>	33 153	21 475	23 026	20 488	-14.8%	7.1%	21 969	23 565	24 649	6.4%	5.5%
<b>Transfers received</b>	<b>147 970</b>	<b>170 434</b>	<b>180 850</b>	<b>214 177</b>	<b>13.1%</b>	<b>51.1%</b>	<b>223 630</b>	<b>238 523</b>	<b>249 495</b>	<b>5.2%</b>	<b>56.2%</b>
<b>Total revenue</b>	<b>337 049</b>	<b>319 708</b>	<b>350 533</b>	<b>386 508</b>	<b>4.7%</b>	<b>100.0%</b>	<b>401 888</b>	<b>421 990</b>	<b>436 898</b>	<b>4.2%</b>	<b>100.0%</b>
<b>Expenses</b>											
<b>Current expenses</b>	<b>339 722</b>	<b>319 089</b>	<b>345 952</b>	<b>360 207</b>	<b>2.0%</b>	<b>98.3%</b>	<b>374 425</b>	<b>392 698</b>	<b>406 258</b>	<b>4.1%</b>	<b>93.1%</b>
Compensation of employees	154 439	164 595	170 907	182 669	5.8%	48.4%	192 716	202 351	211 659	5.0%	47.9%
Goods and services	169 941	142 556	161 079	167 776	-0.4%	46.2%	175 630	183 964	182 727	2.9%	43.1%
Depreciation	12 859	10 414	12 371	8 183	-14.0%	3.2%	4 413	4 633	10 042	7.1%	1.7%
Interest, dividends and rent on land	2 483	1 524	1 595	1 580	-14.0%	0.5%	1 666	1 750	1 830	5.0%	0.4%
<b>Transfers and subsidies</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>26 303</b>	<b>-</b>	<b>1.7%</b>	<b>27 463</b>	<b>29 293</b>	<b>30 640</b>	<b>5.2%</b>	<b>6.9%</b>
<b>Total expenses</b>	<b>339 722</b>	<b>319 089</b>	<b>345 952</b>	<b>386 510</b>	<b>4.4%</b>	<b>100.0%</b>	<b>401 888</b>	<b>421 991</b>	<b>436 898</b>	<b>4.2%</b>	<b>100.0%</b>
<b>Surplus/(Deficit)</b>	<b>(2 673)</b>	<b>619</b>	<b>4 581</b>	<b>(2)</b>	<b>-90.9%</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-100.0%</b>	
<b>Statement of financial position</b>											
Carrying value of assets	186 248	181 657	188 031	182 902	-0.6%	70.2%	177 024	170 807	164 303	-3.5%	67.0%
<i>of which:</i>											
<i>Acquisition of assets</i>	12 615	3 270	8 965	3 054	-37.7%	2.6%	3 222	3 383	3 538	5.0%	1.3%
Inventory	4 801	3 551	4 005	5 535	4.9%	1.7%	5 828	6 114	6 395	4.9%	2.3%
Receivables and prepayments	47 102	30 963	32 007	42 318	-3.5%	14.6%	44 561	46 744	48 894	4.9%	17.6%
Cash and cash equivalents	15 993	28 370	67 506	27 493	19.8%	12.8%	30 601	35 877	41 800	15.0%	13.1%
Taxation	-	-	4 064	-	-	0.3%	-	-	-	-	-
Derivatives financial instruments	-	1 070	4 064	-	-	0.4%	-	-	-	-	-
<b>Total assets</b>	<b>254 144</b>	<b>245 611</b>	<b>299 677</b>	<b>258 248</b>	<b>0.5%</b>	<b>100.0%</b>	<b>258 014</b>	<b>259 542</b>	<b>261 393</b>	<b>0.4%</b>	<b>100.0%</b>
Accumulated surplus/(deficit)	14 438	15 112	19 693	19 693	10.9%	6.5%	19 693	19 693	19 693	-	7.6%
Capital and reserves	144 404	144 404	154 925	154 925	2.4%	57.0%	154 925	154 925	154 925	-	59.7%
Finance lease	6 187	4 978	1 404	1 387	-39.3%	1.4%	-	-	-	-100.0%	0.1%
Deferred income	43 100	40 828	74 383	40 654	-1.9%	18.6%	42 809	44 906	46 972	4.9%	16.9%
Trade and other payables	30 554	21 586	29 591	27 874	-3.0%	10.4%	29 352	30 790	32 206	4.9%	11.6%
Taxation	-	2 400	-	-	-	0.2%	-	-	-	-	-
Provisions	15 461	16 303	16 815	13 714	-3.9%	5.9%	11 236	9 228	7 597	-17.9%	4.0%
<b>Total equity and liabilities</b>	<b>254 144</b>	<b>245 611</b>	<b>296 811</b>	<b>258 247</b>	<b>0.5%</b>	<b>100.0%</b>	<b>258 015</b>	<b>259 542</b>	<b>261 393</b>	<b>0.4%</b>	<b>100.0%</b>

## Personnel information

**Table 34.36 Human Sciences Research Council**

Salary level	Post status estimated for 31 March 2013		Number and cost <sup>1</sup> of personnel posts filled/planned for on funded establishment															Number	
	Number of funded posts	Number of vacant posts	Actual			Revised estimate			Medium-term expenditure estimate									Average growth rate (%)	Salary level/total: Average (%)
			2011/12			2012/13			2013/14			2014/15			2015/16				
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost		
	942	–	457	170.9	0.4	942	182.7	0.2	1 000	192.7	0.2	1 000	202.4	0.2	1 000	211.7	0.2	2.0%	100.0%
1 – 6	244	–	97	8.7	0.1	244	12.2	0.1	254	12.9	0.1	254	13.6	0.1	254	14.2	0.1	1.3%	25.5%
7 – 10	292	–	141	29.1	0.2	292	35.3	0.1	340	37.3	0.1	340	39.1	0.1	340	40.9	0.1	5.2%	33.2%
11 – 12	246	–	122	51.2	0.4	246	59.7	0.2	246	63.0	0.3	246	66.1	0.3	246	69.2	0.3	–	25.0%
13 – 16	152	–	90	70.2	0.8	152	67.7	0.4	152	71.4	0.5	152	75.0	0.5	152	78.4	0.5	–	15.4%
17 – 22	8	–	7	11.6	1.7	8	7.7	1.0	8	8.1	1.0	8	8.5	1.1	8	8.9	1.1	–	0.8%

1. Rand million.

## Expenditure trends

The Human Sciences Research Council receives 56.2 per cent of its revenue from government grants. The rest is derived from research contracts, which decreased from 2009/10 to 2012/13 due to the economic downturn.

The bulk of spending over the MTEF period goes towards the upgrading and maintenance of the council's building and infrastructure upgrades, and activities aimed at enhancing inter-institutional collaboration and capacity enhancement initiatives. Allocations over the medium term are as follows: R44 million for the dissemination of knowledge through public dialogue, policy briefs and publications; R707 million for research and analysis of developmental problems to respond to the needs of marginalised groups and contributing to the improvement of their lives; R91 million for a skilled and capable workforce; and R9 million for the objective of preserved datasets. Due to the age of the council's building, most of its supporting infrastructure needs to be upgraded or replaced in order to support the ongoing strategic priorities of the council and to ensure compliance with the requirements of the Occupational Health and Safety Act (1993). Over the past five years, maintenance and repair costs have increased significantly from R11.8 million in 2010/11 to R14 million in 2012/13, and are expected to increase further to R16.9 million in 2015/16.

Expenditure is expected to increase in 2013/14 due to the promotion of an African research agenda following the council's incorporation with the African Institute of South Africa. The council employs consultants mainly to undertake research related activities mainly in areas earmarked by funders. In most instances, agreements with funders stipulate which consultants or research partners must be used to undertake such research work. In addition, consultants are used for support related activities, most notably accounting, human resources and payroll system maintenance. Over the MTEF period, the council anticipates spending R13.2 million on consultants.

The council has implemented a number of austerity measures to direct more funds towards its core business. These include: reducing the use of and dependency on consultants, using technology efficiently to reduce travel and other related expenses, reducing finance lease liabilities, focusing new appointments on research related activities, and improving controls on telephone usage. These measures are expected to generate savings of R1.5 million over the medium term.

The council has a funded establishment of 942, all of which are filled. The number of posts increased from 457 in 2011/12 to 942 in 2012/13. This was due to efforts made to increase the number of research trainees, postdoctoral fellows and technical staff, bringing previously outsourced activities in-house, and appointing additional administrative staff to ensure compliance with the Public Finance Management Act (1999). The ratio of research staff to support staff is 1:1.4

## South African National Space Agency

### Mandate and goals

The South African National Space Agency was established under the South African National Space Agency Act (2008) and came into existence in December 2010. The agency is broadly required to promote the peaceful use of space, foster international cooperation in space related activities, and facilitate the creation of an environment that is conducive to space technology and industrial development. The agency's strategic priorities are aligned to those of the Department of Science and Technology, and derives its mandate from the national space strategy, as approved by Cabinet in 2008.

The agency's strategic goals over the medium term are to:

- deliver world class and efficient services that yield social and economic benefits
- conduct cutting edge research and development, and innovation in space science, communications, navigation and space physics
- develop human capital
- contribute to a competitive national space industry
- support the creation of an environment that is conducive to industrial development in space technology
- advance scientific, engineering and technological competencies and capabilities through human capital development outreach programmes, and infrastructure development
- strengthen South Africa's presence in the global space arena.

### Selected performance indicators

**Table 34.37 South African National Space Agency**

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10 <sup>1</sup>	2010/11 <sup>1</sup>	2011/12	2012/13	2013/14	2014/15	2015/16
Amount of data acquired and archived in all forms (scenes) per year	Earth observation services	- <sup>1</sup>	- <sup>1</sup>	4 000	4 200	4 600	4 800	5 000
Amount of data distributed (scenes) per year	Earth observation services	- <sup>1</sup>	- <sup>1</sup>	40 000	42 000	44 000	50 000	55 000
Number of mission launch activities supported per year	Launch, tracking telemetry and command	- <sup>1</sup>	- <sup>1</sup>	20	20	18	24	25
Number of end-user or value added space weather, geospace, technology services and products per year	Research, applied science and technology platforms	- <sup>1</sup>	- <sup>1</sup>	5	7	7	9	11
Number of knowledge outputs on geospace and space weather products and services per year	Research, development, innovation, technology and applications	- <sup>1</sup>	- <sup>1</sup>	2	2	(2)3	3	3
Number of students or interns financially supported and/or co-supervised per year	Human capital development	- <sup>1</sup>	- <sup>1</sup>	15	25	25	30	30
Number of staff supported or trained through formal programmes per year	Human capital development	- <sup>1</sup>	- <sup>1</sup>	10	10	11	14	16
Number of learners engaged per year	Human capital development	- <sup>1</sup>	- <sup>1</sup>	4 000	5 200	7 000	11 000	14 500
Proportion of commercial income from industry relative to total commercial income per year	Industry growth	- <sup>1</sup>	- <sup>1</sup>	70% (R17.5m)	70% (R21m)	75% (R22.5m)	80% (R24.2m)	80% (R24.2m)
Number of multi-national projects participated in per year	Partnerships	- <sup>1</sup>	- <sup>1</sup>	7	7	9	12	13

1. As the agency came into existence at the end of 2010, the indicators begin from 2011/12.

### Programmes/activities/objectives

**Table 34.38 South African National Space Agency**

R thousand	Audited outcome			Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12				2013/14	2014/15	2015/16		
Earth observation services	-	-	22 633	38 440	-	-	45 423	48 717	58 634	15.1%	17.9%
Launch, tracking telemetry and Command	-	-	5 220	18 600	-	-	20 471	20 216	27 222	13.5%	8.2%
Research, applied science and technology platforms	-	-	2 842	5 589	-	-	7 685	7 823	6 406	4.7%	2.6%

Table 34.38 South African National Space Agency (continued)

R thousand	Audited outcome			Revised estimate 2012/13	Average growth rate (%) 2009/10 - 2012/13	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%) 2012/13 - 2015/16
	2009/10	2010/11	2011/12				2013/14	2014/15	2015/16		
Research, development, innovation, technology and applications	-	-	37 123	27 277	-	-	33 462	34 661	37 869	11.6%	12.5%
Human capital development	-	-	12 604	18 472	-	-	23 579	24 272	24 144	9.3%	8.5%
Industry growth	-	-	22 670	7 954	-	-	10 128	10 430	10 438	9.5%	3.7%
Partnerships	-	-	9 057	8 545	-	-	10 739	11 081	11 446	10.2%	3.9%
Administration	-	4 862	30 050	33 438	-	-	34 230	35 428	37 098	3.5%	13.5%
National space programme	-	-	13 136	-	-	-	-	-	-	-	-
Other objectives	-	-	-	16 120	-	-	89 000	135 000	112 000	90.8%	29.3%
<b>Total expense</b>	-	<b>4 862</b>	<b>155 335</b>	<b>174 435</b>	-	-	<b>274 716</b>	<b>327 627</b>	<b>325 255</b>	<b>23.1%</b>	<b>100.0%</b>

## Expenditure estimates

Table 34.39 South African National Space Agency

Statement of financial performance	Audited outcome			Revised estimate 2012/13	Average growth rate (%) 2009/10 - 2012/13	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%) 2012/13 - 2015/16	Expenditure/total: Average (%) 2012/13 - 2015/16
	2009/10	2010/11	2011/12				2013/14	2014/15	2015/16		
R thousand											
<b>Revenue</b>											
<b>Non-tax revenue</b>	-	<b>48</b>	<b>61 359</b>	<b>52 000</b>	-	-	<b>74 943</b>	<b>77 887</b>	<b>83 654</b>	17.2%	26.7%
Sale of goods and services other than capital assets	-	-	56 705	50 500	-	-	58 003	59 265	61 681	6.9%	21.8%
<i>of which:</i>											
<i>Sales by market establishment</i>	-	-	56 705	50 500	-	-	58 003	59 265	61 681	6.9%	21.8%
<i>Other non-tax revenue</i>	-	48	4 654	1 500	-	-	16 940	18 622	21 973	144.7%	4.9%
<b>Transfers received</b>	-	<b>9 528</b>	<b>128 659</b>	<b>121 866</b>	-	-	<b>199 773</b>	<b>249 740</b>	<b>241 601</b>	<b>25.6%</b>	<b>73.3%</b>
<b>Total revenue</b>	-	<b>9 576</b>	<b>190 018</b>	<b>173 866</b>	-	-	<b>274 716</b>	<b>327 627</b>	<b>325 255</b>	<b>23.2%</b>	<b>100.0%</b>
<b>Expenses</b>											
<b>Current expenses</b>	-	<b>4 862</b>	<b>152 515</b>	<b>174 435</b>	-	-	<b>274 716</b>	<b>327 627</b>	<b>325 255</b>	<b>23.1%</b>	<b>100.0%</b>
Compensation of employees	-	1 471	55 353	70 147	-	-	74 743	79 566	83 226	5.9%	29.3%
Goods and services	-	3 373	82 963	104 288	-	-	199 973	248 061	242 029	32.4%	70.7%
Depreciation	-	18	14 074	-	-	-	-	-	-	-	-
Interest, dividends and rent on land	-	-	125	-	-	-	-	-	-	-	-
<b>Transfers and subsidies</b>	-	-	<b>2 821</b>	-	-	-	-	-	-	-	-
<b>Total expenses</b>	-	<b>4 862</b>	<b>155 335</b>	<b>174 435</b>	-	-	<b>274 716</b>	<b>327 627</b>	<b>325 255</b>	<b>23.1%</b>	<b>100.0%</b>
<b>Surplus/(Deficit)</b>	-	<b>4 715</b>	<b>34 683</b>	<b>(569)</b>	-	-	-	-	-	<b>-100.0%</b>	
<b>Statement of financial position</b>											
Carrying value of assets	-	3 820	83 227	119 725	-	-	214 169	366 658	507 055	61.8%	93.8%
<i>of which:</i>											
<i>Acquisition of assets</i>	-	3 837	11 237	29 820	-	-	110 257	152 489	140 397	67.6%	34.6%
Inventory	-	-	314	296	-	-	326	345	366	7.3%	0.1%
Receivables and prepayments	-	893	19 834	5 050	-	-	5 800	5 927	6 168	6.9%	2.2%
Cash and cash equivalents	-	20 300	73 292	22 562	-	-	-	-	-	-100.0%	3.8%
<b>Total assets</b>	-	<b>25 013</b>	<b>176 667</b>	<b>147 633</b>	-	-	<b>220 295</b>	<b>372 930</b>	<b>513 589</b>	<b>51.5%</b>	<b>100.0%</b>
Accumulated surplus/(deficit)	-	4 715	127 198	112 279	-	-	185 466	303 703	397 935	52.5%	79.8%
Capital reserve fund	-	-	16 540	-	-	-	-	-	-	-	-
Borrowings	-	-	292	-	-	-	-	-	-	-	-
Finance lease	-	-	-	175	-	-	105	-	-	-100.0%	0.0%
Deferred income	-	18 416	-	-	-	-	-	-	-	-	-
Trade and other payables	-	1 882	27 262	30 270	-	-	29 492	63 657	109 828	53.7%	18.1%
Provisions	-	-	5 375	4 910	-	-	5 232	5 570	5 826	5.9%	2.1%
<b>Total equity and liabilities</b>	-	<b>25 013</b>	<b>176 666</b>	<b>147 634</b>	-	-	<b>220 295</b>	<b>372 930</b>	<b>513 589</b>	<b>51.5%</b>	<b>100.0%</b>

## Personnel information

**Table 34.40 South African National Space Agency**

Post status estimated for 31 March 2013	Number and cost <sup>1</sup> of personnel posts filled/planned for on funded establishment															Number			
	Number of funded posts	Number of vacant posts	Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)			
			2011/12			2012/13			2013/14		2014/15		2015/16						
			Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost			Number	Cost	Unit Cost
Salary level	180	-	135	55.4	0.4	180	70.6	0.4	200	83.6	0.4	176	88.5	0.5	176	93.1	0.5	-0.7%	100.0%
1-6	41	-	64	41.3	0.6	41	11.5	0.3	48	15.3	0.3	42	13.6	0.3	42	13.9	0.3	0.8%	23.6%
7-10	68	-	53	12.4	0.2	68	16.7	0.2	73	18.4	0.3	62	19.5	0.3	62	20.4	0.3	-3.0%	36.2%
11-12	42	-	7	0.8	0.1	42	18.1	0.4	48	22.5	0.5	45	26.3	0.6	45	28.4	0.6	2.3%	24.6%
13-16	28	-	7	0.5	0.1	28	22.7	0.8	30	25.7	0.9	26	27.2	1.0	26	28.5	1.1	-2.4%	15.0%
17-22	1	-	4	0.3	0.1	1	1.6	1.6	1	1.7	1.7	1	1.8	1.8	1	1.9	1.9	5.6%	0.5%

1. Rand million.

## Expenditure trends

The South African National Space Agency derives its revenue from government grants, which constitute 73.3 per cent of the agency's income over the medium term. The agency also derives revenue from contract income. Revenue for the agency increases over the medium term due to additional allocations of R6.2 million for improved conditions of service. The agency also received income from other government units, specifically the Department of Defence.

The spending focus over the medium term will be on undertaking work with respect to Earth observation services, and the development of South Africa's earth observation satellite, the ZA-ARMC1, for the African Resource and Environmental Management Satellite Constellation, in order to improve the provision of data.

Expenditure on the agency's Earth observation programme is projected to increase over the medium term as the SPOT 5 satellite is being phased out and a new agreement for SPOT 6 and SPOT 7 is being concluded. The new agreement will ensure the continued supply of geospatial information products from the SPOT mission. Over this period, R153 million has been allocated for Earth observation; R68 million for the launch, tracking telemetry and command to support 67 mission launch activities; and R72 million for human capital development in connection with the 85 students and interns financially supported and co-supervised.

As at 30 September 2012, the agency had 180 filled posts, all of which were funded. There were 22 temporary staff members and interns, mainly in the space science programme. The ratio of support staff to line staff is 1:5. Consultants are used primarily for specific support function projects to assist in bedding down the establishment of the agency and the supporting IT equipment and software.

## Technology Innovation Agency

### Mandate and goals

The Technology Innovation Agency is a national public entity that draws its mandate from the Technology Innovation Agency Act (2008). The agency serves as the key institutional intervention to bridge the innovation chasm between research and development outcomes from higher education institutions, science councils, public entities, and private companies, thus intensifying the effect of technological innovation in the economy. The agency's overarching objective is to enable and support technological innovation across different sectors of the economy to achieve socioeconomic benefits through structured financial and non-financial interventions.

The agency's strategic goals over the medium term are to:

- stimulate the development and demonstration of technology based services, processes and products
- support the commercialisation of technology innovations
- develop an enabling environment for technology innovation in South Africa
- develop an enabling internal environment to successfully execute its strategy

- facilitate the development of innovation skills to support technology innovation and commercialisation
- build a culture of technology innovation.

## Selected performance indicators

**Table 34.41 Technology Innovation Agency**

Indicator	Programme/Activity/Objective	Past			Current	Projections		
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Number of high impact investments per year	Stimulate the development and demonstration of technology based products, processes and services	-1	-1	3	1	1	1	1
Number of technology based products and processes developed through investments per year	Stimulate the development and demonstration of technology based products, processes and services	-1	-1	1	25	30	40	45
Total number of technology based products/processes developed through technology stations	Stimulate the development and demonstration of technology based products, processes and services	-1	-1	22	450	550	700	850
Number of products and processes developed or improved through technology platforms per year	Stimulate the development and demonstration of technology based products, processes and services	-1	-1	7	5	10	15	20
Number of investments commercialised per year	Support the commercialisation of technology innovations	-1	-1	5	10	12	15	18
Number of technology based companies established per year	Support the commercialisation of technology innovations	-1	-1	1	2	4	6	8

1. The agency became operational in 2010/11, hence there are no indicators for 2009/10 and 2010/11.

## Programmes/activities/objectives

**Table 34.42 Technology Innovation Agency**

	Audited outcome				Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12	2012/13				2009/10 - 2012/13	2013/14	2014/15		
R thousand												
Stimulate the development and demonstration of technology based products, processes and services	-	340 110	246 873	190 491	-	-	313 965	241 927	256 398	10.4%	57.9%	
Support the commercialisation of technology innovations	-	132 547	181 051	81 935	-	-	98 340	94 392	94 417	4.8%	21.4%	
Develop an enabling environment for technology innovation and commercialisation	-	13 266	15 671	129 276	-	-	33 540	35 390	37 387	-33.9%	13.4%	
Develop an enabling internal environment within the agency to successfully execute its strategy	-	49 943	23 659	3 640	-	-	9 820	13 230	13 977	56.6%	2.4%	
Facilitate the development of innovation skills to support technology innovation and commercialisation	-	17 921	8 302	13 657	-	-	15 690	10 450	11 040	-6.8%	2.9%	
Become a schedule 3B entity in terms of Public Finance Management Act (1999)	-	-	-	37 326	-	-	210	220	232	-81.6%	2.1%	
<b>Total expense</b>	<b>-</b>	<b>553 787</b>	<b>475 556</b>	<b>456 325</b>	<b>-</b>	<b>-</b>	<b>471 565</b>	<b>395 609</b>	<b>413 451</b>	<b>-3.2%</b>	<b>100.0%</b>	

## Expenditure estimates

**Table 34.43 Technology Innovation Agency**

Statement of financial performance	Audited outcome				Revised estimate	Average growth rate (%)	Expenditure/total: Average (%)	Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
	2009/10	2010/11	2011/12	2012/13				2009/10 - 2012/13	2013/14	2014/15		
R thousand												
<b>Revenue</b>												
<b>Non-tax revenue</b>	<b>-</b>	<b>76 360</b>	<b>63 664</b>	<b>23 042</b>	<b>-</b>	<b>-</b>	<b>49 812</b>	<b>61 659</b>	<b>94 118</b>	<b>59.9%</b>	<b>11.3%</b>	
Sale of goods and services other than capital assets	-	50 677	46 389	112	-	-	40 123	45 136	75 000	774.9%	7.8%	
of which:												
Administrative fees	-	-	2 143	112	-	-	123	136	-	-100.0%	0.0%	
Sales by market establishment	-	50 677	44 246	-	-	-	40 000	45 000	75 000	-	7.8%	
Other non-tax revenue	-	25 683	17 275	22 930	-	-	9 689	16 523	19 118	-5.9%	3.4%	
<b>Transfers received</b>	<b>-</b>	<b>544 189</b>	<b>442 688</b>	<b>456 325</b>	<b>-</b>	<b>-</b>	<b>481 081</b>	<b>410 717</b>	<b>435 188</b>	<b>-1.6%</b>	<b>88.7%</b>	
<b>Total revenue</b>	<b>-</b>	<b>620 549</b>	<b>541 763</b>	<b>479 367</b>	<b>-</b>	<b>-</b>	<b>530 893</b>	<b>472 376</b>	<b>529 306</b>	<b>3.4%</b>	<b>100.0%</b>	

**Table 34.43 Technology Innovation Agency (continued)**

Statement of financial performance		Audited outcome			Revised estimate	Average growth rate (%)		Medium-term estimate			Average growth rate (%)	Expenditure/total: Average (%)
		2009/10	2010/11	2011/12		2009/10	2012/13	2013/14	2014/15	2015/16		
R thousand												
<b>Expenses</b>												
<b>Current expenses</b>		-	553 786	475 196	184 242	-	-	183 293	191 385	197 770	2.4%	43.9%
Compensation of employees		-	98 671	114 425	87 616	-	-	93 725	100 113	106 649	6.8%	22.5%
Goods and services		-	442 695	347 645	87 726	-	-	80 668	81 872	81 190	-2.5%	19.2%
Depreciation		-	12 287	12 582	8 900	-	-	8 900	9 400	9 931	3.7%	2.2%
Interest, dividends and rent on land		-	133	544	-	-	-	-	-	-	-	-
<b>Transfers and subsidies</b>		-	-	-	272 083	-	-	288 272	204 224	215 681	-7.5%	56.1%
<b>Total expenses</b>		-	553 787	475 556	456 325	-	-	471 565	395 609	413 451	-3.2%	100.0%
<b>Surplus/(Deficit)</b>		-	66 762	66 207	23 042	-	-	59 328	76 767	115 855	71.3%	
<b>Statement of financial position</b>												
Carrying value of assets		-	42 731	35 541	24 735	-	-	26 888	28 434	31 612	8.5%	9.4%
<i>of which:</i>												
<i>Acquisition of assets</i>		-	20 711	7 834	4 552	-	-	4 782	5 070	5 830	8.6%	1.7%
Investments		-	28 840	16 928	35 900	-	-	41 200	46 800	52 400	13.4%	15.0%
Loans		-	-	-	46 800	-	-	55 700	62 500	71 300	15.1%	20.1%
Receivables and prepayments		-	49 490	45 010	2 899	-	-	2 425	2 120	1 890	-13.3%	0.8%
Cash and cash equivalents		-	223 814	301 503	250 125	-	-	180 900	120 800	105 300	-25.1%	52.6%
Derivatives financial instruments		-	3 084	-	4 900	-	-	5 700	7 400	8 200	18.7%	2.2%
<b>Total assets</b>		-	347 959	398 982	365 359	-	-	312 813	268 054	270 702	-9.5%	100.0%
Accumulated surplus/(deficit)		-	260 642	337 010	307 098	-	-	269 663	232 904	239 352	-8.0%	86.4%
Capital and reserves		-	(4 949)	(6 438)	-	-	-	-	-	-	-	-
Capital reserve fund		-	29 274	44 364	25 800	-	-	15 800	5 200	3 300	-49.6%	3.8%
Borrowings		-	2 171	2 295	-	-	-	-	-	-	-	-
Finance lease		-	335	246	-	-	-	-	-	-	-	-
Deferred income		-	1 869	180	-	-	-	-	-	-	-	-
Trade and other payables		-	20 139	22 230	21 457	-	-	17 500	19 200	18 200	-5.3%	6.3%
Taxation		-	910	1 312	-	-	-	-	-	-	-	-
Provisions		-	2 157	-	9 604	-	-	8 200	8 800	7 700	-7.1%	2.8%
Derivatives financial instruments		-	35 411	867	1 400	-	-	1 650	1 950	2 150	15.4%	0.6%
<b>Total equity and liabilities</b>		-	347 959	402 066	365 359	-	-	312 813	268 054	270 702	-9.5%	100.0%

**Personnel information****Table 34.44 Technology Innovation Agency**

Salary level	Post status estimated for 31 March 2013	Number of funded posts	Number of vacant posts	Number and cost <sup>1</sup> of personnel posts filled/planned for on funded establishment															Number	
				Actual			Revised estimate			Medium-term expenditure estimate						Average growth rate (%)	Salary level/total: Average (%)			
				2011/12		2012/13		2013/14		2014/15		2015/16		2012/13 - 2015/16						
				Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number	Cost	Unit Cost	Number		Cost	Unit Cost	Number	Cost	Unit Cost	
	185	-	-	250	114.4	0.5	185	87.6	0.5	185	93.7	0.5	185	100.1	0.5	185	106.6	0.6	-	100.0%
7 - 10	8	-	-	-	-	-	8	0.8	0.1	8	0.9	0.1	8	0.9	0.1	8	1.0	0.1	-	0.9%
11 - 12	171	-	241	104.6	0.4	171	79.6	0.5	171	84.2	0.5	171	90.4	0.5	171	96.4	0.6	-	90.4%	
13 - 16	6	-	9	9.8	1.1	6	7.2	1.2	6	8.6	1.4	6	8.8	1.5	6	9.2	1.5	-	8.7%	

1. Rand million.

**Expenditure trends**

The Technology Innovation Agency's revenue is generated mainly from transfers received from government and other income made up of royalties, interest from loans to investees, and dividends received on investments.

The agency's spending focus over the medium term will be on stimulating the development and commercialisation of technology based services, processes and products; supporting the establishment and development of technology based commercially viable enterprises; leveraging off agency funds for co-investment; optimising the implementation of statutory requirements; facilitating the development of human capital for technology commercialisation and innovation; and building a culture conducive to technology innovation.

As the agency only became operational in 2010/11, expenditure on compensation of employees, project grant funding and goods and services is expected to increase over the medium term. 60 per cent of expenditure will be used to support the commercialisation of technology based products, services and processes. This will be done by investing in projects and technology development initiatives. A further 16 per cent of expenditure will be on initiatives intended to support these investments, and in developing technology driven industries. By focusing its allocation in this manner, the agency will achieve the goal of using technology innovation to address issues of national importance, particularly poverty alleviation, job creation and reducing the burden of disease.

The agency has a funded staff complement of 185 posts, all of which are filled. Personnel numbers are expected to remain at this level over the medium term. The ratio of support staff to line staff is 1:2.3.

## Additional tables

**Table 34.A Summary of expenditure trends and estimates per programme and economic classification**

Programme	Appropriation		Audited outcome	Appropriation			Revised estimate
	Main	Adjusted		Main	Additional	Adjusted	
R thousand	2011/12		2011/12	2012/13		2012/13	
Administration	192 116	195 701	195 556	202 651	26 778	229 429	229 429
Research, Development and Innovation	854 610	854 610	854 944	1 156 372	(13 565)	1 142 807	1 142 807
International Cooperation and Resources	137 194	137 194	132 276	141 226	(1 909)	139 317	139 317
Human Capital and Knowledge Systems	1 950 427	1 950 427	1 956 334	2 035 896	28 777	2 064 673	2 064 673
Socio Economic Partnerships	1 270 271	1 269 071	1 264 362	1 419 785	3 599	1 423 384	1 423 384
<b>Total</b>	<b>4 404 618</b>	<b>4 407 003</b>	<b>4 403 472</b>	<b>4 955 930</b>	<b>43 680</b>	<b>4 999 610</b>	<b>4 999 610</b>
<b>Economic classification</b>							
<b>Current payments</b>	<b>369 713</b>	<b>365 303</b>	<b>345 917</b>	<b>393 493</b>	<b>15 822</b>	<b>409 315</b>	<b>409 315</b>
Compensation of employees	225 251	227 636	207 164	242 302	5 286	247 588	247 588
Goods and services	144 462	137 667	138 283	151 191	10 536	161 727	161 727
Interest and rent on land	–	–	470	–	–	–	–
<b>Transfers and subsidies</b>	<b>4 031 647</b>	<b>4 038 442</b>	<b>4 050 426</b>	<b>4 559 018</b>	<b>28 702</b>	<b>4 587 720</b>	<b>4 587 720</b>
Departmental agencies and accounts	2 619 942	2 633 548	2 599 251	3 076 203	(12 812)	3 063 391	3 063 391
Higher education institutions	–	–	151 093	–	–	–	–
Public corporations and private enterprises	924 764	924 764	1 245 807	972 641	43 099	1 015 740	1 015 740
Non-profit institutions	486 941	480 130	53 645	510 174	(1 585)	508 589	508 589
Households	–	–	630	–	–	–	–
<b>Payments for capital assets</b>	<b>3 258</b>	<b>3 258</b>	<b>6 946</b>	<b>3 419</b>	<b>(844)</b>	<b>2 575</b>	<b>2 575</b>
Machinery and equipment	3 258	3 258	6 946	3 419	(844)	2 575	2 575
<b>Payments for financial assets</b>	<b>–</b>	<b>–</b>	<b>183</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>
<b>Total</b>	<b>4 404 618</b>	<b>4 407 003</b>	<b>4 403 472</b>	<b>4 955 930</b>	<b>43 680</b>	<b>4 999 610</b>	<b>4 999 610</b>

**Table 34.B Summary of expenditure on training**

	Audited outcome			Adjusted	Medium-term expenditure estimate		
	2009/10	2010/11	2011/12	appropriation	2013/14	2014/15	2015/16
				2012/13			
Compensation of employees (R thousand)	167 488	190 629	207 164	247 588	260 733	283 818	300 966
Training expenditure (R thousand)	3 219	2 792	4 199	6 741	5 229	5 543	5 798
Training spend as percentage of compensation	1.9%	1.5%	2.0%	2.7%	2.0%	2.0%	1.9%
Total number trained (headcount)	180	117	209	110			
<i>of which:</i>							
Employees receiving bursaries (headcount)	131	185	121	124			
Internships (headcount)	22	22	22	34			

**Table 34.C Summary of donor funding**

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
							2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
R thousand													
<b>Foreign In cash</b>													
Canadian International Development Agency	Epidemiological modelling for HIV and AIDS policy in South Africa	Research, Development and Innovation	5 years	20 000	Foreign governments and international organisations	Improved region, age and gender specific epidemiological measures incorporated into routine surveillance. South African Centre for Epidemiological Modelling and Analysis' long relationship with the Department of Health and South African National AIDS Council impacts key policy decisions, such as the evaluation and redrafting of the national space programme. Increased capacity of young South Africans to perform gender sensitive, policy impacting epidemiological research	4 227	4 870	4 251	4 717	-	-	-
European Union	Innovation for poverty alleviation	Socio Economic Partnerships	3 years	300 000	Departmental agencies and accounts	Contribute to South Africa's sustainable economic and social development through programmes and measures designed to reduce poverty and encourage economic growth which benefits the poor	22 191	71 235	78 655	10 000	-	-	-
Finland	Cooperative financial institute of South Africa	International Cooperation and Resources	3 years	30 000	Departmental agencies and accounts	Support the development of provincial and local systems of innovation, especially in Eastern Cape, Gauteng and Western Cape	10 023	-	-	-	-	-	-
Finland	South Africa-Finland knowledge partnership on information communication technology	International Cooperation and Resources	3 years	30 000	Departmental agencies and accounts	Narrow the digital divide by introducing interventions that will help South Africa become an inclusive knowledge society with a strong ICT brand, reflecting research excellence and demonstrating improvements in quality of life and economic competitiveness	10 000	10 000	768	9 232	-	-	-
Finland	Southern African-Finland partnership on biosciences	International Cooperation and Resources	3 years	30 000	Foreign governments and international organisations	Strengthen the Southern Africa Biosciences Network secretariat; develop the operating environment; capacity development; network creation and dissemination; and identification, development and implementation of projects by the network	10 000	10 000	7 608	2 392	-	-	-
United States Agency for International Development	SADC capacity building in relation to the risk and vulnerability atlas	Socio Economic Partnerships	4 years	3 097	Departmental agencies and accounts	Build capacity in the SADC member states in understanding information on climate change impact and risk in the context of the SADC early warning mechanisms	584	584	355	965	-	-	-
United States Agency for International Development	Development of propagation of pathogen free potato seed for yield improvement in Malawi	Research, Development and Innovation	2 years	488	Departmental agencies and accounts	Provide technical assistance to Malawi government and higher education sector in the proposed project that aims at increased production of good quality seed of high yielding potato varieties in Malawi	244	-	100	-	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
							2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
R thousand													
<b>Foreign In cash</b>													
United States Agency for International Development	3rd SADC workshop on indigenous knowledge	Human Capital and Knowledge Systems	1 year	348	Foreign governments and international organisations	Establish regional guidelines and frameworks for the implementation of the 2007 to 2009 action plan	348	-	-	-	-	-	-
United States Agency for International Development	Mozambique marine finfish sea cage farming project	Socio Economic Partnerships	2 years	1 864	Goods and services	Provide technical assistance to the Mozambique government and higher education sector in the proposed project that aims at sustainable and competitive aquaculture in Mozambique	-	-	-	932	932	-	-
United States Agency for International Development	Human health risks and coping mechanisms relating to environmental pollution in the Lower Olifants water catchment area	Research, Development and Innovation	2 years	1 724	Goods and services	Determine the extent to which water and air pollution may impact on the health of 2 communities in the Lower Olifants water catchment area	-	-	-	862	-	-	-
European Union	Promoting Africa/EU research infrastructure	International Cooperation and Resources	2 years	450	Goods and services	Develop a database of African research infrastructure and influence policy dialogue in the region	-	-	-	225	-	-	-
European Union	Incontact-One World	International Cooperation and Resources	4 years	2 735	Goods and services	Cooperation with EU associated member states and Third World countries on science and technology innovation	-	684	942	684	425	-	-
European Union	Network for the Coordination and Advancement of Sub-Saharan Africa-EU Science and Technology Cooperation Caastnet (phase 1)	International Cooperation and Resources	4 years	2 055	Goods and services	Promote mutual understanding of Africa/EU cooperation in critical science and technology areas of mutual interest	514	514	74	-	-	-	-
European Union	SAccess	International Cooperation and Resources	4 years	2 055	Goods and services	Promote mutual understanding of Africa/EU cooperation in critical science and technology areas of mutual interest	220	220	64	-	-	-	-
European Union	European -South Africa science and technology advancement programme (phase 1)	International Cooperation and Resources	3 years	5 000	Goods and services	Advance South Africa/EU collaboration	1 667	1 667	775	-	-	-	-
European Union	Information Society Technologies in Africa	Socio Economic Partnerships	2 years	661	Goods and services	Improve overall ICT policies and create systems for each African country to ensure a consolidated, effective regional impact through information society in Africa	287	287	-	-	-	-	-
European Union	Europe research area: Africa	International Cooperation and Resources	3 years	2 345	Goods and services	Implement wide dialogue with the aim of reaching consensus among EU and African programme owners	-	-	-	782	782	-	-
European Union	Nanocode programme	Human Capital and Knowledge Systems	2 years	594	Goods and services	Facilitate close collaboration between South Africa and other national contact points throughout the world in the area of food, agriculture, fisheries and biotechnology	327	-	165	-	-	-	-

**Table 34.C Summary of donor funding (continued)**

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
							2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
							R thousand						
<b>Foreign In cash</b>													
European Union	BioCircles2	International Cooperation and Resources	2 years	419	Higher education institutions	Increase the participation of researchers from outside Europe in research projects under the food, agriculture, fisheries and biotechnology theme	-	-	-	209	-	-	-
European Union	Science and technology opportunities for practical public policy	Socio Economic Partnerships	3 years	143 500	Foreign governments and international organisations	Establish the link between science and technology opportunities for practical policy influence	-	-	-	35 900	47 800	59 800	-
European Union	Network for the Coordination and Advancement of Sub-Saharan Africa-EU Science and Technology Cooperation Caastnet (Phase 2)	International Cooperation and Resources	3 years	1 300	Goods and services	Promote mutual understanding of Africa/EU cooperation in critical science and technology areas of mutual interest	-	-	-	-	450	450	400
Argentina	Argentinian Bureau for enhancing cooperation with the European community in the science, technology and innovation area phase 2	International Cooperation and Resources	3 year	196	Goods and services	Support the enhancement of cooperation with the European community in the areas of science, technology and innovation	-	-	-	196	-	-	-
European Union	EU/South Africa science and technology advancement programme (phase 2)	International Cooperation and Resources	3 year	2 500	Goods and services	Extension of advancement of South Africa/EU collaboration	-	-	-	833	833	833	-
European Union	Technology localisation programme	Socio Economic Partnerships	3 years	26 000	Higher education institutions	Develop and implement a benchmarking programme that forms the basis of a technology capability assessment of companies	-	-	26 000	-	-	-	-
<b>In kind</b>													
Japan	Senior technical assistance	International Cooperation and Resources	4 years	6 800	Foreign governments and international organisations	Assist in creating, implementing and designing joint initiatives. Improve bilateral relationships with the Japanese national system of innovation	2 000	2 000	-	-	-	-	-
Japan	Science centre senior volunteers to provinces	Human Capital and Knowledge Systems	4 years	12 402	Foreign governments and international organisations	Support science centres in developing teaching material for science and mathematics education, and develop exhibitions. Systematise the newly developed exhibitions to ensure knowledge gain by science centres	2 400	1 850	-	2 300	2 100	-	-
Japan	Productivity training	Human Capital and Knowledge Systems	2 years	1 100	Goods and services	Increase the employability level of science and technology graduates	400	400	-	-	-	-	-
United States Agency for International Development	Science centre manager training	Human Capital and Knowledge Systems	1 year	862	Departmental agencies and accounts	Train 20 South African and 5 Lesotho science centre managers in South Africa initially and then further train 5 South Africa and 2 Lesotho participants in Australia in a certificate course for science centre managers	862	-	-	-	-	-	-
Japan	Hitachi scholarships	Human Capital and Knowledge Systems	4 years	2 400	Goods and services	3 Hitachi scholarships for South African engineers in the area of electricity generation and transmission	600	900	-	900	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
							2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
R thousand													
<b>Foreign In cash</b>													
Japan	Climate simulation and projections for adaptation impact in Southern Africa	Socio Economic Partnerships	3 years	30 000	Foreign governments and international organisations	Build capacity in ocean atmosphere coupled circulation models in Southern Africa and translate this to an early warning system	10 000	10 000	–	10 000	–	–	–
Japan	Observational study to mitigate seismic risks in mines	Socio Economic Partnerships	5 years	16 000	Foreign governments and international organisations	Improve the accuracy of predicting and control of seismicity and earthquakes	3 200	3 200	–	3 200	3 200	3 200	–
Germany	Technical assistant	International Cooperation and Resources	2 years	1 089	Goods and services	Improve bilateral relationships with the German national system of innovation	489	600	–	–	–	–	–
Germany	Financial assistance towards the Academy of Sciences for the Developing World conference	International Cooperation and Resources	1 year	1 000	Departmental agencies and accounts	Host the multilateral conference, which aims at the promotion of scientific excellence in the South, focusing on science based sustainability	1 000	–	–	–	–	–	–
France	Extension of the contract of the scientific director on the Franco-South African Institute in Electronics programme at Tshwane University of Technology and Cape Peninsula University of Technology	Human Capital and Knowledge Systems	3 years	14 850	Foreign governments and international organisations	Extension of the contract of the scientific director on the Franco-South African Institute in electronics programme at Tshwane University of Technology and Cape Peninsula University of Technology	4 950	4 950	–	1 764	–	–	–
Canada	Research chair management training	Human Capital and Knowledge Systems	1 year	328	Foreign governments and international organisations	Research chair management training	328	–	–	–	–	–	–
Australia	Department of Science and Technology study tours to Australian research institutions	Human Capital and Knowledge Systems	1 year	182	Goods and services	Support to University of Cape Town for knowledge transfer on compound library and participation in the international mining processing congress	–	182	–	–	–	–	–
Australia	Regional support for science and technology policy training and the development of a science and technology climate change framework	International Cooperation and Resources	3 years	3 000	Goods and services	Regional support for science and technology policy training and the development of a science and technology climate change framework	–	450	794	1 756	–	–	–
France	South African Nuclear Energy Corporation trip to France	Research, Development and Innovation	1 year	315	Goods and services	Assist the South African Nuclear Energy Corporation in the training of nuclear experts	–	315	–	–	–	–	–
United States Agency for International Development	Tenofovir microbicide gel for HIV prevention	Research, Development and Innovation	3 years	127 800	Foreign governments and international organisations	FACTS 001 study: Confirmation of the results of Centre for the AIDS Programme of Research in South Africa through a phase 3 clinical trial	–	–	–	60 000	7 800	–	–
Canadian International Development Agency	South African participation in the grand challenge call on point of care diagnostics	Research, Development and Innovation	3 years	6 892	Higher education institutions	Support the development of new technology in improving existing point of care diagnostic tests	–	–	–	2 424	1 970	–	–
Japan	Short term training programme	Research, Development and Innovation	1 Year	108	Goods and services	Technical training in the field of the management of electric power pools	–	–	–	108	–	–	–

**Table 34.C Summary of donor funding (continued)**

Donor	Project	Departmental programme	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
							2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
R thousand													
<b>Foreign In cash</b>													
Bill and Melinda Gates Foundation	Training of the next generation of African researchers in legume sciences	Research, Development and Innovation	5 years	10 000	Higher education institutions	Train the next generation of African researchers in legume sciences	–	–		2 000	2 000	2 000	2 000
United Kingdom Department for International Development	HSRC Longitudinal Study on Lone Mothers in South Africa	Socio Economic Partnerships	1 year	395	Departmental agencies and accounts	Improve understanding of the role of social security in respecting and protecting dignity	–	–		395	–	–	–
World Wide Fund for Nature South Africa	Energy Access to rural communities	Socio Economic Partnerships	3 years	1 700	Goods and services	Develop a social infrastructure lead approach to addressing lack of access to energy through renewable or clean technologies	–	–		–	485	485	486
<b>Total</b>				<b>844 554</b>			<b>86 861</b>	<b>124 908</b>	<b>120 551</b>	<b>152 776</b>	<b>68 777</b>	<b>66 768</b>	<b>2 886</b>

**Table 34.D Summary of expenditure on infrastructure**

Project name	Service delivery outputs	Current project stage	Initial project cost	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
				2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
R thousand										
<b>Infrastructure transfers to other spheres, agencies and departments</b>										
Square Kilometre Array	Construction of telescopes	Construction	1 649 195	490 293	–	218 738	218 738	628 107	647 793	701 082
Space infrastructure	Satellite construction	Construction	290 791	36 403	51 390	–	36 000	45 000	40 000	37 466
Hydrogen strategy	Purchase of equipment	Various	440 714	44 229	48 361	51 900	54 498	57 223	60 772	63 568
National nanotechnology centres	Equipping of centres	Various	309 954	34 905	38 337	42 400	44 520	45 835	48 645	50 429
South African National Research Network	Broadband connectivity	Various	883 190	93 474	98 783	104 710	129 946	101 943	108 252	113 279
<b>Total</b>			<b>3 573 844</b>	<b>699 304</b>	<b>236 871</b>	<b>417 748</b>	<b>483 702</b>	<b>878 108</b>	<b>905 462</b>	<b>965 824</b>





**BUDGET 2013**  
ESTIMATES OF NATIONAL EXPENDITURE

Private Bag X115, Pretoria, 0001, **Tel:** +27 12 395 6697, **Fax:** +27 12 315 5126



**national treasury**  
Department:  
National Treasury  
REPUBLIC OF SOUTH AFRICA