

VOTE 34 *Science and Technology*



National Treasury

BUDGET 2012

ESTIMATES OF NATIONAL EXPENDITURE



national treasury

Department:
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REPUBLIC OF SOUTH AFRICA

Estimates of National Expenditure

2012

National Treasury

Republic of South Africa

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The Estimates of National Expenditure 2012 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.

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 current global economic context is characterised by high levels of uncertainty. Against this backdrop, South Africa's development depends largely on government improving its level and quality of service delivery in support of the inclusive and equitable economic roadmap, as contained in the new growth path. The 2012 Budget is an important tool of government for giving effect to these objectives, and this Budget allocates resources to specific interventions that will be actioned over the period of the medium term expenditure framework (MTEF). Growth in spending focuses particularly on infrastructure development, job creation, enterprise support and the enhancement of local government delivery.

South Africa's fiscal stance and public spending programmes are focused on long term structural transformation. Over the next three years of the MTEF period, government priorities will continue to be realised within a sustainable fiscal trajectory, which balances current needs with intergenerational equity. In line with this, spending baselines have undergone rigorous review, areas of inefficiency and lower priority have been identified, and funds have been redirected towards government's key priorities, both new and existing. This has been done in recognition of the relationship between the composition of spending and fiscal sustainability over the long term. Here, the balance between consumption and investment is extremely important. Even the distribution of consumption spending between wages, goods and services and transfers is significant, as is the balance between the functional categories expenditure (such as education, health and economic services). Underspensing on key priorities undermines the aims of the spending proposed within MTEF Budgets.

Since introducing the functional approach to budget decision-making in 2009, transparency and coordination in budgeting has been enhanced, largely due to the participation by the stakeholders responsible for delivery across all spheres of government. South African budget reforms, especially the intensified focus on budget trade-offs and the composition of expenditure, will lead to greater accountability and improved control.

It is not enough to demonstrate a change in the composition of budgeted expenditure; nor is it enough to pinpoint the specific actions required and proposed within the Budget. Success will only be achieved when we can demonstrate that a shift in the composition of actual expenditure has taken place, together with the achievement of improved delivery targets.

This year, the layout of this publication has been altered substantially. The focus is on linking more closely expenditure planned with targeted performance. Specific focus is on the outcomes to which institutions contribute and the output and other performance measures supporting them. The sections covering employee numbers, personnel budgets and the purpose and key activities of each subprogramme within a vote are now more prominent, giving expression to the budget and service delivery. This publication still indicates details per vote of the allocation of new monies, monies reprioritised between or within budget programmes, and Cabinet approved budget reductions over the period ahead. Compared to the abridged version of the Estimates of National Expenditure, the e-publications for each vote 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; skills 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.

The expenditure estimates of departments are the outcome of a rigorous administrative and executive process. Treasury budget analysts, under the guidance of the Ministers' Committee on the Budget, follow a wide-ranging intergovernmental consultative process, working closely with the policy and budget teams of departments and entities to ensure that government priorities are appropriately funded within the available resource envelope. The Treasury is grateful for the contribution of these teams. Appreciation is also due to the people in the Treasury team, who worked with great diligence to produce a high quality document that provides a comprehensive account of government's spending and performance plans.



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. Estimates of National Expenditure publications continue to make a significant contribution to the changes relating to budgeting by programme. As part of these ongoing efforts, several changes have been made to the 2012 Estimates of National Expenditure publications. Departments still provide information on the key objectives of each subprogramme within a programme, and note the activities carried out, the number of personnel responsible for undertaking these activities and the funding allocations supporting this. This year in the 2012 publications, information on expenditure and performance is more closely linked under the 'expenditure trends' section, with a brief discussion on the impact of budget allocations on the achievement of outputs over the seven-year period. In addition, an explanation of the personnel trends, per programme by salary level, over the seven years in relation to compensation of employees has also been included. Finally, information on Cabinet approved cost reduction measures and other budget reprioritisation has been included per programme.

The 2012 abridged Estimates of National Expenditure publication, and the separate Estimates of National Expenditure e-publications for each vote are the product of an extensive consultative review process of budgets and policy, and policy implementation by programme, and include the latest improvements in non-financial performance information. These publications provide the details of the spending estimates for the next three financial years (2012/13 to 2014/15), expenditure outcomes for the past three years (2008/09 to 2010/11) and revised estimates for the current financial year (2011/12). Information is provided on performance targets over the seven year period as well as changes in these, as they relate to trends in planned expenditure.

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; skills 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.

Science and Technology

**National Treasury
Republic of South Africa**



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Vote 34

Science and Technology

Budget summary

R thousand	2012/13				2013/14	2014/15
	Total to be appropriated	Current payments	Transfers and subsidies	Payments for capital assets	Total	Total
MTEF allocation						
Administration	202 651	199 581	1 000	2 070	212 271	230 465
Research, Development and Innovation	1 156 372	53 924	1 102 217	231	1 317 662	1 439 815
International Cooperation and Resources	141 226	61 285	79 402	539	152 124	161 105
Human Capital and Knowledge Systems	2 035 896	31 398	2 004 382	116	2 378 902	2 588 974
Socio Economic Partnerships	1 419 785	47 305	1 372 017	463	1 516 666	1 600 464
Total expenditure estimates	4 955 930	393 493	4 559 018	3 419	5 577 625	6 020 823
Executive authority	Minister of Science and Technology					
Accounting officer	Director General of Science and Technology					
Website address	www.dst.gov.za					

Aim

Realise the full potential of science and technology in social and economic development, through the development of human resources, research and 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 our 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 in the creation of an innovative and competitive society with highly skilled human capital, and competitive knowledge and research infrastructure.

Programme 5: Socio Economic Partnerships

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

Strategic overview: 2008/09 – 2014/15

The Department of Science and Technology derives its mandate from the 1996 White Paper on Science and Technology. The department executes its mandate through the implementation of its key strategies such as the national research and development strategy and the 10-year innovation plan. The plan seeks to transform the South African economy into a knowledge based economy, in which the production and dissemination of knowledge will lead to economic benefits and enrich all fields of human endeavour. The success of this plan will be measured by the extent to which science and technology can play a driving role in enhancing productivity, economic growth and socioeconomic development.

Strategic objectives and outcomes based approach

The goals of the department are to: develop the capacity of the national system of innovation, enhance South Africa's knowledge exploitation and generation, build world class research infrastructure, and position South Africa as a significant strategic international partner. These goals have been translated into the strategic priorities of the department for the medium term. The key focus areas will be on building and strengthening human capital for the national system of innovation, generating and maximising the use of knowledge, and strengthening international cooperation.

Science and technology play a fundamental role in the development of the economy and society. To further advance this role, the department established the Technology Innovation Agency, a public entity, and the National Intellectual Property Management Office, which was established as the implementing agency of the Intellectual Property Rights from Publicly Financed Research and Development Act (2008), to play a regulatory role in respect of the adherence of recipients of public funds of the provisions of the act. The introduction of these agencies will stimulate and intensify technological innovation aimed at improving the quality of life of all South Africans. Over the past few years, the department has initiated pilot projects to demonstrate technological solutions in areas as diverse as cultivating medicinal plants, fish production, essential oils, new plant cultivars, sustainable water delivery, and the design of low cost housing. These projects target marginalised communities and have the potential to improve the circumstances of society at large.

In relation to government's 12 outcomes, the department, through its work, contributes to: helping realise a long and healthy life for all South Africans (outcome 2); creating decent employment through inclusive economic growth (outcome 4); and creating a skilled and capable workforce to support an inclusive growth path (outcome 5).

In relation to outcome 2, the department initiated an accelerating sustainable water service delivery through technology innovation in the OR Tambo and Amathole district municipalities in Eastern Cape. The aim of the project was to demonstrate the use of technology innovation in delivering water in a sustainable manner, thus increasing access to safe drinking water. The project has already produced fruit in OR Tambo, where water is flowing from the communal water stations designed to produce 3 cubic metres of potable water per hour.

To contribute to creating decent jobs (outcome 4) and supporting entrepreneurship, the department helped 573 small, medium and micro enterprises (SMMEs) in the first quarter of 2011/12 through its technology station programme. In helping to create a skilled and capable workforce (outcome 5) and build human capital for the national system of innovation by the end of the second quarter of 2011/12, the department awarded bursaries to 1 275 honours, 2 771 masters and 1 574 PhD candidates. Furthermore, 2 339 researchers were supported in the same period to promote and enhance research productivity and to increase South Africa's world share of knowledge outputs.

Selected performance indicators

Table 34.1 Science and Technology

Indicator	Programme	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of patents, patents applications and trademarks resulting from policy funded research per year	Socio Economic Partnerships, Research Development and Innovation and Human Capital and Knowledge Systems	50	19	59	32	37	40	44
Number of companies provided with a technology assistance package per year to facilitate successful participation in infrastructure public procurement process per year	Socio Economic Partnerships	- ¹	24	24	24	13	22	28
Total number of postgraduate students supported	Human Capital and Knowledge Systems	5 060	5 131	5 644	6 600	6 100	6 400	6 700
Number of researchers supported per year	Human Capital and Knowledge Systems	2 422	2 442	2 519	2 500	2 600	2 700	2 800
Foreign funds leveraged off per year in support of science, technology and innovation cooperation	International Cooperation and Resources	R189m	R230m	R196.3m	R199.3m	R240 m	R140m	R 140m
Number of foreign participants in global knowledge and science and technology innovation network per year	International Cooperation and Resources	- ¹	- ¹	- ¹	3 380	800	930	900
Number of technology based enterprises supported per year	Research, Development and Innovation	- ¹	- ¹	- ¹	14	5	5	5
Number of small and medium enterprises provided with technology support per year	Socio Economic Partnerships	- ¹	1 594	1 791	1 753	1 928	2 120	2 500

1. New indicators so no historical information for these years.

Expenditure estimates

Table 34.2 Science and Technology

Programme	Audited outcome			Adjusted appropriation	Revised estimate	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12		2012/13	2013/14	2014/15
R thousand								
Administration	141 035	159 122	188 858	195 701	195 701	202 651	212 271	230 465
Research, Development and Innovation	852 974	1 141 350	802 774	854 610	854 610	1 156 372	1 317 662	1 439 815
International Cooperation and Resources	136 314	117 474	131 384	137 194	137 194	141 226	152 124	161 105
Human Capital and Knowledge Systems	1 454 698	1 591 357	1 754 144	1 950 427	1 950 427	2 035 896	2 378 902	2 588 974
Socio Economic Partnerships	1 118 447	1 174 554	1 174 742	1 269 071	1 269 071	1 419 785	1 516 666	1 600 464
Total	3 703 468	4 183 857	4 051 902	4 407 003	4 407 003	4 955 930	5 577 625	6 020 823
Change to 2011 Budget estimate				2 385	2 385	68 574	67 531	180 123

Table 34.2 Science and Technology (continued)

R thousand	Audited outcome			Adjusted appropriation	Revised estimate	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12		2012/13	2013/14	2014/15
Economic classification								
Current payments	259 840	284 245	331 698	365 303	365 303	393 493	417 447	446 978
Compensation of employees	141 585	167 488	190 629	227 636	227 636	242 302	253 366	275 048
Goods and services	118 255	116 757	140 736	137 667	137 667	151 191	164 081	171 930
<i>of which:</i>								
<i>Administrative fees</i>	4 537	2 567	3 074	4 699	4 699	4 960	5 219	5 533
<i>Advertising</i>	10 680	4 994	14 177	3 092	3 092	3 205	3 703	3 925
<i>Assets less than the capitalisation threshold</i>	578	526	405	593	593	626	670	710
<i>Audit cost: External</i>	1 614	2 414	3 010	1 876	1 876	1 868	2 082	2 207
<i>Bursaries: Employees</i>	1 172	967	1 156	2 248	2 248	2 013	2 240	2 374
<i>Catering: Departmental activities</i>	2 110	1 677	1 356	2 115	2 115	2 315	2 469	2 616
<i>Communication</i>	6 812	8 384	8 024	7 901	7 901	8 669	9 302	9 862
<i>Computer services</i>	3 226	9 307	5 264	5 100	5 100	5 379	5 853	6 205
<i>Consultants and professional services: Business and advisory services</i>	7 599	7 262	9 679	16 914	16 914	17 607	19 492	20 553
<i>Consultants and professional services: Legal costs</i>	268	189	1 937	1 028	1 028	1 075	1 172	1 242
<i>Contractors</i>	3 173	6 247	6 704	7 092	7 092	7 203	7 854	8 325
<i>Agency and support / outsourced services</i>	22 414	19 342	16 562	14 650	14 650	18 357	21 198	20 744
<i>Entertainment</i>	1 217	640	463	4 277	4 277	6 834	7 081	7 507
<i>Fleet services (including government motor transport)</i>	–	–	–	137	137	–	–	–
<i>Inventory: Fuel, oil and gas</i>	35	–	10	101	101	106	116	123
<i>Inventory: Materials and supplies</i>	–	–	10	–	–	–	–	–
<i>Inventory: Other consumables</i>	358	242	557	789	789	964	1 056	1 120
<i>Inventory: Stationery and printing</i>	3 533	4 519	6 596	5 042	5 042	5 281	5 700	6 044
<i>Lease payments</i>	3 976	3 094	2 513	3 539	3 539	3 743	4 007	4 246
<i>Property payments</i>	99	1 598	3 406	4 689	4 689	4 973	5 357	5 679
<i>Travel and subsistence</i>	35 714	27 867	38 638	36 207	36 207	40 891	43 203	45 633
<i>Training and development</i>	2 023	5 767	2 789	4 553	4 553	4 729	5 229	5 543
<i>Operating expenditure</i>	4 906	4 025	4 821	4 757	4 757	5 021	5 394	5 717
<i>Venues and facilities</i>	2 211	5 129	9 585	6 268	6 268	5 372	5 684	6 022
<i>Interest and rent on land</i>	–	–	333	–	–	–	–	–
Transfers and subsidies	3 440 230	3 891 873	3 709 582	4 038 442	4 038 442	4 559 018	5 156 580	5 570 030
Departmental agencies and accounts	1 876 540	2 318 315	2 243 054	2 633 548	2 633 548	2 857 465	3 243 959	3 551 164
Higher education institutions	69 452	113 447	173 200	–	–	–	–	–
Public corporations and private enterprises	1 075 099	1 185 833	1 246 280	924 764	924 764	972 641	1 047 863	1 102 492
Non-profit institutions	418 439	273 576	46 070	480 130	480 130	728 912	864 758	916 374
Households	700	702	978	–	–	–	–	–
Payments for capital assets	3 322	7 659	10 603	3 258	3 258	3 419	3 598	3 815
Machinery and equipment	3 322	7 659	10 603	3 258	3 258	3 419	3 598	3 815
Payments for financial assets	76	80	19	–	–	–	–	–
Total	3 703 468	4 183 857	4 051 902	4 407 003	4 407 003	4 955 930	5 577 625	6 020 823

Expenditure trends

Spending over the medium term will focus on human capital development, knowledge generation and exploitation, investment in research and development infrastructure, and pursuing African advancement and leveraging international cooperation. The department will also continue to encourage South African innovation by funding marketable products emerging from research and the process of incubation.

Expenditure increased from R3.7 billion in 2008/09 to R4.4 billion in 2011/12, at an average annual rate of 6 per cent. The slowdown in overall expenditure is due to the fact that the Square Kilometre Array project was reallocated to over the medium term due to slow spending in 2011/12.

Over the medium term, expenditure is expected to increase to R6 billion, at an average annual rate of 11 per cent. This is mainly due to an additional allocation of R350 million received over the medium term from the economic competitiveness and support package comprised: R60 million for technology localisation, R110 million for the internship programme and R180 million for research into satellite development, titanium and nanotechnology. This allocation was made specifically to stimulate the economy and create jobs. The increase in spending is further due to the funding reallocated from 2011/12 to 2012/13 and 2013/14 for the Square Kilometre Array project, additional funds for improved conditions of service in the department and its entities, and the expansion of human resources and research infrastructure to support the development of research capacity in universities.

The department spends R17.9 million or 0.4 per cent of its total allocation in 2011/12 on consultants to support critical skills and provide technical expertise. Spending on consultants is expected to increase to R21.8 million in over the medium term, at an average annual rate of 6.7 per cent, as a result of inflationary adjustments and an increase in projects.

Infrastructure spending

In September 2006, South Africa and Australia were shortlisted as suitable sites to host the core of the Square Kilometre Array radio telescope. The announcement of the successful bidding country is expected before the end of 2012. The shortlisted countries are building demonstration telescopes to develop the technology and optimise alignment with the scientific research expectations. The South African demonstration telescope, MeerKAT, is being constructed in two phases. The seven-dish array prototype was completed in 2010. R894.6 million is allocated over the medium term to complete the MeerKAT telescope, which is expected to be fully assembled by 2013/14.

R535 million has been spent on research, development and infrastructure between 2008/09 and 2011/12, and R1.4 billion is been allocated over the medium term. The allocation earmarked for research infrastructure will be used to provide state of the art research equipment and infrastructure to the scientific community to ensure global competitiveness in research, development and innovation. Between 2006/07 and 2011/12, the department, through its implementing agency, the National Research Foundation, awarded a grant to the University of the Western Cape to acquire a 200 kilovolt field emission gun transmission electron microscope for R10.2 million. The microscope will be used for research in critical areas, such as photovoltaics, superconductors, bioceramic coatings, and metal semi-conductor interaction. The department awarded a R10 million scanning auger nanoprobe and the PHI5000 XPS versaprobe to the University of the Free State. The research focus areas for this equipment are nano solid state lighting, flat panel displays, solar cells, corrosion of alloys and steels (airplanes), drug development, biology cell structures, catalyst development, and physical metallurgy.

In 2008/09, the department allocated R69 million to the Nelson Mandela Metropolitan University to establish a centre for high resolution transmission electron microscopy by acquiring a high resolution transmission electron microscope, a feeder transmission electron microscope and a variety of sample preparation equipment. Sasol and the Department of Higher Education and Training contributed to the establishment of the centre. The centre, which was officially launched in October 2011, aims to promote knowledge and human capital development in areas of strategic importance to South Africa, to foster collaborative research, to develop interdisciplinary research, and to systematically develop a creative research training environment that is internationally competitive.

The South African National Research Network and the Centre for High Performance Computing together constitute the department's cyber infrastructure initiative. Spending on cyber infrastructure amounted to R404.1 million between 2007/08 and 2010/11, and R523.4 million has been allocated over the MTEF period. The first phase of the South African National Research Network has been completed and 105 research sites have been connected to the network's national backbone. Spending increased from R172.5 million in 2007/08 to R576.6 million in 2010/11. Total funding is expected to increase to R1.1 billion (cumulative) over the MTEF period.

Personnel information

Table 34.3 Details of approved establishment and personnel numbers according to salary level¹

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of posts additional to the establishment	Actual			Mid-year ²	Medium-term estimate		
				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Department	447	425	-	339	421	421	435	470	470	470
Salary level 1 – 6	62	60	-	61	57	58	62	64	64	64
Salary level 7 – 10	129	123	-	89	122	121	125	143	143	143
Salary level 11 – 12	140	132	-	103	134	143	142	156	156	156
Salary level 13 – 16	116	110	-	86	108	99	106	107	107	107
Administration	230	221	-	155	219	219	225	249	249	249
Salary level 1 – 6	44	43	-	40	41	41	43	47	47	47
Salary level 7 – 10	80	77	-	61	81	81	79	91	91	91
Salary level 11 – 12	54	51	-	19	48	48	51	58	58	58
Salary level 13 – 16	52	50	-	35	49	49	52	53	53	53
Research, Development and Innovation	49	49	-	43	38	38	48	39	39	39
Salary level 1 – 6	5	5	-	3	3	3	5	3	3	3
Salary level 7 – 10	8	8	-	4	4	4	8	4	4	4
Salary level 11 – 12	19	19	-	20	16	16	18	16	16	16
Salary level 13 – 16	17	17	-	16	15	15	17	16	16	16
International Cooperation and Resources	61	58	-	59	61	61	58	69	69	69
Salary level 1 – 6	3	3	-	6	4	4	3	4	4	4
Salary level 7 – 10	24	24	-	15	22	22	23	26	26	26
Salary level 11 – 12	17	16	-	24	19	19	16	20	20	20
Salary level 13 – 16	17	15	-	14	16	16	16	19	19	19
Human Capital and Knowledge Systems	44	40	-	36	43	43	42	46	46	46
Salary level 1 – 6	4	4	-	7	3	4	5	4	4	4
Salary level 7 – 10	6	5	-	2	6	5	4	8	8	8
Salary level 11 – 12	22	20	-	18	22	31	30	31	31	31
Salary level 13 – 16	12	11	-	9	12	3	3	3	3	3
Socio Economic Partnerships	63	57	-	46	60	60	62	67	67	67
Salary level 1 – 6	6	5	-	5	6	6	6	6	6	6
Salary level 7 – 10	11	9	-	7	9	9	11	14	14	14
Salary level 11 – 12	28	26	-	22	29	29	27	31	31	31
Salary level 13 – 16	18	17	-	12	16	16	18	16	16	16

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

2. As at 30 September 2011.

The department had an establishment of 447 posts as at 30 September 2011. The number of filled posts grew from 339 in 2008/09 to 435 in 2011/12 and is expected to grow to 470 over the MTEF period. The growth is attributed to the expansion in the department's activities due to the establishment of the South African National Space Agency, the Technology Innovation Agency and the National Intellectual Property Management Office to respond to the economic and social challenges of the economy.

As at 30 September 2011, there were 12 vacancies in the department, most of which are in salary levels 8 and 11 to 12, and the senior management level. Most of the vacancies are in the *Administration* programme and were created by resignations and transfers into other government departments. The recruitment process is underway

to fill all vacant and new posts, which, in the interim, are filled on contract basis or using secondments. The ratio of support staff to line function staff in the department was 1:12.

Departmental receipts

Table 34.4 Receipts

R thousand	Audited outcome			Adjusted estimate	Revised estimate	Medium-term receipts estimate		
	2008/09	2009/10	2010/11	2011/12		2012/13	2013/14	2014/15
Departmental receipts	333	1 585	468	350	875	116	116	116
Sales of goods and services produced by department	26	30	35	40	46	28	28	28
Other sales	26	30	35	40	46	28	28	28
of which:								
Service rendered: Commission on insurance	26	28	32	35	26	27	27	27
Sales of equipment less than R5 000: Domestic furniture	–	–	–	–	19	–	–	–
Replacement of security cards	–	2	3	5	1	1	1	1
Interest, dividends and rent on land	9	3	8	10	4	8	8	8
Interest	9	3	8	10	4	8	8	8
Sales of capital assets	–	–	–	–	257	–	–	–
Transactions in financial assets and liabilities	298	1 552	425	300	568	80	80	80
Total	333	1 585	468	350	875	116	116	116

The department generates departmental receipts from miscellaneous items such as debt repayments, interests on bank accounts and recovered private telephone costs. Receipts increased from R333 000 in 2008/09 to R875 000 in 2011/12, at an average annual rate of 38 per cent, due to auction of assets in 2011/12. Over the medium term, departmental revenue is expected to remain stable at R116 000 due to a projected decrease in transactions in financial assets and liabilities as no assets are planned to be auctioned over the medium term.

Programme 1: Administration

Table 34.5 Administration

Subprogramme	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Ministry	2 890	3 192	3 303	3 494	3 669	3 853	4 065
Management	56 617	58 208	64 812	72 085	82 123	79 754	91 225
Corporate Services	76 645	90 285	113 204	108 108	104 252	115 495	121 215
Governance	3 444	5 772	5 425	8 022	8 411	8 755	9 281
Office Accommodation	1 439	1 665	2 114	3 992	4 196	4 414	4 679
Total	141 035	159 122	188 858	195 701	202 651	212 271	230 465
Change to 2011 Budget estimate				3 585	4 751	(6 191)	(1 730)

Economic classification

	138 119	151 582	179 481	192 729	199 581	209 042	227 042
Current payments							
Compensation of employees	60 682	82 637	94 254	113 393	117 160	117 415	129 917
Goods and services	77 437	68 945	85 016	79 336	82 421	91 627	97 125
of which:							
Administrative fees	4 322	1 942	2 601	4 347	4 594	4 832	5 123
Advertising	8 930	2 585	12 098	2 031	2 102	2 553	2 706
Assets less than the capitalisation threshold	522	438	215	451	475	518	549
Audit cost: External	1 614	1 964	2 931	1 794	1 868	2 082	2 207

Table 34.5 Administration (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Economic classification							
<i>Bursaries: Employees</i>	1 172	967	1 156	1 912	1 991	2 218	2 351
<i>Catering: Departmental activities</i>	1 082	751	677	1 142	1 202	1 315	1 394
<i>Communication</i>	3 289	4 758	4 485	4 805	5 070	5 528	5 860
<i>Computer services</i>	3 033	8 194	3 738	4 489	4 726	5 172	5 482
<i>Consultants and professional services: Business and advisory services</i>	6 818	3 564	4 930	9 009	9 531	10 341	10 961
<i>Consultants and professional services: Legal costs</i>	268	189	234	601	626	698	740
<i>Contractors</i>	2 540	5 441	5 906	5 343	5 580	6 188	6 559
<i>Agency and support / outsourced services</i>	16 815	9 409	9 943	4 894	5 143	7 362	7 804
<i>Entertainment</i>	563	247	241	492	523	563	597
<i>Inventory: Fuel, oil and gas</i>	35	–	10	101	106	116	123
<i>Inventory: Materials and supplies</i>	–	–	10	–	–	–	–
<i>Inventory: Other consumables</i>	178	220	538	680	710	788	835
<i>Inventory: Stationery and printing</i>	1 561	2 480	4 648	3 004	3 146	3 474	3 682
<i>Lease payments</i>	3 059	2 200	1 743	2 419	2 554	2 779	2 946
<i>Property payments</i>	3	1 417	1 707	4 304	4 568	4 930	5 226
<i>Travel and subsistence</i>	15 834	11 617	17 413	17 017	18 137	19 437	20 603
<i>Training and development</i>	2 005	5 711	2 789	4 103	4 273	4 761	5 047
<i>Operating expenditure</i>	3 055	3 277	3 779	3 348	3 534	3 852	4 083
<i>Venues and facilities</i>	739	1 574	3 224	3 050	1 962	2 120	2 247
<i>Interest and rent on land</i>	–	–	211	–	–	–	–
Transfers and subsidies	649	1 005	1 425	1 000	1 000	1 051	1 114
Higher education institutions	49	135	80	–	–	–	–
Public corporations and private enterprises	–	–	284	–	–	–	–
Non-profit institutions	600	418	636	1 000	1 000	1 051	1 114
Households	–	452	425	–	–	–	–
Payments for capital assets	2 195	6 458	7 940	1 972	2 070	2 178	2 309
Machinery and equipment	2 195	6 458	7 940	1 972	2 070	2 178	2 309
Payments for financial assets	72	77	12	–	–	–	–
Total	141 035	159 122	188 858	195 701	202 651	212 271	230 465
Details of transfers and subsidies							
Non-profit institutions							
Current	600	418	636	1 000	1 000	1 051	1 114
Institutional and programme support	600	418	636	1 000	1 000	1 051	1 114
Households							
Social benefits							
Current	–	452	425	–	–	–	–
Households	–	452	425	–	–	–	–
Higher education institutions							
Current	49	135	80	–	–	–	–
Institutional and programme support	49	135	80	–	–	–	–
Public corporations and private enterprises							
Public corporations							
Other transfers to public corporations							
Current	–	–	284	–	–	–	–
Institutional and programme support	–	–	284	–	–	–	–

Expenditure trends

Expenditure increased from R141 million in 2008/09 to R195.7 million in 2011/12, at an average annual rate of 11.5 per cent. This can be attributed to the expansion of executive support, procurement of the performance information management system, establishment of the ministerial review committee and the introduction of the ministerial participation programme. Over the medium term, expenditure is expected to increase to R230.5 million, at an average annual rate of 5.6 per cent. The increase is due to inflation related adjustments to spending in compensation of employees and on goods and services.

Expenditure on consultants increased from R7.1 million in 2008/09 to R9.6 million in 2011/12, at an average annual rate of 10.7 per cent, due to the increased use of facilities management services. Over the medium term, spending on consultants is expected to increase to R11.7 million in 2014/15, at an average annual rate of 6.8 per cent, to accommodate inflationary increases.

Programme 2: Research, Development and Innovation

Objectives and measures

- Support research, development and innovation initiatives in the strategic research areas of space, energy, biosciences and innovation research to enhance South Africa's knowledge and skills base by:
 - increasing the number of undergraduates and postgraduates students who are funded in space, bioscience and energy related research from 274 in 2012/13 to 310 by 2014/15
 - completing 15 MeerKAT antennae by 2014/15
 - publishing 20 publications resulting from research and development funded initiatives by 2014/15
 - supporting 6 research chairs and 2 centres of competence by 31 March 2013
 - creating a total of 400 construction jobs through the MeerKAT antennae project in the Northern Cape by 2014/15.
- Create and support multidirectional policy and institutional linkages between research and development and commercialisation to increase the commercialisation potential of research and development outcomes by:
 - supporting 15 new technology based enterprises by 2014/15
 - supporting 8 centres of competence demonstrators by 2014/15
 - training 140 candidates in internet protocol and technology transfer by 2014/15
 - increasing the number of requests for satellite datasets honoured from 5000 in 2012/13 to 6000 in 2013/14
 - developing 2 prototypes and registering 4 patents by 2014/15.
- Promote coordination among national systems of innovation institutions in space, energy and bioscience-related research that will enable the effective and efficient use of resources and the pooling of expertise by developing 10 policy briefs and concept documents by 2014/15.

Subprogrammes

- *Space Science* focuses on creating the necessary strategic and institutional regimes for the development of a viable space programme and a functional earth observing system. This includes providing strategic leadership on key aspects linked to the construction of the Square Kilometre Array demonstrator telescope and related activities. Targeted initiatives include developing space applications, products and services that respond to the needs of end users across all tiers of government. This subprogramme had a staff complement of 11 and a total budget of R129.4 million in 2011/12, of which 82.5 per cent was allocated to the South African National Space Agency and 8.7 per cent to the Square Kilometre Array project. No savings in 2012/13 have been identified in this subprogramme.
- *Hydrogen and Energy* provides policy direction in the long term and cross-cutting research, development and innovation in the energy sector. It plays 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. This subprogramme had a staff complement of 10 and a total budget of R140.6 million in 2011/12, of which 93 per cent was used on transfers and subsidies for the

energy grand challenge, health innovation and HIV and AIDS prevention, treatment technologies, and the hydrogen strategy. Over the medium term, focus will be placed on developing the hydrogen strategy catalysis and hydrogen strategy systems centres of competence to facilitate human capacity development, capital acquisitions and the undertaking of projects. No savings in 2012/13 have been identified in this subprogramme.

- *Biotechnology and Health* provides policy leadership for developing a world class bioeconomy in South Africa and to support health interventions aimed at combating infectious diseases such as HIV and AIDS, malaria and TB. This subprogramme had a staff complement of 12 and a total budget of R112.9 million in 2011/12, of which 56 per cent was used for health innovation research, while 40 per cent was used for implementing the biotechnology strategy. Over the medium term, the focus for health motivation and biotechnology will be to increase the number and quality of South African developed products and services for the prevention and treatment of HIV and AIDS through increased support for basic and applied research in the areas of antiretrovirals, microbicides, vaccines and diagnostics. Successful projects have included the piloting of telemedicine and telebioeconomy. No savings in 2012/13 have been identified in this subprogramme.
- *Innovation Planning and Instruments* drives strategic interventions and creates support instruments which 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 subprogramme had a staff complement of 27 and a total budget of R471.7 million in 2011/12, of which 92 per cent was used for supporting the activities of the Technology Innovation Agency. The implementation of the Technology Innovation Agency and the National Intellectual Property Management office from Publicly Financed Research and Development Act (2008) will support the commercialisation of locally developed technologies, and provide a sound management system for intellectual property developed using public money. No savings in 2012/13 have been identified in this subprogramme.

Expenditure estimates

Table 34.6 Research, Development and Innovation

Subprogramme	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
R thousand							
Space Science	340 999	575 166	88 607	129 434	380 146	496 315	571 040
Hydrogen and Energy	139 650	146 755	130 844	140 578	147 887	155 500	164 646
Biotechnology and Health	228 447	253 907	153 974	112 920	131 460	139 229	145 913
Innovation Planning and Instruments	143 878	165 522	429 349	471 678	496 879	526 618	558 216
Total	852 974	1 141 350	802 774	854 610	1 156 372	1 317 662	1 439 815
Change to 2011 Budget estimate				–	44 000	44 850	90 634

Economic classification

	23 508	32 510	37 232	50 828	53 924	57 510	60 960
Current payments							
Compensation of employees	13 572	17 136	21 156	31 676	31 067	33 720	37 390
Goods and services	9 936	15 374	16 036	19 152	22 857	23 790	23 570
<i>of which:</i>							
Administrative fees	70	116	102	96	100	107	113
Advertising	843	956	506	346	364	365	387
Assets less than the capitalisation threshold	15	17	156	92	94	97	103
Audit cost: External	–	450	79	–	–	–	–
Bursaries: Employees	–	–	–	22	22	22	23
Catering: Departmental activities	180	181	247	167	179	175	186
Communication	634	789	801	504	519	529	560
Computer services	38	240	403	345	350	360	381
Consultants and professional services:	319	51	1 428	2 766	853	877	929
Business and advisory services							
Contractors	173	585	140	1 007	828	843	894

Table 34.6 Research, Development and Innovation (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Economic classification							
Agency and support / outsourced services	1 761	5 798	3 067	5 518	8 838	9 199	8 106
Entertainment	155	20	12	2 989	5 465	5 633	5 971
Inventory: Other consumables	10	1	7	61	63	64	68
Inventory: Stationery and printing	520	430	690	402	413	423	448
Lease payments	82	195	416	252	257	264	280
Property payments	–	1	1 542	–	–	–	–
Travel and subsistence	4 917	4 408	4 555	3 599	3 498	3 799	4 027
Training and development	–	56	–	450	456	468	496
Operating expenditure	86	442	320	259	273	273	289
Venues and facilities	133	638	1 565	277	285	292	309
Interest and rent on land	–	–	40	–	–	–	–
Transfers and subsidies	829 262	1 108 500	763 848	803 562	1 102 217	1 259 909	1 378 596
Departmental agencies and accounts	468 526	748 945	513 549	636 827	705 142	744 343	832 119
Higher education institutions	54 149	82 853	124 774	–	–	–	–
Public corporations and private enterprises	32 556	103 423	124 754	–	–	–	–
Non-profit institutions	273 681	173 279	759	166 735	397 075	515 566	546 477
Households	350	–	12	–	–	–	–
Payments for capital assets	203	340	1 688	220	231	243	259
Machinery and equipment	203	340	1 688	220	231	243	259
Payments for financial assets	1	–	6	–	–	–	–
Total	852 974	1 141 350	802 774	854 610	1 156 372	1 317 662	1 439 815

Details of transfers and subsidies

Departmental agencies and accounts							
Departmental agencies (non-business entities)							
Current	204 262	256 720	513 549	636 827	705 142	744 343	832 119
Biofuels	–	–	5 000	–	–	–	–
Biotechnology strategy	2 000	50 383	15 840	–	–	–	–
Energy grand challenge	–	500	200	42 700	46 720	49 149	51 914
Health innovation	–	15 978	12 386	–	–	–	–
Hydrogen strategy	8 680	11 700	17 199	–	–	–	–
Innovation projects	–	7 000	5 462	17 912	21 187	27 019	28 640
Innovation Fund	140 000	149 229	–	–	–	–	–
Technology Innovation Agency	–	–	410 628	433 816	455 196	478 217	506 910
HIV and AIDS prevention and treatment technologies	–	–	18 206	19 298	20 263	21 317	22 596
International Centre for Genetic Engineering and Biotechnology	10 000	9 930	9 900	5 100	10 395	10 936	11 592
Space Science	–	–	–	–	–	–	–
Space science	18 086	–	6 104	–	44 000	45 000	91 000
Square Kilometre Array	25 496	12 000	12 624	11 282	11 842	12 458	13 205
South African National Space Agency	–	–	–	106 719	95 539	100 247	106 262
Capital	264 264	492 225	–	–	–	–	–
Space science	–	1 932	–	–	–	–	–
Square Kilometre Array	264 264	490 293	–	–	–	–	–

Table 34.6 Research, Development and Innovation (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Details of transfers and subsidies							
Non-profit institutions							
Current	273 681	173 279	759	114 832	123 839	130 127	137 912
Biofuels	5 000	5 000	–	5 300	5 565	5 854	6 205
Biotechnology strategy	175 257	123 946	–	35 430	42 758	44 906	47 589
Energy grand challenge	44 268	5 000	–	–	–	–	–
Health innovation	14 500	17 570	–	38 452	41 635	43 725	46 337
Hydrogen strategy	18 000	800	–	30 356	30 874	32 479	34 428
Innovation projects	–	3 000	–	–	–	–	–
Technology Top 100	–	–	–	5 294	3 007	3 163	3 353
HIV and AIDS prevention and treatment technologies	16 601	17 228	–	–	–	–	–
Space science	55	735	759	–	–	–	–
Capital	–	–	–	51 903	273 236	385 439	408 565
Hydrogen strategy	–	–	–	51 903	54 498	57 332	60 772
Square Kilometre Array	–	–	–	–	218 738	328 107	347 793
Households							
Social benefits							
Current	–	–	12	–	–	–	–
Households	–	–	12	–	–	–	–
Households							
Other transfers to households							
Current	350	–	–	–	–	–	–
Households	350	–	–	–	–	–	–
Higher education institutions							
Current	15 391	38 624	85 775	–	–	–	–
Biofuels	–	–	–	–	–	–	–
Biotechnology strategy	200	3 976	41 980	–	–	–	–
Energy grand challenge	–	328	18 758	–	–	–	–
Health innovation	–	–	11 850	–	–	–	–
Hydrogen strategy	10 000	31 843	9 000	–	–	–	–
Innovation projects	–	–	4 187	–	–	–	–
Space science	5 191	2 477	–	–	–	–	–
Capital	38 758	44 229	38 999	–	–	–	–
Hydrogen strategy	38 758	44 229	38 999	–	–	–	–
Space science	–	–	–	–	–	–	–
Public corporations and private enterprises							
Public corporations							
Other transfers to public corporations							
Current	16 615	69 423	89 322	–	–	–	–
Biotechnology strategy	50	1 699	18 164	–	–	–	–
Energy grand challenge	–	34 000	23 000	–	–	–	–
Health innovation	1 000	2 000	13 636	–	–	–	–
Hydrogen strategy	8 750	6 597	11 800	–	–	–	–
Innovation projects	–	–	1 094	–	–	–	–
Innovation Fund	–	2 000	–	–	–	–	–
Space science	6 815	23 127	21 628	–	–	–	–
Capital	15 941	34 000	35 432	–	–	–	–
Hydrogen strategy	1 742	–	–	–	–	–	–
Space science	14 199	34 000	35 432	–	–	–	–

Expenditure trends

Expenditure increased from R853 million in 2008/09 to R854.6 million in 2011/12, at an average annual rate of 0.1 per cent, and is expected to increase to R1.4 billion over the medium term, at an average annual rate of 19 per cent. The increase over the medium term is due to funds received from the economic competitiveness and support package of R44 million in 2012/13, R45 million in 2013/14 and R91 million in 2014/15 for research into satellite development, titanium and nanotechnology. This research is expected to boost industry and create jobs. The increase in spending is also due to the rescheduling of spending on the Square Kilometre Array project from 2011/12 to 2012/13 and 2013/14. Allocations were reallocated as follows: R218.7 million in 2012/13, R328.1 million in 2013/14 and R347.8 million in 2014/15.

Spending on consultants increased from R319 000 in 2008/09 to R2.8 million in 2011/12, at an average annual rate of 105.4 per cent, due to the Square Kilometre Array project. These consultants support critical skills and provide technical expertise. Over the medium term, expenditure on this item is expected to decrease to R929 000, at an average annual rate of 30.5 per cent, due to public entities taking over the work of some of the consultants.

Programme 3: International Cooperation and Resources

Objectives and measures

- Stimulate international technology transfer and knowledge production and innovation in research by leveraging off foreign science, technology and innovation funds of R520 million by 2014/15 by increasing the value of South African and foreign funds spent on science and technology based socioeconomic development in Africa from R46.5 million in 2012/13 to R61 million in 2014/15.
- Increase access to global knowledge and to science, technology and innovation networks through international bilateral agreements, to facilitate international technology transfer, and a competent and equitable pool of science, engineering and technology skills, to support the national system of innovation by exposing South African researchers to cooperation opportunities through a network of at least 2 600 international researchers over the MTEF period.
- Promote the involvement of the next generation of researchers in the international knowledge network by ensuring participation of at least 1 200 South African students participating in international cooperative science, technology and innovation research projects over the MTEF period, thus contributing to the development of a skilled future workforce able to promote South Africa's national system of innovation.

Subprogrammes

- *Multilateral Cooperation and Africa* seeks to advance and facilitate South Africa's participation in strategic African bilateral and multilateral partnerships, and global multilateral science, technology and innovation organisations so as to strengthen the national system of innovation and to achieve shared economic and social development in the region and the continent. This subprogramme had a staff complement of 19 and a total budget of R60 million in 2011/12, of which 54 per cent was transferred to the Africa Institute of South Africa. No savings in 2012/13 have been identified in this subprogramme.
- *International Resources* leverages funding, human capital and knowledge; promotes the hosting of global research infrastructures in South Africa, the Southern African Development Community (SADC) region and the African continent; and facilitates access to international research facilities to benefit researchers and students through the national system of innovation. A specific focus 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 programme. This subprogramme had a staff complement of 20 and a total budget of R47.2 million in 2011/12, of which 55 per cent was used for transfer payments, while 22 per cent was used for goods and services such as travel and subsistence. No savings in 2012/13 have been identified in this subprogramme.

- *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. South Africa will host the next Brazil-Russia-India-China-South Africa forum science and technology senior officials meeting in 2012, which will also be used as a platform to strategically put in place processes for further implementation. This subprogramme had a staff complement of 20 and a total budget of R30 million in 2011/12, of which 43 per cent was used for transfer payments, while 22 per cent was used for goods and services such as travel and subsistence. No savings in 2012/13 have been identified in this subprogramme.

Expenditure estimates

Table 34.7 International Cooperation and Resources

Subprogramme	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Multilateral Cooperation and Africa	57 194	54 601	58 236	59 955	58 956	62 496	66 260
International Resources	42 163	39 238	39 853	47 212	50 550	53 212	56 325
Overseas Bilateral Cooperation	36 957	23 635	33 295	30 027	31 720	36 416	38 520
Total	136 314	117 474	131 384	137 194	141 226	152 124	161 105
Change to 2011 Budget estimate				–	(666)	(779)	(930)

Economic classification

	48 936	41 596	51 118	53 808	61 285	68 267	72 124
Current payments							
Compensation of employees	30 393	27 915	31 154	30 531	35 467	40 959	43 418
Goods and services	18 543	13 681	19 924	23 277	25 818	27 308	28 706
<i>of which:</i>							
Administrative fees	60	275	191	118	124	129	137
Advertising	404	296	341	373	393	415	440
Assets less than the capitalisation threshold	10	9	29	43	45	47	50
Audit cost: External	–	–	–	82	–	–	–
Bursaries: Employees	–	–	–	314	–	–	–
Catering: Departmental activities	362	414	271	311	387	409	432
Communication	1 272	1 165	1 150	1 194	1 587	1 674	1 775
Computer services	54	313	425	107	138	146	156
Consultants and professional services: Business and advisory services	238	2	143	208	219	231	245
Consultants and professional services: Legal costs	–	–	1 703	427	449	474	502
Contractors	347	2	25	453	476	502	532
Agency and support / outsourced services	2 883	923	794	3 920	4 042	4 289	4 465
Entertainment	452	194	98	723	762	803	852
Fleet services (including government motor transport)	–	–	–	137	–	–	–
Inventory: Other consumables	139	2	12	29	172	183	195
Inventory: Stationery and printing	454	357	415	611	642	678	719
Lease payments	540	433	226	548	577	608	643
Property payments	96	180	157	385	405	427	453
Travel and subsistence	8 605	6 885	10 000	9 997	11 930	12 635	13 232
Training and development	17	–	–	–	–	–	–
Operating expenditure	1 587	215	317	852	898	945	1 003
Venues and facilities	1 023	2 016	3 627	2 445	2 572	2 713	2 875
Interest and rent on land	–	–	40	–	–	–	–

Table 34.7 International Cooperation and Resources (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Economic classification							
Transfers and subsidies	86 913	75 642	79 786	82 872	79 402	83 290	88 381
Departmental agencies and accounts	44 265	42 793	50 868	32 440	33 643	35 237	37 487
Higher education institutions	2 763	3 805	6 417	–	–	–	–
Public corporations and private enterprises	34 344	26 938	18 235	–	–	–	–
Non-profit institutions	5 541	2 106	4 251	50 432	45 759	48 053	50 894
Households	–	–	15	–	–	–	–
Payments for capital assets	465	236	480	514	539	567	600
Machinery and equipment	465	236	480	514	539	567	600
Total	136 314	117 474	131 384	137 194	141 226	152 124	161 105

Details of transfers and subsidies

Departmental agencies and accounts							
Departmental agencies (non-business entities)							
Current	44 265	42 793	50 868	32 440	33 643	35 237	37 487
Africa Institute of South Africa	30 464	29 280	30 594	32 440	33 643	35 237	37 487
Global science: Bilateral cooperation	12 900	7 734	9 500	–	–	–	–
Global science: International resources	401	3 329	4 686	–	–	–	–
Global science: Multilaterals and Africa	500	2 450	6 088	–	–	–	–
Non-profit institutions							
Current	5 541	2 106	4 251	50 432	45 759	48 053	50 894
Global science: Bilateral cooperation	799	–	–	13 000	11 600	12 203	12 935
Global science: International resources	592	1 706	4 143	26 132	26 759	28 150	29 839
Global science: Multilaterals and Africa	4 150	400	108	11 300	7 400	7 700	8 120
Households							
Social benefits							
Current	–	–	15	–	–	–	–
Households	–	–	15	–	–	–	–
Higher education institutions							
Current	2 763	3 805	6 417	–	–	–	–
Global science: International resources	1 557	1 305	4 549	–	–	–	–
Global science: Multilaterals and Africa	1 206	2 500	1 868	–	–	–	–
Public corporations and private enterprises							
Public corporations							
Other transfers to public corporations							
Current	34 344	26 938	18 235	–	–	–	–
Gifts and donations	–	–	–	–	–	–	–
Global science: Bilateral cooperation	6 324	1 266	1 700	–	–	–	–
Global science: International resources	21 051	20 672	11 527	–	–	–	–
Global science: Multilaterals and Africa	6 969	5 000	5 008	–	–	–	–

Expenditure trends

Expenditure increased from R136.3 million in 2008/09 to R137.2 million in 2011/12, at an average annual rate of 0.2 per cent. The slight increase is attributable to maintenance of projects aimed at strengthening bilateral and multilateral cooperation and leveraging international resources.

Over the medium term, expenditure is expected to increase to R161.1 million, at an average annual rate of 5.5 per cent, in line with inflationary expectations.

Expenditure on consultants increased from R238 000 in 2008/09 to R635 000 in 2011/12, at an average annual rate of 38.7 per cent. These consultants support critical skills and provide technical expertise. Over the medium term, expenditure on this item is expected to increase to R747 000, at an average annual rate of 5.6 per cent, in line with inflationary expectations.

Programme 4: Human Capital and Knowledge Systems

Objectives and Measures

- Enhance South Africa's global competitiveness by building a science, engineering and technology human capital pipeline thereby increasing:
 - the number of postgraduate research students supported from 6 300 in 2012/13 to 6 900 in 2014/15
 - the number of people participating in science awareness and engagement initiatives from 375 000 in 2012/13 to 422 700 in 2014/15.
- Promote and enhance research productivity to increase South Africa's world share of knowledge outputs by:
 - increasing the number of researchers supported from 2 900 in 2012/13 to 3 100 in 2014/15
 - increasing the number of book chapters from 240 to 260, the number of patents from 20 to 40 and products, prototypes and artefacts from 140 to 160 in 2012/13 and 2014/15.
- Identify and support the development of new and emerging research areas and technologies for their application in the improvement of quality of life and enhancement of economic competitiveness by:
 - facilitating the first intake of students into the national nanoscience postgraduate teaching and training platform in 2012
 - supporting 7 nanotechnology flagship projects by 2014/15.
- Ensure the availability of appropriate infrastructure for enhancement of research, development and innovation competitiveness by:
 - increasing the availability of broadband connectivity for research, development and innovation from 28 research sites connected in 2012/13 to a cumulative 92 research sites connected to the South African National Research Network in 2014/15
 - increasing the number of research equipment grants awarded to increase knowledge outputs from 50 research equipment grants in 2012/13 to a cumulative 170 by 2014/15
 - increasing the number of postgraduate students to be trained from 2 500 in 2012/13 to 3 000 by 2014/15
 - increasing the number of researchers accessing infrastructure from 250 in 2012/13 to 350 by 2014/15.
- Promote and develop research, development and innovation in indigenous knowledge systems for improved quality of life by:
 - developing legislation for the protection and preservation of indigenous knowledge by 2014/15
 - ensuring that an approved accreditation and certification system is in place by 2014/15
 - ensuring that Northern Cape and Free State have functional national record systems in place by 2012/13
 - establishing a fully functional national bioprospecting platform for the bioeconomy by 2014/15.

Subprogrammes

- *Human Capital and Science Platforms* formulates and implements programmes that address the availability of human capital for science, technology and innovation; and ensures the production of new knowledge to build South Africa's knowledge resources. The primary purposes are to: promote science and technology through a range of programmes such as the South African Research Chairs Initiative and centres of excellence with the aim of encouraging the production of a new generation of researchers; support emerging researchers; and encourage and maximise the output of actively established researchers. This subprogramme had a staff complement of 20 and a total budget of R1.4 billion in 2011/12, of which 78 per cent was transferred to the National Research Foundation as its core grant, the majority of which was distributed as bursaries for postgraduate students, while 1 per cent was transferred to the Academy of Science of South Africa. No savings in 2012/13 have been identified in this subprogramme.

- *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. It focuses on developing indigenous knowledge and integrating it into the national system of innovation by developing and integrating policy, and undertaking strategic projects through the national indigenous knowledge systems office. This subprogramme had a staff complement of 12 and a total budget of R17.1 million in 2011/12, of which 51 per cent was used for transfer payments for indigenous knowledge systems and 35.5 per cent on compensation of employees. No savings in 2012/13 have been identified in this subprogramme.
- *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 innovations. This subprogramme had a staff complement of 10 and a total budget of R527.5 million in 2011/12, of which 81 per cent was used for the acquisition and refurbishment of infrastructure, while 19 per cent was used for the development of new and emerging research areas. The subprogramme is currently supporting the development of 4 emerging research areas: nanotechnology, synthetic biology, robotics and photonics. No savings in 2012/13 have been identified in this subprogramme.

Expenditure estimates

Table 34.8 Human Capital and Knowledge Systems

Subprogramme	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11		2011/12	2012/13	2013/14
R thousand							
Human Capital and Science Platforms	1 061 963	1 119 136	1 243 722	1 405 844	1 433 561	1 695 652	1 864 800
Indigenous Knowledge Systems	12 122	23 525	25 259	17 132	28 437	31 241	33 115
Emerging Research Areas and Infrastructure	380 613	448 696	485 163	527 451	573 898	652 009	691 059
Total	1 454 698	1 591 357	1 754 144	1 950 427	2 035 896	2 378 902	2 588 974
Change to 2011 Budget estimate				-	(13 730)	(29 546)	36 645
Economic classification							
Current payments	21 463	25 689	29 633	26 221	31 398	32 616	33 947
Compensation of employees	14 964	18 112	19 369	19 743	24 647	25 596	26 506
Goods and services	6 499	7 577	10 251	6 478	6 751	7 020	7 441
of which:							
Administrative fees	43	168	92	41	38	40	42
Advertising	196	638	518	51	33	34	35
Assets less than the capitalisation threshold	26	18	4	2	2	2	2
Catering: Departmental activities	285	189	73	263	292	303	321
Communication	788	888	736	558	580	602	639
Computer services	98	209	289	105	108	113	120
Consultants and professional services: Business and advisory services	128	195	2 043	473	492	511	542
Contractors	1	189	259	176	184	191	202
Agency and support / outsourced services	274	429	260	265	275	287	304
Entertainment	18	164	102	22	23	23	24
Inventory: Other consumables	31	1	-	14	14	15	16
Inventory: Stationery and printing	719	1 055	739	776	808	838	891
Lease payments	147	117	38	150	155	160	170
Travel and subsistence	3 394	2 581	3 854	3 141	3 288	3 423	3 628
Operating expenditure	134	58	355	268	278	290	306
Venues and facilities	217	678	889	173	181	188	199
Interest and rent on land	-	-	13	-	-	-	-

Table 34.8 Human Capital and Knowledge Systems (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Economic classification							
Transfers and subsidies	1 433 015	1 565 430	1 724 332	1 924 095	2 004 382	2 346 164	2 554 897
Departmental agencies and accounts	1 090 088	1 237 027	1 341 912	1 557 422	1 619 358	1 940 933	2 125 556
Higher education institutions	5 761	18 524	34 688	–	–	–	–
Public corporations and private enterprises	262 109	262 519	315 037	104 710	99 946	105 143	111 452
Non-profit institutions	74 707	47 110	32 401	261 963	285 078	300 088	317 889
Households	350	250	294	–	–	–	–
Payments for capital assets	217	238	179	111	116	122	130
Machinery and equipment	217	238	179	111	116	122	130
Payments for financial assets	3	–	–	–	–	–	–
Total	1 454 698	1 591 357	1 754 144	1 950 427	2 035 896	2 378 902	2 588 974
Details of transfers and subsidies							
Departmental agencies and accounts							
Departmental agencies (non-business entities)							
Current	959 088	1 076 659	1 191 040	1 319 796	1 339 851	1 599 492	1 763 629
Emerging research areas	–	17 000	3 500	–	–	–	–
Frontier science and technology	–	–	–	–	–	–	–
Human resources development	227 035	273 322	335 332	156 650	201 924	414 585	503 918
Indigenous knowledge system	1 250	11 310	11 380	–	–	–	–
National Research Foundation	683 420	692 131	749 142	1 099 035	1 070 810	1 114 300	1 184 867
Science and youth	2 190	20 691	33 924	–	–	–	–
Science themes	45 193	57 739	57 677	64 111	67 117	70 607	74 844
Women in science	–	–	85	–	–	–	–
Learnerships	–	4 466	–	–	–	–	–
Capital	131 000	160 368	150 872	237 626	279 507	341 441	361 927
Frontier science and technology	11 500	–	–	–	–	–	–
Research and development infrastructure	119 500	160 368	150 872	237 626	279 507	341 441	361 927
Non-profit institutions							
Current	72 907	47 110	29 401	181 840	200 949	211 584	224 075
Technology Top 100	2 280	–	–	–	–	–	–
Centre for High Performance Computing	–	–	–	1 847	1 939	1 935	1 979
Emerging research areas	–	–	5 925	55 551	58 179	61 204	64 876
Human resources development	16 078	5 592	3 710	–	–	–	–
Indigenous knowledge system	–	10	99	8 726	19 660	20 682	21 923
National nanotechnology centres	–	–	–	42 400	44 520	46 835	49 645
Science and youth	40 794	30 434	4 231	59 364	63 182	66 467	70 455
Science themes	1 545	1 181	1 853	–	–	–	–
Academy of Science of South Africa	5 570	9 893	10 554	13 952	13 469	14 461	15 197
Learnerships	6 640	–	3 029	–	–	–	–
Capital	1 800	–	3 000	80 123	84 129	88 504	93 814
Centre for High Performance Computing	–	–	–	80 123	84 129	88 504	93 814
Research and development infrastructure	1 800	–	3 000	–	–	–	–
Households							
Social benefits							
Current	–	–	44	–	–	–	–
Households	–	–	44	–	–	–	–

Table 34.8 Human Capital and Knowledge Systems (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Details of transfers and subsidies							
Current	350	250	250	-	-	-	-
Indigenous knowledge system	-	50	50	-	-	-	-
Science themes	-	50	-	-	-	-	-
Women in science	350	150	200	-	-	-	-
Higher education institutions							
Current	5 761	5 948	19 117	-	-	-	-
Technology Top 100	-	100	-	-	-	-	-
Emerging research areas	-	1 900	4 000	-	-	-	-
Frontier science and technology	500	-	-	-	-	-	-
Human resources development	58	78	7 087	-	-	-	-
Indigenous knowledge system	2 600	3 420	4 701	-	-	-	-
Science and youth	2 603	200	3 000	-	-	-	-
Science themes	-	-	179	-	-	-	-
Women in science	-	250	150	-	-	-	-
Capital	-	12 576	15 571	-	-	-	-
Research and development infrastructure	-	12 576	15 571	-	-	-	-
Public corporations and private enterprises							
Public corporations							
Other transfers to public corporations							
Current	153 909	101 355	57 565	-	-	-	-
Centre for High Performance Computing	-	61 349	1 623	-	-	-	-
Emerging research areas	-	30 399	35 500	-	-	-	-
Frontier science and technology	132 450	-	-	-	-	-	-
Human resources development	20 539	6 188	6 500	-	-	-	-
Indigenous knowledge system	920	1 139	742	-	-	-	-
Science and youth	-	-	13 200	-	-	-	-
Learnerships	-	2 280	-	-	-	-	-
Capital	108 200	158 664	257 202	104 710	99 946	105 143	111 452
Centre for High Performance Computing	-	1 414	70 397	-	-	-	-
National nanotechnology centres	-	34 905	38 337	-	-	-	-
Research and development infrastructure	19 200	28 871	49 685	-	-	-	-
South African National Research Network	89 000	93 474	98 783	104 710	99 946	105 143	111 452
Public corporations and private enterprises							
Private enterprises							
Other transfers to private enterprises							
Current	-	2 500	270	-	-	-	-
Technology Top 100	-	2 500	270	-	-	-	-

Expenditure trends

Expenditure increased from R1.5 billion in 2008/09 to R2 billion in 2011/12, at an average annual rate of 10.3 per cent. The main area of expenditure was in human capital development, mainly to support researchers and students pursuing postgraduate studies at honours, masters, doctorate and postdoctoral level. These activities are managed by the National Research Foundation, which explains the increase in transfer payments in this period. In addition, spending in research and development infrastructure and cyber infrastructure, which

includes the Centre for High Performance Computing and South African National Research Network, also increased.

Over the medium term, expenditure is expected to increase to R2.6 billion, at an average annual rate of 9.9 per cent. This is mainly due to additional allocations received in the 2011 budget of R358 million for bursaries for post-graduate students and R150 million for scientific equipment, and allocations of R15 million in 2012/13, R15 million in 2013/14 and R80 million in 2014/15 from the economic competitiveness and support package for the internship programme. The additional funding will be used to increase the total number of interns supported, thereby adding to the skills base in the science and technology industry.

Expenditure on consultants increased from R128 000 in 2008/09 to R473 000, at an average annual rate of 54.6 per cent. These consultants were appointed to support critical skills and provide technical expertise. Over the medium term, expenditure on this item is expected to increase to R542 000, at an average annual rate of 4.6 per cent, in line with inflationary expectations.

Programme 5: Socio Economic Partnerships

Objectives and measures

- Inform and influence technology based options and opportunities for transforming rural economic development, social economic development, government planning and service delivery, and the building of sustainable human settlements by:
 - creating, sustaining or improving 400 livelihood opportunities by 31 March 2013
 - testing, evaluating and documenting one influential policy study on a technology-led opportunity for sustainable livelihoods by 31 March 2013
 - testing, evaluating and documenting two influential policy studies for government planning, service delivery and the building of sustainable human settlements by 31 March 2013.
- 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 200 students for research degrees by 31 March 2013
 - making two additions to the intellectual property portfolio of patents, patent applications prototypes and technology demonstrators by 31 March 2013
 - producing 50 scientific and technical papers by 31 March 2013.
- To enhance understanding and analysis that supports improvements in the functioning and performance of the national system of innovation by:
 - generating 5 policy briefings on the innovation system and innovation policy by 31 March 2013.
- Identify, grow and sustain a portfolio of niche high potential research and development capabilities that improve the competitiveness of existing and emerging economic sectors and which facilitates the development of new targeted industries, with growth potential in advanced manufacturing, chemicals, advanced metals and ICTs by:
 - funding or co-funding 138 students for research degrees by 31 March 2013
 - producing 13 additions to the internet portfolio including patents, patent applications, prototypes and technology demonstrators by 31 March 2013
 - providing 1 928 small and medium enterprises with technology support by 31 March 2013.
- Support the generation, application and dissemination of social scientific knowledge, high end human capital development in the social sciences and humanities and stronger links between knowledge and policy by:
 - funding or co-funding 35 honours, masters and PhD students in the social sciences and humanities by 31 March 2013
 - funding or co-funding 50 internships in the social sciences and humanities by 31 March 2013
 - publishing 7 peer reviewed scientific publications by 31 March 2013
 - introducing 9 policy interventions in the form of seminars, briefs and policy papers by 31 March 2013.

Subprogrammes

- Science and Technology for Economic Impact* advances strategic medium and long term sustainable economic growth and sector development priorities and government service delivery through two value adding functions: investing in the long term knowledge generation capabilities of the national system of innovation, specifically those that offer innovation opportunities and partnership with other government departments and economic sectors; and spearheading focused efforts that exploit knowledge capabilities for economic benefit. This subprogramme had a staff complement of 34 and a total budget of R945.7 million in 2011/12, of which 97 per cent was used for transfer payments to science councils, universities, and other research, development and innovation agencies. The Council for Scientific and Industrial Research accounted for 73 per cent of the total transfers, while the remaining 27 per cent was used for ringfenced initiatives that advance a number of strategies which the subprogramme is responsible for. These include the advanced manufacturing technology strategy; the technology localisation strategy; the global change grand challenge; the advanced metals initiative; and the ICT research, development, and innovation strategy. In 2008/09, line items for the global change grand challenge were created for funding the implementation of the technology localisation strategy and technology transfer related initiatives were scaled down. No savings in 2012/13 have been identified in this subprogramme.
- Science and Technology for Social Impact* leads and supports knowledge generation and use in human and social dynamics in development; promotes the use of technology based approaches for the creation of sustainable livelihoods, government planning and service delivery; and the building of sustainable human settlements, particularly within resource constrained communities. This is done through a combination of demonstration and application of new and mature technologies, policy analysis, and through engagement in policy and decision making processes. This subprogramme had a staff complement of 13 and a total budget of R296.8 million in 2011/12, of which 97 per cent was used as follows: transfers to the Human Sciences Research Council account (61 per cent), research and development (15 per cent) and the initiatives that support technology for sustainable livelihoods account for (9 per cent). The subprogramme focuses on mature technologies that are seen as having the potential to achieve government's broad development objectives. This is done by building partnerships with other government departments, focusing on research and technology transfer. In 2010/11, 2 innovation strategies that support localisation have been developed for the nuclear manufacturing and foundry industry innovation strategies. No savings in 2012/13 have been identified in this subprogramme.
- Science and Technology Investment* leads and supports the development of indicators and instruments for measuring and monitoring investments in science and technology, the performance of the national system of innovation, and ways of strengthening the system and innovation policy. This subprogramme had a staff complement of 15 and a total budget of R26.6 million in 2011/12, of which 37 per cent was used for policy indicator activities, while 23 per cent was used for research and development. In 2011/12, an annual research and development survey was conducted; innovation measurement was carried out; science and technology indicators, databases and information systems such as the research information management system, and national science and technology expenditure tables were developed; and section 11D of the Income Tax Act (1962) was implemented to promote private sector research and development investment. Progress with the implementation of the research information management system, which relates to university requirements for managing research portfolios, is under way. The number of institutions actually using 1 or 2 modules has increased from 3 in 2008/09 to 32 in 2011/12. No savings in 2012/13 have been identified in this subprogramme.

Expenditure estimates

Table 34.9 Socio Economic Partnerships

Subprogramme	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Science and Technology for Economic Impact	847 157	899 209	888 272	945 676	1 022 114	1 100 654	1 157 958
Science and Technology for Social Impact	247 595	264 910	254 274	296 798	372 534	390 010	412 885
Science and Technology Investment	23 695	10 435	32 196	26 597	25 137	26 002	29 621
Total	1 118 447	1 174 554	1 174 742	1 269 071	1 419 785	1 516 666	1 600 464
Change to 2011 Budget estimate				(1 200)	34 219	59 197	55 504

Economic classification

	27 814	32 868	34 234	41 717	47 305	50 012	52 905
Current payments							
Compensation of employees	21 974	21 688	24 696	32 293	33 961	35 676	37 817
Goods and services	5 840	11 180	9 509	9 424	13 344	14 336	15 088
<i>of which:</i>							
<i>Administrative fees</i>	42	66	88	97	104	111	118
<i>Advertising</i>	307	519	714	291	313	336	357
<i>Assets less than the capitalisation threshold</i>	5	44	1	5	10	6	6
<i>Catering: Departmental activities</i>	201	142	88	232	255	267	283
<i>Communication</i>	829	784	852	840	913	969	1 028
<i>Computer services</i>	3	351	409	54	57	62	66
<i>Consultants and professional services: Business and advisory services</i>	96	3 450	1 135	4 458	6 512	7 532	7 876
<i>Contractors</i>	112	30	374	113	135	130	138
<i>Agency and support / outsourced services</i>	681	2 783	2 498	53	59	61	65
<i>Entertainment</i>	29	15	10	51	61	59	63
<i>Inventory: Other consumables</i>	–	18	–	5	5	6	6
<i>Inventory: Stationery and printing</i>	279	197	104	249	272	287	304
<i>Lease payments</i>	148	149	90	170	200	196	207
<i>Travel and subsistence</i>	2 964	2 376	2 816	2 453	4 038	3 909	4 143
<i>Training and development</i>	1	–	–	–	–	–	–
<i>Operating expenditure</i>	44	33	50	30	38	34	36
<i>Venues and facilities</i>	99	223	280	323	372	371	392
<i>Interest and rent on land</i>	–	–	29	–	–	–	–
Transfers and subsidies	1 090 391	1 141 296	1 140 191	1 226 913	1 372 017	1 466 166	1 547 042
Departmental agencies and accounts	273 661	289 550	336 725	406 859	499 322	523 446	556 002
Higher education institutions	6 730	8 130	7 241	–	–	–	–
Public corporations and private enterprises	746 090	792 953	787 970	820 054	872 695	942 720	991 040
Non-profit institutions	63 910	50 663	8 023	–	–	–	–
Households	–	–	232	–	–	–	–
Payments for capital assets	242	387	316	441	463	488	517
Machinery and equipment	242	387	316	441	463	488	517
Payments for financial assets	–	3	1	–	–	–	–
Total	1 118 447	1 174 554	1 174 742	1 269 071	1 419 785	1 516 666	1 600 464

Table 34.9 Socio Economic Partnerships (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Details of transfers and subsidies							
Departmental agencies and accounts							
Departmental agencies (non-business entities)							
Current	273 661	289 550	336 725	406 859	499 322	523 446	556 002
Advanced manufacturing technology strategy	–	–	23 181	–	–	–	–
Global change science and technology	12 700	15 617	12 148	33 581	64 303	67 586	71 315
Human and social development dynamics	14 279	3 013	26 006	17 962	10 297	11 298	9 976
Human Science Research Council	163 851	166 185	194 293	206 169	214 177	223 630	238 523
Local systems of innovation	4 999	5 000	–	9 120	8 576	9 022	9 563
Natural resources and public assets	52 832	55 296	50 521	61 980	66 079	69 463	73 571
Quality of life nuclear technologies	–	3 765	660	660	–	–	–
Resource based industries	–	1 666	500	–	–	–	–
Research Information Management System	14 000	–	13 870	8 606	4 805	4 519	6 850
Science and technology indicators	3 000	2 000	7 900	8 494	9 019	9 488	10 057
South African Research Chairs Initiative for Human Sciences	–	21 349	–	19 414	70 385	74 045	78 488
Technology for poverty alleviation	8 000	–	596	18 328	30 819	32 448	34 395
Technology for sustainable livelihoods	–	15 659	–	–	–	–	–
Information communication technology	–	–	1 000	–	–	–	–
Local manufacturing capacity	–	–	6 050	22 545	20 862	21 947	23 264
Non-profit institutions							
Current	63 910	50 663	8 023	–	–	–	–
Advanced manufacturing technology strategy	9 999	–	–	–	–	–	–
Global change science and technology	–	–	1 000	–	–	–	–
Local systems of innovation	311	120	5 150	–	–	–	–
Resource based industries	3 500	606	956	–	–	–	–
Tshumisano Trust	36 600	36 437	–	–	–	–	–
Local manufacturing capacity	13 500	13 500	917	–	–	–	–
Households							
Social benefits							
Current	–	–	32	–	–	–	–
Households	–	–	32	–	–	–	–
Households							
Other transfers to households							
Current	–	–	200	–	–	–	–
Human and social development dynamics	–	–	200	–	–	–	–
Higher education institutions							
Current	6 730	8 130	7 241	–	–	–	–
Global change science and technology	32	72	–	–	–	–	–
Local systems of innovation	400	1 680	1 535	–	–	–	–
Resource based industries	98	950	100	–	–	–	–
Technology for sustainable livelihoods	6 200	3 817	–	–	–	–	–
Local manufacturing capacity	–	1 611	5 606	–	–	–	–

Table 34.9 Socio Economic Partnerships (continued)

R thousand	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Details of transfers and subsidies							
Public corporations and private enterprises							
Public corporations							
Other transfers to public corporations							
Current	191 403	193 569	102 186	132 885	135 204	172 260	180 796
Advanced manufacturing technology strategy	38 000	47 229	22 234	49 569	43 297	45 548	48 281
Global change science and technology	4 268	4 685	6 048	–	–	–	–
Human and social development dynamics	12 000	8 400	2 000	–	–	–	–
Local systems of innovation	740	405	650	–	–	–	–
Quality of life nuclear technologies	5 000	–	–	–	–	–	–
Resource based industries	29 603	28 326	35 941	39 061	39 014	41 043	43 506
Technology for poverty alleviation	15 500	25 558	9 544	–	–	–	–
Technology for sustainable livelihoods	21 316	13 380	13 662	25 903	35 623	37 501	39 751
Information communication technology	54 976	55 586	11 200	18 352	17 270	18 168	19 258
Local manufacturing capacity	10 000	10 000	907	–	–	30 000	30 000
Public corporations and private enterprises							
Public corporations							
Public corporations - subsidies on products and production							
Current	554 687	599 384	685 784	687 169	737 491	770 460	810 244
Council for Scientific and Industrial Research	554 687	599 384	685 784	687 169	737 491	770 460	810 244

Expenditure trends

Expenditure increased from R1.1 billion in 2008/09 to R1.3 billion in 2011/12, at an average annual rate of 4.3 per cent. The marginal increase is ascribed to sustained activities in policy and indicator development, tax incentives, sustainable human settlement research, sustainable livelihoods and social development analysis. Over the medium term, expenditure is expected to increase to R1.6 billion, at an average annual rate of 8 per cent, mainly due to additional allocations of R30 million in 2013/14 and R30 million in 2014/15 from the economic competitiveness and support package for the support of local, technology-intensive manufacturers to improve their competitiveness and their capability to supply in large public procurement and large export orders.

Expenditure on consultants increased from R96 000 in 2008/09 and increased to R4.5 million in 2011/12, at an average annual rate of 259.4 per cent, due to projects associated with technology for economic impact, specifically global change. Consultants are appointed mainly to support critical skills and provide technical expertise. Over the medium term, expenditure on this item is expected to increase to R7.9 million in 2014/15, at an average annual rate of 20.9 per cent. The increased spending over the medium term can be attributed to the following activities, which 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.

Public entities and other agencies

Council for Scientific and Industrial Research

Overview: 2008/09 – 2014/15

The Council for Scientific and Industrial Research was established under the Scientific Research Council Act (1988). Its objectives are to foster industrial and scientific development in the national interest through multidisciplinary research and technological innovation. The council's activities focus on directed research and development, and cut across the research and innovation value chain.

Strategic focus is directed at basic and applied research, and technology development, transfer and implementation for commercial and social benefit. The council is funded through a combination of baseline and ringfenced grants from the department, and contract research and development income from the public and private sectors domestically, throughout the rest of Africa and internationally. Contract research and development income comprises 70 per cent of total annual income.

The council's strategy over the medium term is structured around six research impact areas that support national priorities: energy, which entails developing renewable and alternative energy technology options and providing decision support to achieve an energy secure, low carbon, national economy with reduced water impact; industry, which entails new technology and technological innovation for advanced manufacturing and mining; the built environment, which entails contributing technological innovations that support planning, design, construction and management of the built environment; the natural environment, which entails developing decision support tools and capabilities to monitor the state of the natural resource base, and applying environmental engineering to provide technological innovations that address key resource base issues; defence and national security, which entails developing technological solutions that contribute to the security of South Africa, the region and the continent; and health, which entails supporting the creation of an effective and efficient health care system, and developing affordable preventative, diagnostic and treatment solutions to address priority diseases.

Priorities over the medium term include: building and transforming human capital; strengthening the science, engineering and technology base; carrying out relevant research and development; transferring skills and technology, and maintaining financial sustainability and good governance. A number of measures are in place to address potential reductions in funding and income from research and development, and to ensure the continuity of the council's work and cost effective service delivery.

One of the mechanisms for the implementation of the research impact areas will be the council's flagship programmes, which will be launched in 2012/13. The initial flagship programmes will be health and nutrition, water sustainability, and safety and security. Organisational priorities underpinning the strategy are building and transforming human capital; strengthening the science, engineering and technology base, and performing relevant research and development; and transferring technology and skilled human capital, while maintaining financial sustainability and good governance.

Performance

In general, the organisation has met or exceeded performance targets since 2008/09 and is on track to do so in 2011/12. The number of permanent staff studying towards masters or doctorate degrees increased to 226 in 2010/11 and the number of staff with doctorate degrees increased to 299. This target is expected to increase to 345 over the medium term.

Selected performance indicators

Table 34.10 Council for Scientific and Industrial Research

Indicator	Programme/Activity/Objective/Project	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Percentage of science, engineering and technology staff who are black	Building and transforming human capital	53.3% (1 512)	52.20% (1 547)	52.6% (1 560)	53.8% (1 530)	54.5% (1 550)	55.3% (1 580)	56% (1 610)
Total number of staff with doctorates	Building and transforming human capital	273	283	299	300	315	330	345
Number of publication equivalents per year	Strengthening the science engineering and technology base and performing relevant research and development	451.5	502	576	550	600	630	660
Number of new technology demonstrator equivalents per year	Strengthening the science engineering and technology base and performing relevant research and development	24.5	39	37	25	27	28	30
Private sector and international income per year	Transferring technology and skilled human capital	R289.8m	R310.9m	R327.8m	R305.1m	R323.4m	R342.8m	R363.4m
Number of new international and national patents granted per year	Transferring technology and skilled human capital	35	13	14	12	16	20	22
Broad based black economic empowerment rating per year	Corporate governance	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3	Level 3

Programmes/activities/objectives

Table 34.11 Council for Scientific and Industrial Research

	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Defence, Peace, Safety and Security	298 007	300 811	347 484	355 436	374 168	392 824	412 540
Materials Science Manufacturing	182 690	168 489	169 143	172 508	181 439	190 287	199 612
Biosciences	122 613	133 913	127 921	130 301	136 993	143 614	150 571
Natural Resources and the Environment	185 245	139 025	144 721	148 491	156 459	164 449	172 893
Built Environment	157 029	141 408	136 028	139 986	147 620	155 331	163 469
Meraka Institute	168 895	217 219	158 897	162 941	171 658	180 378	189 614
Centres and Implementation Units	262 110	341 627	377 431	381 086	399 636	417 538	436 399
R and D Core, Shared Services and Group Adjustments	149 950	276 575	299 226	389 174	412 284	433 555	456 614
Total expense	1 526 539	1 719 067	1 760 851	1 879 923	1 980 257	2 077 976	2 181 712

The Council for Scientific and Industrial Research had a total budget of R1.9 billion in 2011/12, of which 53.6 per cent was used for compensation of employees.

Savings and cost effectiveness measures

The entity continues to strive to operate effectively and efficiently to ensure that savings are effected and financial resource investments are aligned to its strategic priorities. The shared services function is continually looking to standardise and automate functions, thereby rationalising costs and providing value addition services

to the research and development operations. An energy efficiency plan was developed in 2006/07 and measures put in place in 2008/09 to reduce energy usage. Energy consumption has come down by more than 1.2 per cent each year since 2008/09.

Expenditure estimates

Table 34.12 Council for Scientific and Industrial Research

Statement of financial performance	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Revenue							
Non-tax revenue	1 104 497	1 267 552	1 259 389	1 231 355	1 334 488	1 404 928	1 473 943
Sale of goods and services other than capital assets of which:	955 721	1 176 895	1 187 201	1 175 036	1 278 044	1 346 171	1 413 719
<i>Sales by market establishments</i>	955 721	1 176 895	1 187 201	1 175 036	1 278 044	1 346 171	1 413 719
<i>Other non-tax revenue</i>	148 776	90 657	72 188	56 319	56 444	58 757	60 224
Transfers received	480 320	509 122	535 357	683 351	680 834	710 857	747 421
Total revenue	1 584 817	1 776 674	1 794 746	1 914 706	2 015 322	2 115 785	2 221 364
Expenses							
Current expenses	1 525 054	1 718 945	1 760 791	1 879 922	1 980 256	2 077 976	2 181 712
Compensation of employees	771 977	880 745	946 485	1 008 220	1 073 754	1 143 548	1 217 879
Goods and services	705 645	788 261	768 176	831 519	865 219	892 072	920 937
Depreciation	37 409	42 787	42 067	40 183	41 283	42 356	42 896
Interest, dividends and rent on land	10 023	7 152	4 063	-	-	-	-
Total expenses	1 526 539	1 719 067	1 760 851	1 879 922	1 980 256	2 077 976	2 181 712
Surplus / (Deficit)	58 278	57 607	33 895	34 784	35 066	37 809	39 652
Statement of financial position							
Carrying value of assets	297 985	350 249	392 498	401 859	435 897	445 897	475 896
of which:							
<i>Acquisition of assets</i>	115 092	96 030	91 308	49 544	75 321	52 356	72 895
Investments	100 000	1 487	1 419	1 487	1 487	1 487	1 487
Inventory	79 338	80 928	89 549	103 632	111 523	123 563	129 741
Receivables and prepayments	138 725	128 752	118 509	175 569	189 597	196 245	236 057
Cash and cash equivalents	782 528	799 982	1 009 403	877 374	821 477	809 483	800 297
Non-current assets held for sale	96 756	94 890	94 890	-	-	-	-
Taxation	-	258	400	-	-	-	-
Total assets	1 495 332	1 456 546	1 706 668	1 559 921	1 559 981	1 576 675	1 643 478
Accumulated surplus / (deficit)	449 495	507 152	541 030	575 813	610 878	648 687	688 339
Deferred income	40 588	42 417	57 365	-	-	-	-
Trade and other payables	994 960	896 721	1 097 803	967 152	934 250	915 109	944 881
Provisions	10 289	10 256	10 470	16 956	14 853	12 879	10 258
Total equity and liabilities	1 495 332	1 456 546	1 706 668	1 559 921	1 559 981	1 576 675	1 643 478

Expenditure trends

The spending over the medium term will be on: building and transforming human capital; strengthening the science, engineering and technology base; carrying out relevant research and development; transferring skills and technology; and maintaining financial sustainability and good governance.

The council is funded through ringfenced grants from the department, and contract research and development income from the public and private sectors. The council generates about 70 per cent of its income from research and development contract income. Contract revenue increased from R955.7 million in 2008/09 to R1.2 billion in 2011/12, at an average annual rate of 7.1 per cent, through additional contract research and development work secured and inflationary adjustments. Contract revenue is projected to increase to R1.4 billion in 2012/13 as a result of the securing of additional contract research and development work and inflationary growth. The

decrease in contract income between 2010/11 to 2011/12 is due to the transfer of the Satellite Application Centre to the South African National Space Agency and transfer of the advanced manufacturing technology strategy to the Technology Innovation Agency in 2010/11.

Expenditure increased from R1.5 billion in 2008/09 to R1.9 billion in 2011/12, at an average annual rate of 7.2 per cent, due to inflationary increases and related income generating activities. Expenditure is expected to increase to R2.2 billion over the medium term, at an average annual rate of 5.1 per cent, due to a projected increase in activities related to income generation. Expenditure on compensation of employees increased from R772 million in 2008/09 to R1 billion in 2011/12, at an average annual rate of 9.3 per cent, due to growth in manpower costs and inflationary adjustments. Over the medium term, expenditure on this item is expected to increase to R1.2 billion, at an average annual rate of 6.5 per cent, due to inflationary growth in manpower costs and modest growth in available positions

Personnel information

Table 34.13 Council for Scientific and Industrial Research

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid-year ¹	Medium-term estimate		
				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive board members	1	1	–	1	1	1	1	1	1	1
Executive management	13	13	1	10	10	13	11	12	12	12
Senior management	80	80	1	58	79	82	83	79	79	81
Professionals	1 036	1 036	18	950	977	1 031	1 039	1 057	1 078	1 099
Skilled	836	836	14	881	892	876	788	853	870	887
Semi-skilled	413	413	7	444	432	418	387	421	429	438
Very low skilled	17	17	–	23	17	18	18	17	17	17
Total	2 396	2 396	41	2 367	2 408	2 439	2 327	2 440	2 486	2 535
Compensation (R thousand)				771 977	880 745	946 485	1 008 220	1 073 754	1 143 548	1 217 879
Unit cost (R thousand)				326	366	388	433	440	460	480

1. As at 30 September 2011.

As at 30 September 2011, the entity had an establishment of 2 396 posts, all of which were funded. The number of filled posts decreased from 2 367 in 2008/09 to 2 327, due to the Satellite Application Centre moving to the South African National Space Agency as from 1 April 2011. The number of filled posts is expected to increase to 2 535 over the medium term as this is aligned to contract income generation.

There were 69 vacancies as at 30 September 2011 due to the difficulty in finding suitable skilled candidates given the current science environment in the country and having to work within a constrained budget. However, the council is in the process of filling these posts. The ratio of support staff to line staff was 1:2.

National Research Foundation

Overview: 2008/09 – 2014/15

The National Research Foundation Act (1998) mandates the National Research Foundation to promote and support research in all fields of humanities, the social and natural sciences, engineering and technology. It provides research funding and research platforms through national facilities and science awareness activities. The Foundation 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 Vision 2015 strategic plan aims 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; and contribute to a vibrant national innovation system.

Annually, the foundation funds the work of more than 2 900 researchers at universities and other research institutes. Transformation and the nurturing of young talent is a tenet of the foundation. Knowledge generation is promoted through the national research facilities and through special initiatives such as research chairs and centres of excellence.

The research and innovation support and advancement programme promotes and supports research through human capacity development in all fields of knowledge and technology, funds strategic research platforms and infrastructure, facilitates strategic national and international partnerships and networks, and rates researchers. The total budget is R1.5 billion in 2012/13 with a staff complement of 240. Approximately 90 per cent of the programme's expenditure relates to research grants and bursaries. The foundation also continues to manage the Technology and Human Resources for Industry Programme on behalf of the Department of Trade and Industry.

The national research facilities programme provides highly specialised equipment and infrastructure platforms to researchers and research institutions. The foundation operates five national research facilities namely, Ithemba Laboratory for Accelerator Based Sciences; the South African Astronomical Observatory; the Hartebeesthoek Radio Astronomy Observatory; the South African Institute for Aquatic Biodiversity, and the National Zoological Gardens of South Africa. The programme has a total budget of R431 million in 2012/13 and a staff complement of 834.

The South African agency for science and technology advancement programme promotes and communicates the value and impact of science, technology and innovation for a dynamic knowledge economy. These activities contribute to building a science, engineering and technology human resource base. The agency has a total budget of R93.5 million in 2012/13 and a staff complement of 43 employees.

The Square Kilometre Array programme houses South Africa's bid for this prestigious project, which, when built, will be the largest radio telescope in the world, up to 100 times more sensitive than any other telescope. It will probe the edges of the universe and allow scientists to answer fundamental questions in astronomy, physics and cosmology, including the nature of dark energy and dark matter.

MeerKAT, the current phase of the project, under construction at a site near Carnarvon in the Northern Cape, entails the design, testing and construction of 64 Gregorian offset dishes and includes the costs of appropriate systems, land, astronomy and site operations, and telescope array. South Africa's investment in MeerKAT will provide it with leading edge world class radio astronomy infrastructure that will enhance its bid for the full Square Kilometre Array project. A successful bid will not only position South Africa as the leading international provider of astronomical data, but could attract international funding of some R20 billion, with accompanying job creation, human capacity development and knowledge discovery for a coordinated South Africa based African footprint. The project budget of R560 million, includes capital expenditure of R282 million for 2012/13. The current staff complement is 92.

Priorities over the medium term include elevating science advancement activities to a corporate level, which is intended to provide a national footprint. Its activities also entail the upgrade of the Johannesburg Observatory site. The foundation has put in place mechanisms to enable creating a separate astronomy institution pending further direction from the department. In ensuring sustainability of the National Zoological Gardens in Pretoria, the foundation and the department are currently working on business models for the optimal functioning of the gardens as a national research facility, with a view to transforming it into a research platform for veterinary and conservation science.

Performance

In 2010/11, the entity's target for the number of peer reviewed journal articles was 3 500 but actual performance amounted to 3 935, thereby exceeding the performance target by 435 articles. Similarly, the number of grant holders supported by the research and innovation support and advancement programme was 2 600, while actual performance amounted to 2 927, thereby exceeding the target by 327 grant holders supported. Most performance targets were exceeded in 2010/11 and this is expected to continue over the medium term. In 2009/10, additional funding for the research chair initiative was given, thus significantly increasing the number of student bursaries and scholarships for doctorate, masters, and Bachelor of Technology or honours compared to 2008/09. This target will remain over the MTEF period.

Selected performance indicators

Table 34.14 National Research Foundation

Indicator	Programme/Activity/Objective/Project	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of peer-reviewed journal articles per year	Research and innovation support and advancement	5 354	2 753	3 935	3 500	4 000	4 100	4 200
Number of grant holders supported by the research and innovation support and advancement programme per year	Research and innovation support and advancement	3 570	2 442	2 927	2 800	2 900	3 000	3 100
Number of student bursaries and scholarships: third or fourth year awarded per year	Research and innovation support and advancement	253	286	425	400	420	440	460
Number of student bursaries and scholarships: Bachelor of Technology or honours awarded per year	Research and innovation support and advancement	260	1663	2 718	1 700	1 700	1 800	1 900
Number of student bursaries and scholarships for masters awarded per year	Research and innovation support and advancement	874	2 203	3 566	2 820	3 000	3 100	3 200
Number of student bursaries and scholarships for PhDs awarded per year	Research and innovation support and advancement	528	1 265	1 937	1 519	1 600	1 700	1 800
Number of postdoctoral fellowships per year	Research and innovation support and advancement	33	255	405	381	400	420	440
Number of interactions with public at large per year	South African Agency for Science and Technology Advancement	- ¹	20 997	49 385	45 000	48 000	48 000	48 000
Number of collaborations with institutions abroad per year	National facilities	- ¹	117	149	140	132	133	137
Number of science promotion publications generated by national facilities per year	National facilities	- ¹	30	32	32	31	32	33
Number of times participated in science festivals per year	South African Agency for Science and Technology Advancement	- ¹	140 807	57 450	114 000	120 000	130 000	140 000

1. New indicator therefore no performance information in these years.

Programmes/activities/objectives

Table 34.15 National Research Foundation

R thousand	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Research and Innovation Support and Advancement and corporate	882 765	941 235	1 324 144	1 486 111	1 451 473	1 323 057	1 326 426
National research facilities	379 237	372 327	412 635	476 990	431 139	428 980	428 933
South African Agency for Science and Technology Advancement	36 933	47 685	58 489	75 062	93 529	56 095	56 111
Square Kilometre Array project	80 135	78 687	154 346	250 844	278 074	244 170	264 022
Total expense	1 379 070	1 439 934	1 949 614	2 289 007	2 254 215	2 052 302	2 075 492

The National Research Foundation had a total budget of R2.3 billion in 2011/12, of which 64.9 per cent was used for skills development.

Savings and cost effectiveness measures

The foundation implemented various austerity measures in 2011/12, including: curtailing costs by means of enhanced coordinated analysis; planning and negotiating better rates by leveraging economies of scale; working faster and more economically by automating a number of processes, especially the rollout of the foundation's online submission system, and work is currently being done on developing workflow software specifically for tender management and procurement planning; reducing new initiatives at corporate level that entail marginal costs; and implementing the recommendations of the external five-year review, which includes aligning overhead costs with similar international organisations. The post-retirement medical benefit has been paid out for the vast majority of members and an annuity purchased for the remaining members. This has reduced staff related costs for 2011/12. Efficiency savings on overheads are targeted at a minimum of R9.8 million for 2012/13, in addition to other operation costs being reduced to accommodate the reduced budget allocation.

Expenditure estimates

Table 34.16 National Research Foundation

Statement of financial performance				Revised estimate	Medium-term estimate		
	Audited outcome						
R thousand	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Revenue							
Non-tax revenue	720 138	809 234	1 269 703	1 126 290	1 433 325	1 090 418	1 196 750
Sale of goods and services other than capital assets	574 557	703 299	1 157 374	1 038 032	1 367 019	1 023 967	1 128 979
<i>of which:</i>							
<i>Sales by market establishments</i>	25 344	32 021	39 496	47 839	53 426	53 986	64 113
<i>Other sales</i>	549 213	671 278	1 117 878	990 193	1 313 593	969 981	1 064 866
<i>Other non-tax revenue</i>	145 581	105 935	112 329	88 258	66 306	66 451	67 771
Transfers received	732 810	729 325	769 513	1 134 316	1 093 043	1 138 621	1 216 241
Total revenue	1 452 948	1 538 559	2 039 216	2 260 606	2 526 368	2 229 039	2 412 991
Expenses							
Current expenses	612 751	626 066	732 315	933 528	963 086	905 365	943 147
Compensation of employees	287 902	334 947	388 703	435 899	483 510	492 971	527 478
Goods and services	293 261	257 909	304 400	453 110	434 946	366 980	370 846
Depreciation	30 941	32 628	38 718	44 392	44 515	45 322	44 712
Interest, dividends and rent on land	647	582	494	127	115	92	111
Transfers and subsidies	766 319	813 868	1 217 299	1 355 479	1 291 129	1 146 937	1 132 345
Total expenses	1 379 070	1 439 934	1 949 614	2 289 007	2 254 215	2 052 302	2 075 492
Surplus / (Deficit)	73 878	98 625	89 602	(28 401)	272 153	176 736	337 499
Statement of financial position							
Carrying value of assets	319 552	428 403	507 429	582 258	852 954	1 020 810	1 348 717
<i>of which:</i>							
<i>Acquisition of assets</i>	111 122	146 508	119 000	119 805	315 803	213 770	373 139
Investments	46 141	41 172	38 157	38 150	38 150	38 150	38 150
Inventory	3 926	3 283	3 684	6 000	6 500	7 000	7 000
Accrued investment interest	–	–	–	3 000	2 800	1 500	1 000
Receivables and prepayments	264 991	270 056	540 282	678 528	712 728	709 028	703 528
Cash and cash equivalents	756 204	1 313 906	795 424	470 485	522 808	209 906	200 000
Total assets	1 390 814	2 056 820	1 884 976	1 778 421	2 135 940	1 986 394	2 298 395
Accumulated surplus/(deficit)	(26 936)	50 955	64 549	(39 303)	(37 847)	(28 966)	(19 375)
Capital and reserves	447 735	41 168	38 150	38 150	38 150	38 150	38 150
Capital reserve fund	–	427 303	506 329	581 158	851 854	1 019 710	1 347 617
Finance lease	–	2 603	1 617	2 200	2 000	1 850	1 700
Deferred income	–	1 359 007	1 095 956	1 124 755	1 210 128	878 496	853 387
Trade and other payables	875 298	69 000	68 175	71 462	71 655	77 155	76 916
Provisions	94 717	106 784	110 200	–	–	–	–
Total equity and liabilities	1 390 814	2 056 820	1 884 976	1 778 421	2 135 940	1 986 394	2 298 395

Expenditure trends

The spending focus over the medium term will be on the research and innovation support and advancement division to increase outputs both qualitatively and quantitatively, primarily through the increased numbers of targeted research in the national system of innovation.

The foundation generates revenue from transfers from the department, contract funding, and sales and interest. Revenue increased from R1.5 billion in 2008/09 to R2.3 billion in 2011/12, at an average annual rate of 15.9 per cent. The increase is due to an additional allocation received in 2011/12 for bursaries for postgraduate students and additional contract funding received over the period. Over the medium term, transfers received are expected to increase from R1.1 billion to R1.2 billion, at an average annual rate of 2.4 per cent, due to increased allocations, while contract funding is projected to increase from R990.2 million to R1.1 billion over the same

period, at an average annual rate of 2.5 per cent. This increase in the projection for contract funding is due to the uncertainty involved in this revenue stream.

Expenditure increased from R1.4 billion in 2008/09 to R2.3 billion in 2011/12, at an average annual rate of 18.4 per cent. This growth is primarily due to the ramping up of directed initiatives and programmes, including the South African Research Chairs Initiative at R300 million per year, and the Square Kilometre Array project. The increase can also be attributed to expenditure on urgent infrastructure needs; national research equipment; the broadband roll out to rural universities; and human capacity bursaries and assistance to needy students. Increased expenditure, mainly grants and bursaries, is directly linked to additional income received, the most significant being contract funding. Such grants are awarded on a competitive basis of merit by external panel review members. The Square Kilometre Array project, being a world class, highly specialised and competitive bid has maximised the use of the foundation's specialist expertise, where practical, and outsourced the remainder to ensure timeous delivery.

Over the medium term, expenditure is expected to decrease to R2.1 billion, at an average annual rate of 3.2 per cent. This trend relates to the expected decrease in expenditure in 2013/14 on the Square Kilometre Array project and the uncertainty involved in projecting future year expected contract income.

Personnel information

Table 34.17 National Research Foundation

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid-year ¹	Medium-term estimate		
				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive board members	10	10		10	10	10	10	10	10	10
Executive management	5	5		5	5	5	5	5	5	5
Senior management	21	21		24	24	24	21	21	21	21
Middle management	–	–		298	159	200	–	–	–	–
Professionals	273	273		256	579	640	273	273	273	273
Skilled	593	593		283	274	262	593	593	593	593
Semi-skilled	237	237		209	50	62	237	237	237	237
Very low skilled	80	80		–	–	33.0	80.0	80.0	80.0	80.0
Total	1 219	1 219	109	1 085	1 101	1 236	1 219	1 219	1 219	1 219
Compensation (R thousand)				287 902	334 947	388 703	435 899	483 510	492 971	527 478
Unit cost (R thousand)				265	304	314	358	397	404	433

1. As at 30 September 2011.

The number of posts filled increased from 1 085 in 2008/09 to 1 219 in 2011/12. The filled posts are expected to remain at a constant 1 219 over the medium term. Staff in the Square Kilometre Array project is expected to increase as the project ramps up in 2012/13, while staff in other divisions such as national research facilities, specifically national zoological gardens, where a sustainability study is currently being undertaken, will decrease. There were 109 vacant operational positions as at 30 September 2011. The foundation is in the process of reviewing the vacancies. The ratio of support staff to line staff is 1:1.

Africa Institute of South Africa

Overview: 2008/09 – 2014/15

The Africa Institute of South Africa is a statutory body established in terms of the Africa Institute of South Africa Act (2001). It focuses on political, socioeconomic, international and development issues in contemporary Africa, and contributes to the goals of the national system of innovation through research programmes which impact on knowledge production, human resource development, social science and innovation. The institute's key roles are to conduct research, support policy development, run training programmes, and establish, participate in and maintain networks for peace, development and prosperity in Africa. Budget allocations are augmented through joint research ventures with like minded institutions and sponsorships.

More partnerships have been built in South Africa and internationally, allowing the institute's networks and footprint to grow, thus: opening up opportunities, securing commissioned work, developing joint research projects, resulting in greater visibility, and building capacity for the institute's staff and resource mobilisation. The following cooperation agreements, which entail two research bodies working together to attain a certain research goal where costs are split and expertise are shared, have been entered into: 9 in 2008/09, 6 in 2009/10 and 6 in 2010/11.

Over the medium term, the institute will continue to do research in priority areas focusing on projects with partners and getting greater global coverage. In support of this, there will be an emphasis on building relationships with strategic partners in South Africa and other African countries, the African Union (AU), the New Partnership for Africa's Development and United Nations agencies. The institute will continue to build capacity and expand its database of researchers. The focus will be on developing strategic partnerships; utilising the institute's networks more effectively; and building the library to promote increased access and awareness of African affairs. Apart from improving the quality of publications, the institute will also seek to increase its impact, especially with policymakers. Capacity building programmes will be enhanced along with performance management of personnel and divisions to ensure that the institute continues to utilise public funding effectively and efficiently as mandated.

Performance

The library's total holdings increased by 350 in 2009/10 and by 592 in 2010/11. This represents a significant addition to the collection. In 2011/12 and the MTEF period, the library hopes to add 2 304 to this. The geographic information system and cartography units assisted researchers in various tasks such as: turning data into maps; collecting and processing data; developing a geoportal, which is a website that provides a means to search for spatial data services on socioeconomic, demographic and geographical information; and providing products and services that were sold locally and internationally.

The institute also began with the process of digitising some of its documents and, over the MTEF period, intends to digitise 2 412 documents in total. The institute also intends to continue raising awareness through its schools outreach programme, which has resulted in the three years from 2008/09 in visiting of 479 schools, with the intention of reaching 700 more over the MTEF period.

Selected performance indicators

Table 34.18 Africa Institute of South Africa

Indicator	Programme/Activity/Objective/Project	Past			Current	Projected		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of high level outputs produced per year	Produce and encourage knowledge production and dissemination on African affairs	120	130	112	204	205	204	205
Increase in the number of library holdings per year	Produce and encourage knowledge production and dissemination on African Affairs	300	350	592	556	574	579	595
Number of library documents digitised per year	Produce and encourage knowledge production and dissemination on African affairs	-1	-1	-1	528	578	628	678
Number of seminars hosted per year	Increase the reservoir and quality of researchers, and develop and implement capacity building programmes	-1	-1	3	5	5	5	5
Number of students engaged through campus lecture series per year	Increase the reservoir and quality of researchers and develop and implement capacity building programmes	400	710	500	550	600	650	700
Number of interns appointed per year	Increase the reservoir and quality of researchers and develop and implement capacity building programmes	8	10	10	10	10	10	10

Table 34.18 Africa Institute of South Africa (continued)

Indicator	Programme/Activity/Objective/ Project	Past			Current	Projected		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of fellows appointed per year	Increase the reservoir and quality of researchers and develop and implement capacity building programmes	8	8	4	6	6	6	6
Minimum number of research consultations conducted at regional, national, and international levels at various conferences per year	Building the Africa Institute of South Africa's image and increasing its visibility	10	13	13	11	11	11	11
Number of ambassadorial forums and embassy campaigns hosted per year	Building the Africa Institute of South Africa's image and increasing its visibility	8	8	7	9	9	9	9
Number of memorandums of understanding signed and monitored with strategic stakeholders to advance the institute's agenda per year	Building the Africa Institute of South Africa's image and increasing its visibility	6	9	8	8	8	8	8
Percentage increase in traffic on the website per year to align with the three top search engines to ensure that the institute receives priority listing on internet searches	Building the Africa Institute of South Africa's image and increasing its visibility	5% (1 782)	5% (1 876)	5% (1 975)	5% (2 078)	5% (2 182)	5% (2 291)	5% (2 406)
Archie Mafeje memorial lecture and/or Africa Expo hosted per year	Building the Africa Institute of South Africa's image and increasing its visibility	– ¹	– ¹	1	2	2	2	2
Number of schools visited per year as part of the school outreach programme to promote awareness of the institute	Building the Africa Institute of South Africa's image and increasing its visibility	130	140	209	160	170	180	190
Number of book fairs attended and number of book launches hosted per year	Building the Africa Institute of South Africa's image and increasing its visibility	3	4	3	3	7	6	9
Number of mandatory reports and legislative requirements timeously submitted to the Department of Science and Technology, National Treasury, the Department of Labour and Parliament	Improve and maintain the control and governance environment and compliance with legislation	4	6	6	4	4	4	4
Number of council and committee meetings held per year	Improve and maintain the control and governance environment and compliance with legislation	8	10	9	9	9	9	9

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

Programmes/activities/objectives

Table 34.19 Africa Institute of South Africa

	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Produce and encourage knowledge production and dissemination on African Affairs	4 656	5 261	6 082	5 459	5 273	5 563	6 719
Increase the reservoir and quality of researchers and develop and implement capacity building programmes	529	598	691	1 777	1 803	1 913	1 995
Building the Africa institutes of South Africa image and increasing its visibility	810	915	1 058	959	822	1 175	1 231
Develop a performance led culture within Africa institutes of South Africa	–	–	–	890	754	985	1 035
Improve the control and governance environment and compliance with legislation	18 315	27 645	29 879	27 119	29 177	30 202	31 107
Total expense	24 310	34 419	37 710	36 204	37 829	39 838	42 087

The Africa Institute of South Africa had a total budget of R36.2 million in 2011/12, of which 52.7 per cent was used for compensation of employees.

Savings and cost effectiveness measures

The entity has implemented the following savings measures in 2011/12: the provision for fieldwork sessions for the two directors has been withdrawn; fieldwork will not be conducted by researchers who have not published their prior year outputs; the 2012/13 budget on commissioning of researchers will be maintained at the 2011/12 level; printing of publications will be reduced and additional print runs will only take place on demand; the acquisition of books will be limited to 50 new additions in 2012/13; and digitisation will also be minimised. In addition, the executive director post has been frozen and the responsibilities will be shared between the two directors of the research division. R1.4 million in savings in 2011/12 has been realised as a result and will be reprioritised to cover the cost of the additional research director.

The institute will endeavour to achieve efficiency savings in the following ways: monitoring expenditure trends and implementing firmer controls; identifying process oriented efficiency savings, which 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. Efficiency savings will be monitored to ensure that the reduction in input costs does not erode effectiveness in the long term.

Expenditure estimates

Table 34.20 Africa Institute of South Africa

Statement of financial performance				Revised estimate	Medium-term estimate		
R thousand	Audited outcome			2011/12	2012/13	2013/14	2014/15
	2008/09	2009/10	2010/11				
Revenue							
Non-tax revenue	1 141	1 406	2 529	3 764	4 185	4 602	4 600
Sale of goods and services other than capital assets	36	60	84	120	140	160	171
<i>of which:</i>							
<i>Sales by market establishments</i>	36	60	84	120	140	160	171
<i>Other non-tax revenue</i>	1 105	1 346	2 445	3 644	4 045	4 442	4 428
Transfers received	30 464	29 280	30 594	32 440	33 643	35 237	37 487
Total revenue	31 605	30 686	33 123	36 204	37 828	39 839	42 087
Expenses							
Current expenses	24 310	34 419	37 710	36 204	37 829	39 838	42 087
Compensation of employees	14 744	16 387	20 444	19 079	20 206	21 406	22 583
Goods and services	8 832	17 153	15 015	14 509	16 303	17 550	18 633
Depreciation	734	879	2 251	2 616	1 320	882	871
Total expenses	24 310	34 419	37 710	36 204	37 829	39 838	42 087
Surplus / (Deficit)	7 295	(3 733)	(4 587)	-	(1)	-	-
Statement of financial position							
Carrying value of assets	3 539	4 513	4 064	2 388	2 274	2 242	2 100
<i>of which:</i>							
<i>Acquisition of assets</i>	2 002	3 313	1 163	932	1 246	850	729
Investments	61	-	-	-	-	-	-
Inventory	1 374	1 654	862	1 650	1 500	1 300	1 550
Receivables and prepayments	5 601	942	285	1 597	400	150	300
Cash and cash equivalents	4 788	5 337	4 558	1 904	-	2 870	-
Non-current assets held for sale	2 427	3 202	-	1 106	4 661	458	4 330
Total assets	17 790	15 648	9 769	8 645	8 835	7 020	8 280
Accumulated surplus / (deficit)	14 822	10 089	5 502	5 502	5 501	5 501	5 501
Borrowings	-	-	-	-	1 835	-	1 660
Trade and other payables	2 206	2 898	2 682	1 644	250	550	450
Provisions	762	2 661	1 585	1 499	1 249	969	669
Total equity and liabilities	17 790	15 648	9 769	8 645	8 835	7 020	8 280

Expenditure trends

The spending focus over the medium term will be on: the continued implementation of the new research agenda, which entails seeking solutions for Africa's developmental challenges; developing strategic partnerships; using the institute's networks more effectively; and building the library to promote increased access and awareness of African affairs.

Transfers received from government make up 90 per cent of income, while own revenue makes up the balance of 10 per cent. Revenue increased from R31.6 million in 2008/09 to R36.2 million in 2011/12, at an average annual rate of 4.6 per cent, mainly due to an increase in transfers received. Over the medium term, revenue is expected to increase to R42.1 million, at an average annual rate of 5.1 per cent, in line with inflation projections.

Expenditure increased from R24.3 million in 2008/09 to R36.2 million in 2011/12, at an average annual rate of 14.2 per cent, due to increases in library holdings and cooperation agreements. Over the medium term, expenditure is expected to increase to R42.1 million, at an average annual rate of 5.1 per cent, in line with inflation projections. There is no budget allocated for consultants, but the institute has allocated R160 000 for legal assistance in 2012/13.

Personnel information

Table 34.21 Africa Institute of South Africa

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid-year ¹	Medium-term estimate		
				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive management	2	2	1	1	2	1	2	1	1	1
Senior management	7	7	–	6	5	7	7	7	7	7
Middle management	7	7	–	–	7	7	7	7	7	7
Professionals	16	16	5	17	14	16	16	16	16	16
Skilled	12	12	2	11	13	12	12	12	12	12
Semi-skilled	12	12	–	27	12	13	12	12	12	12
Very low skilled	4	4	–	4	4	4	4	4	4	4
Total	60	60	8	66	57	60	60	59	59	59
Compensation (R thousand)				14 744	16 387	20 444	19 079	20 206	21 406	22 583
Unit cost (R thousand)				223	287	341	318	342	363	383

1. As at 30 September 2011.

As at 30 September 2011, the entity had an establishment of 60 posts, all of which are funded. The number of filled posts decreased from 66 in 2008/09 to 60 in 2011/12, mostly at the semi-skilled level, due to the fact that some interns previously paid by the entity, are now paid through the National Research Foundation. The number of filled posts is expected to decrease to 59 over the medium term due to the executive director post being frozen as mentioned above.

There were 6 vacancies, including two chief research specialists, one research specialist, one senior labour officer, one sales officer and one librarian as at 30 September 2011. The entity has conducted interviews for the research and sales positions, and expects to fill them by 1 March and 1 April 2012, respectively. The ratio of staff in support functions to core functions is 1:1.

Academy of Science of South Africa

Overview: 2008/09 – 2014/15

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

The academy's policy advisory role is informed by key national challenges and is executed in both a responsive and proactive manner. The academy strives to address cross-cutting and complex issues that suit its particular niche and strength as a convening organisation. In its efforts to positively influence regional and global policy, the academy also seeks to implement projects in association with other science academies in Africa and abroad.

The academy has established itself as a young and vibrant research entity that has expanded rapidly in terms of its activities and impact. A critical factor in the academy's growth has been the African Science Academy Development Initiative, which has provided funding and support for capacity development over the past five years. The overriding priority over the medium term is to ensure financial sustainability and to maintain activities and impact.

In seeking to influence policy at national, regional and global levels, the academy has established a policy advisory programme that focuses on the health sciences, water, the environment, energy, human capital development and the social sciences.

The academy is structured around six programmes. The administration and governance programme covers the activities of council and its various committees, reporting to the Department of Science and Technology and other stakeholders. The scholarly publishing programme is aimed at implementing the recommendations of the academy's 2006 consensus report, with overall aims including enhancing the visibility of South African scholarly journals and the national capacity to produce research. The policy advisory programme undertakes evidence based projects to provide scientific policy advice to government and other stakeholders. The liaison programme is divided into national and international liaison, with the former focusing on linkages with various government departments and science councils, universities, and members of the academy. The publications programme is responsible for the production and distribution of the South African Journal of Science and Quest magazine, which promotes interest and encourages dialogue in science among science learners in schools and scholars in tertiary institutions. The communication programme is responsible for non-periodical publications and reports and the marketing of the academy among its stakeholders, and through events and press releases.

Performance

As part of the drive to promote innovation and scholarly activity and to achieve the department's outcome of strengthening the country's skills and resource base, the academy continues to produce several important outputs. The South African Journal of Science is published six times a year. The academy will also continue to host the annual national scholarly editors' forum, and seven public lectures and symposiums per year over the MTEF period. The academy will also maintain its quarterly publication of Quest magazine, which continues to promote interest in and awareness of science education.

The process followed by the academy begins with expert meetings of various types such as consensus panels, committees and forum studies and culminates in producing reports. Allowance has been made for two reports to be produced in 2012/13 and four reports in 2014/15. Because these studies take up to two years to complete, the reports to be published in 2012/13 are already in the pipeline and three additional studies will be initiated in the same year.

Selected performance indicators

Table 34.22 Academy of Science of South Africa

Indicator	Programme/Activity/Objective/Project	Past			Current	Projected		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of consensus panel and committee meetings held per year	Administration and governance	15	15	16	16	16	18	18
Number of forum study meetings held per year	Scholarly publishing programme	5	5	5	5	7	7	7
Number of national scholarly editors' forums held per year	Policy advisory programme	1	1	1	1	1	1	1
Number of evidence based reports produced per year	Publications	2	5	5	5	2	3	4

Table 34.22 Academy of Science of South Africa (continued)

Indicator	Programme/Activity/Objective/Project	Past			Current	Projected		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of issues of the South African Journal of Science published per year	Publications	7	6	6	6	6	6	6
Number of issues of Quest magazine published per year	Communication	4	4	4	4	4	4	4
Number of public lectures, symposiums and international conferences held per year	Liaison: National and international	6	7	7	7	7	7	7
Number of fellowships and awards granted per year	Scholarly publishing programme	3	3	3	3	3	3	3

Programmes/activities/objectives

Table 34.23 Academy of Science of South Africa

R thousand	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Administration and governance	2 238	3 610	3 674	4 011	3 726	3 890	3 951
Scholarly Publishing Programme	1 899	2 706	3 800	3 969	4 361	4 478	4 530
Policy Advisory Programme	3 102	6 269	4 841	4 227	3 726	3 945	4 136
Liaison - national and international	1 821	7 273	3 969	2 486	2 629	2 707	2 792
Publications	3 263	3 491	2 990	1 466	1 544	1 818	2 152
Communication	370	1 497	1 354	1 207	1 207	1 351	1 368
Total expense	12 693	24 846	20 628	17 366	17 193	18 189	18 929

The Academy of Science of South Africa had a total budget of R17.4 million in 2011/12, of which 52.4 per cent was used for compensation of employees.

Savings and cost effectiveness measures

Reductions to the academy's funding have necessitated severe austerity measures, which were put in place in 2010/11. 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. Savings have also been identified in salaries due to the resignation in November 2011 of a staff member at the management level. The responsibilities of this position have been spread across other management staff. The savings realised have been reprioritised to fill the gaps left by previous external funding sources.

Expenditure estimates

Table 34.24 Academy of Science of South Africa

Statement of financial performance	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Revenue							
Non-tax revenue	1 158	2 047	3 438	998	874	878	882
Sale of goods and services other than capital assets	375	1 157	2 765	555	324	328	332
<i>of which:</i>							
Administration fees	29	42	82	68	74	78	82
Sales by market establishments	346	1 115	2 683	487	250	250	250
Other non-tax revenue	783	890	673	443	550	550	550
Transfers received	16 430	24 085	17 455	16 368	16 319	17 311	18 047
Total revenue	17 588	26 132	20 892	17 366	17 193	18 189	18 929

Table 34.24 Academy of Science of South Africa (continued)

Statement of financial performance	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Expenses							
Current expenses	12 693	24 846	20 628	17 366	17 193	18 189	18 929
Compensation of employees	4 908	8 551	8 557	9 108	9 563	10 041	10 543
Goods and services	7 747	16 026	11 710	8 015	7 420	7 954	8 227
Depreciation	38	269	361	243	210	194	159
Total expenses	12 693	24 846	20 628	17 366	17 193	18 189	18 929
Surplus / (Deficit)	4 895	1 286	265	-	-	-	-
Statement of financial position							
Carrying value of assets	240	1 467	1 190	985	845	721	632
<i>of which:</i>							
Acquisition of assets	139	1 496	83	38	70	70	70
Receivables and prepayments	-	198	561	-	-	-	-
Cash and cash equivalents	11 353	11 199	9 717	9 932	9 792	9 668	9 579
Total assets	11 593	12 864	11 469	10 917	10 637	10 389	10 211
Accumulated surplus / (deficit)	8 865	-	-	-	-	-	-
Capital and reserves	-	10 152	10 418	10 437	10 157	9 909	9 731
Deferred income	-	794	-	-	-	-	-
Trade and other payables	2 728	1 439	-	-	-	-	-
Provisions	-	481	1 051	480	480	480	480
Total equity and liabilities	11 593	12 865	11 469	10 917	10 637	10 389	10 211

Expenditure trends

The spending focus over the medium term will be on administration and governance, scholarly publishing, policy advisory and liaison programmes, and will mainly be concentrated in spending on compensation of employees and on goods and services. The entity expects, as a result, to sustain good corporate governance practices and achieve clean audits, continue 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.

Transfers received from government constitute 94 per cent of income, while own revenue makes up the balance of 6 per cent. Revenue decreased from R17.6 million in 2008/09 to R17.4 million in 2011/12, at an average annual rate of 0.4 per cent, mainly due to a decrease in transfers received. Over the medium term, revenue is expected to increase to R18.9 million, at an average annual rate of 2.9 per cent, in line with inflation projections.

Expenditure increased from R12.7 million in 2008/09 to R17.4 million in 2011/12, at an average annual rate of 11 per cent, mainly due to the two international conferences, the Third World Academy of Science and the African Science Academy Development Initiative, which the entity hosted in 2009/10 and 2010/11. Three major studies undertaken on the state of humanities in South Africa, low carbon cities and a study on PhDs between 2009/10 and 2011/12 also contributed to the increase. As a result, spending on compensation of employees grew from R4.9 million in 2008/09 to R9.1 million in 2011/12, at an average annual rate of 22.9 per cent, as more staff was employed to undertake these activities. Spending on related goods and services increased from R7.7 million in 2008/09 to R8 million in 2011/12, at an average annual rate of 1.1 per cent. Over the medium term, expenditure is expected to increase to R18.9 million, at an average annual rate of 2.9 per cent. The lower rate of increase is due to the academy's plans to trim spending over the medium term due to cuts in funding.

Personnel information

Table 34.25 Academy of Science of South Africa

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid-year ¹	Medium-term estimate		
				2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
Executive management	2	2	–	2	2	2	2	2	2	2
Senior management	5	5	–	5	5	5	5	5	5	5
Middle management	1	1	–	–	1	1	1	1	1	1
Professionals	9	9	–	9	9	9	9	9	9	9
Skilled	4	4	–	4	4	4	4	4	4	4
Total	21	21	–	20	21	21	21	21	21	21
Compensation (R thousand)				4 908	8 551	8 557	9 108	9 563	10 041	10 543
Unit cost (R thousand)				245	407	407	434	455	478	502

1. As at 30 September 2011.

The academy's secretariat currently comprises 21 staff members, headed by an executive officer and a chief operations officer. Filled posts remain the same over the seven-year period due to budget constraints. There are no vacancies. The ratio of support staff to line function staff is 1:6.

Human Sciences Research Council

Overview: 2008/09 – 2014/15

The Human Sciences Research Council was established in 1968 to undertake, promote and coordinate research in the human and social sciences. It operates in terms of the Human Sciences Research Council Act (2008), which mandates the council 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; and develop new and improved methodologies for use in the development of this kind of data set.

The act also permits the council to 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 intends to serve as a knowledge hub for research based solutions to inform human and social development. It 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 strategic intent is aligned with the overall goals of the AU's consolidated plan of action for science and technology. The goals of the action plan are to enable Africa to harness and apply science, technology and related innovations to eradicate poverty and achieve sustainable development, and ensure that Africa contributes to the global pool of scientific knowledge and technological innovations.

The council has identified six strategic outcome oriented goals, which are informed by the mandated goals and institutional imperatives of the council. These relate to national priorities, global developmental goals, and the grand challenges in the 10-year national innovation plan, particularly the human and social dynamics in development grand challenge.

The council will disseminate knowledge through public dialogue, policy briefs and publications by: publishing peer reviewed articles in internationally accredited scientific journals, recognised books and book chapters, and policy briefs. The council will also host research seminars, including the human and social dynamics, and the science and policy seminars. R12.9 million is allocated for this objective in 2012/13, R15 million in 2013/14 and R14 million in 2014/15.

The council will participate in institutional collaboration by fostering and supporting research collaboration, networks and institutional linkages within the human sciences research community. The council aims to fulfil this mandate by establishing formalised networks and institutional linkages through 20 memorandums of understanding by the end of 2014/15. Due to financial constraints, there is no budget allocated to this objective.

The council will conduct research and analysis of developmental problems to respond to the needs of marginalised groups and contribute to the improvement of their lives. This objective aims to fulfil the council's mandate by focusing on research projects aimed at improving the quality of basic education. The council will conduct research and produce a South African learning outcomes report that provides policy makers with appropriate knowledge and recommendations for effecting improvements in the quality of basic education by the end of 2015/16, among other projects. The budget for 2012/13 is R222.9 million and is projected to increase to R230 million in 2013/14 and R242.9 million in 2014/15.

The council aims to promote an African research agenda through knowledge and research partnerships elsewhere in Africa and by encouraging comparative work and the involvement of expert participants and reviewers from other African countries. This objective will be achieved by focusing on the following key projects: participating in international conferences and events to promote the Africa focus of publications and the publication of recognised books and book chapters; and the recruitment of African research fellows. The budget for this objective is R4.5 million in 2012/13 and is projected to increase to R4.8 million in 2013/14 and to R6.4 million in 2014/15.

The council is mandated to build research capacity and infrastructure for the human sciences in South Africa and the rest of Africa. As such, it aims to grow a body of suitably qualified and experienced social scientists and strengthen its capacity building programme, concentrating on expanding the coaching skills initiative for managers by the recruitment of masters and doctorate level interns, and postdoctoral fellows. The budget for 2012/13 is R24.9 million and is projected to increase to R27 million in 2013/14 and R31 million in 2014/15.

The council is mandated to develop and make publicly available, new data sets to underpin research, policy development and public discussion on key issues of development; and to establish new and improved methodologies for use in their development. To fulfil this mandate, the council aims to expand the number of data sets already available in the public domain and establish standards for the management and preservation of research data. The budget for 2012/13 is R2 million and is projected to increase to R2.7 million in 2013/14 and R3 million in 2014/15.

Performance

The number of peer reviewed publications in an internationally accredited scientific journal per senior researcher and above per year is expected to increase from 1.6 in 2011/12 to 1.8 in 2014/15. The number of recognised books with at least one council researcher listed as the author or co-author published per year is expected to increase from 2 in 2011/12 to 7 in 2014/15.

Selected performance indicators

Table 34.26 Human Sciences Research Council

Indicator ¹	Programme/Activity/Objective	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Ratio of peer reviewed publications in an internationally accredited scientific journal per senior researcher and above per year	Dissemination of knowledge through public dialogue, policy briefs and publications	1.5	1.5	1.5	1.6	1.6	1.7	1.8
Number of recognised books with at least one Human Sciences Research Council researcher listed as author or co-author, published per year	Dissemination of knowledge through public dialogue, policy briefs and publications	2	2		2	5	5	7
Number of recognised book chapters with at least one Human Sciences Research Council researcher listed as author or co-author, published per year	Dissemination of knowledge through public dialogue, policy briefs and publications	2	2	2	10	13	13	16

Table 34.26 Human Sciences Research Council (continued)

Indicator ¹	Programme/Activity/ Objective	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of human and social dynamics science and policy seminars convened per year	Dissemination of knowledge through public dialogue, policy briefs and publications	– ²	– ²	4	8	8	8	–
Number of policy briefs produced and published by the Human Sciences Research Council per year	Dissemination of knowledge through public dialogue, policy briefs and publications	– ²	– ²	5	6	10	14	20
Number of active memorandums of understanding with other research institutions or associations in place per year	Institutional collaboration	– ²	– ²	– ²	6	12	18	20
Number of research fellows from elsewhere in Africa at the Human Sciences Research Council per year	Promoting an African research agenda	– ²	– ²	7	7	7	7	9
Number of interns (research trainees) enrolled in a masters programme per year	Skilled and capable workforce	41	38	38	34	30	30	34
Number of interns (research trainees) enrolled in a PhD programme per year	Skilled and capable workforce	36	35	25	25	30	34	35
Number of postdoctoral fellows (research associates) appointed per year	Skilled and capable workforce	12	14	18	22	22	22	24
Number of Human Sciences Research Council data sets archived or curated per year	Preserved datasets	– ²	– ²	16	14	21	21	22
Percentage of researchers at senior level and above who are African per year	Transformation	35% (24/68)	42.9% (27/63)	40.7% (22/54)	48% (29/60)	50% (34/58)	53% (38/72)	54% (39/74)
Percentage of total income that is extra-parliamentary per year	Financial sustainability	56% (R140.3m/ R322.4m)	56% (R189.0m/ R337.0m)	47% (R149.6m/ R320.0m)	46% (R180.8m/ R336.3m)	48% (R187.8m/ R360.2m)	48% (R196.1m/ R378.4m)	48% (R209.2m/ R401.3m)
Percentage of research grants that are multi-year or at least three years in duration per year	Financial sustainability	72.4% (40/55)	64% – ³	34.2% (40/117)	46% (43/93)	50% (45/90)	50% (48/96)	52% (49/95)

1. New indicators updated per strategic plan for 2012/13 to 2017/18 and the annual performance plan for 2012/13.

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

3. Indicator given in Rand value for 2009/10 as R136 022 243 out of R212 419 738.

Programmes/activities/objectives

Table 34.27 Human Sciences Research Council

R thousand	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Dissemination of knowledge through public dialogue, policy briefs and publications	–	–	–	10 501	12 917	15 093	14 369
Research and analysis of developmental problems to respond to the needs of marginalised groups and contribute to the improvement of their lives.	240 672	256 086	211 084	235 161	222 931	230 575	242 960
Promoting an African research agenda	–	–	–	4 200	4 538	4 807	6 488
Skilled and capable workforce	–	–	–	23 101	24 990	27 562	31 140
Preserved data sets	–	–	–	1 669	2 320	2 765	3 021
Transformation	–	–	–	6 599	7 776	8 240	9 374
Financial sustainability	86 820	83 636	108 000	80 422	111 037	116 905	123 251
Total expense	327 492	339 722	319 084	361 653	386 509	405 947	430 603

The Human Sciences Research Council had a total budget of R361.7 million in 2011/12, of which 50.5 per cent was used for goods and services and 48 per cent for compensation of employees.

Savings and cost effectiveness measures

The council has implemented a number of austerity measures to direct more funds towards the core business. These include: reduction in the use and dependency on consultants; more efficient use of technology to reduce travel and other related expenses; reduction of finance lease liabilities; focus new appointments on the research related activities; and improved controls on telephone usage management. These measures are expected to generate a saving of R2 million over the medium term.

Expenditure estimates

Table 34.28 Human Sciences Research Council

Statement of financial performance				Revised estimate	Medium-term estimate		
R thousand	Audited outcome			2011/12	2012/13	2013/14	2014/15
	2008/09	2009/10	2010/11				
Revenue							
Non-tax revenue	182 126	189 079	149 644	155 484	172 331	182 317	192 079
Sale of goods and services other than capital assets	161 702	155 926	127 042	143 000	151 843	160 348	168 514
<i>of which:</i>							
<i>Sales by market establishments</i>	151 831	153 157	124 474	141 000	148 843	157 030	164 881
<i>Other sales</i>	9 871	2 769	2 568	2 000	3 000	3 318	3 633
<i>Other non-tax revenue</i>	20 424	33 153	22 602	12 484	20 488	21 969	23 565
Transfers received	140 334	147 970	170 434	206 169	214 177	223 630	238 523
Total revenue	322 460	337 049	320 078	361 653	386 508	405 947	430 602
Expenses							
Current expenses	327 492	339 722	319 086	361 653	360 206	378 484	401 310
Compensation of employees	132 543	154 439	156 886	173 475	182 669	192 716	202 351
Goods and services	182 789	169 941	150 262	182 706	171 775	179 689	192 576
Depreciation	9 447	12 859	10 414	3 972	4 183	4 413	4 633
Interest, dividends and rent on land	2 713	2 483	1 524	1 500	1 580	1 666	1 750
Transfers and subsidies	-	-	-	-	26 302	27 463	29 293
Total expenses	327 492	339 722	319 086	361 653	386 508	405 947	430 603
Surplus / (Deficit)	(5 032)	(2 673)	992	-	-	-	-
Statement of financial position							
Carrying value of assets	181 013	186 248	181 657	180 585	179 456	178 265	177 015
<i>of which:</i>							
<i>Acquisition of assets</i>	16 073	12 615	3 270	2 900	3 054	3 222	3 383
Inventory	3 517	4 801	3 551	4 856	5 535	6 214	6 525
Receivables and prepayments	29 609	47 102	31 861	35 952	40 985	46 018	48 319
Cash and cash equivalents	47 027	15 993	28 370	20 158	18 855	16 591	19 593
Total assets	261 166	254 144	245 439	241 551	244 831	247 088	251 452
Accumulated surplus/(deficit)	25 135	14 438	15 428	15 428	15 428	15 428	15 428
Capital and reserves	143 652	144 404	144 404	144 404	144 404	144 404	144 404
Finance lease	7 917	6 187	5 323	5 518	2 518	2 656	2 789
Deferred income	34 228	43 100	40 309	40 654	40 654	40 654	40 654
Trade and other payables	39 586	30 554	23 673	21 968	27 528	28 861	32 337
Provisions	10 647	15 461	16 303	13 579	14 299	15 085	15 839
Total equity and liabilities	261 165	254 144	245 440	241 551	244 831	247 089	251 452

Expenditure trends

The spending focus over the MTEF period will be on research and analysis of developmental problems to respond to the needs of marginalised groups and contribute to the improvement of their lives.

Total revenue increased from R322.5 million in 2008/09 to R361.7 million in 2011/12, at an average annual rate of 3.9 per cent. This was largely driven the increase in transfers received, which grew from R140.3 million in 2008/09 to R206.2 million in 2011/12, at an average annual rate of 13.7 per cent. Over the medium term, total revenue is projected to increase to R430.6 million, at an average annual rate of 6 per cent, due to inflationary expectations.

Expenditure increased from R327.5 million in 2008/09 to R361.7 million in 2011/12, at an average annual rate of 3.4 per cent, and is expected to increase to R430.6 million over the medium term, at an average annual rate of 6 per cent. The increase in both periods is mainly due to inflationary adjustments.

Personnel information

Table 34.29 Human Sciences Research Council

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid- year ¹	Medium-term estimate		
				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive management	13	13	3	14	14	13	13	10	10	10
Senior management	143	143	8	146	137	138	143	–	–	–
Professionals	118	118	11	116	128	113	118	180	180	180
Skilled	34	34	–	40	33	29	34	84	84	84
Semi-skilled	152	152	7	134	179	200	152	200	200	200
Total	460	460	29	450	491	493	460	500	500	500
Compensation (R thousand)				132 543	154 439	156 886	173 475	182 668	192 716	202 351
Unit cost (R thousand)				295	315	318	377	365	385	405

1. As at 30 September 2011.

The number of filled posts increased from 450 in 2008/09 to 460 in 2011/12 and is expected to increase to 500 over the medium term. Increases are attributable to concerted efforts to grow the numbers of research trainees and postdoctoral fellows, increases in technical staff providing community support activities, bringing previously outsourced activities in-house, and the appointment of more administrative staff to ensure compliance with the Public Finance Management Act (1999) and other corporate governance requirements. The ratio of research staff to support staff is 1:1.4.

South African National Space Agency

Overview: 2008/09 – 2014/15

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 became operational on 1 April 2011 and consists of a newly established corporate office, space operations and earth observation directorates, and a space science directorate. The agency's strategic plan is aligned with the priorities of the Department of Science and Technology and it also derives its mandate from the national space strategy, as approved by Cabinet in 2008. The agency will also be a key contributor to the South African earth observation strategy by providing space based data platforms, in collaboration with other entities that focus on in-situ earth observation measurements such as the South African earth observation network.

The agency is broadly required to promote the peaceful use of space; foster international cooperation in space related activities; facilitate the creation of an environment conducive to space technology and industrial development. This will be achieved by fostering relevant research, and advancing scientific and engineering capabilities through human capital development, outreach programmes and the development of infrastructure.

The agency has five strategic goals: delivering world class and efficient services, which yield social and economic benefits; conducting cutting edge research, development, innovation, technology and applications;

developing human capital, transformation and science advancement; contributing to a competitive national space industry; and making South Africa a recognised global space citizen.

Over the medium term, the administration programme receives R100 million to fund the provision of administrative structures and processes, including stakeholder engagement for institutional cohesion. The earth observation services programme receives R69.4 million to fund the acquisition of data imagery, and for processing and distributing the acquired satellite imagery and data to public institutions for planning, decision making and research purposes. The industry growth programme receives R80.7 million to fund the cost of commercial operations in industry participation in space operations and space science. The research, development and technology applications programme receives R82 million to access satellite infrastructure to enable the download of data and imagery from various satellites, supply research data on space weather, and produce research papers on earth observation, space operations and space science applications.

Over the medium term, the agency aims to achieve: good corporate governance and clean audits; human capital development; science advancement among the youth; public engagement in science programmes; high impact research projects in remote sensing, earth observations, space science, satellite engineering; and growing global partnerships. The agency also intends acquiring and archiving 13 600 scenes in total and supporting 66 mission launch activities over the same period. The agency aims to participate in 11 multinational projects by 2015.

Selected performance indicators

Table 34.30 South African National Space Agency

Indicator	Activity/Objective/Programme/Project	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Amount of data acquired and archived in all forms (scenes) per year	Earth observation services	- ¹	- ¹	- ¹	4 000	4 200	4 600	4 800
Amount of data distributed (scenes) per year	Earth observation Services	- ¹	- ¹	- ¹	40 000	42 000	44 000	50 000
Number of mission launch activities supported per year	Launch, tracking telemetry and command	- ¹	- ¹	- ¹	20	20	22	24
Number of end user or value added space weather, geospace, technology services and products per year	Research, applied science and technology platforms	- ¹	- ¹	- ¹	5	7	10	15
Number of staff supported or trained through formal programmes per year	Human capital development	- ¹	- ¹	- ¹	14	15	16	21
Proportion of commercial income from industry per year	Industry growth	- ¹	- ¹	- ¹	70% (R17.5m)	70% (R21m)	75% (R22.5m)	80% (R24.2m)
Proportion of income from technology or applied science services per year	Industry growth	- ¹	- ¹	- ¹	30% (R1.7m)	30% (R2.1m)	30% (R2.4m)	30% (R2.7m)
Number of multinational projects participated in per year	Partnerships	- ¹	- ¹	- ¹	7	7	9	11

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

Programmes/activities/objectives**Table 34.31 South African National Space Agency**

R thousand	Audited outcome			Revised estimate 2011/12	Medium-term estimate		
	2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
Earth observation services	-	-	-	22 633	22 250	22 886	24 228
Launch, tracking telemetry and Command	-	-	-	5 220	9 820	12 283	14 873
Research, applied science and technology platforms	-	-	-	2 842	2 934	4 068	4 142
Research, development, innovation, technology and applications	-	-	-	25 752	28 833	25 793	27 545
Human capital development	-	-	-	12 604	13 458	15 325	15 650
Industry growth	-	-	-	22 670	24 746	27 723	28 240
Partnerships	-	-	-	9 057	9 759	11 043	11 266
Administration	-	-	4 861	30 050	31 900	33 538	34 695
National space programme	-	-	-	13 136	-	-	-
Total expense	-	-	4 861	143 964	143 700	152 659	160 639

The South African National Space Agency had a total budget of R144 million in 2011/12, of which 56.1 per cent was used for goods and services.

Savings and cost effectiveness measures

Since its inception the entity has implemented cost effectiveness measures with the aim of eliminating inefficient spending. A mid-year budget review and reprioritisation process in 2011/12 assisted in directing available funding to unfunded priority initiatives. This review process will be continued to ensure that available funding is directed timely and appropriately to unfunded priority projects.

Expenditure estimates**Table 34.32 South African National Space Agency**

Statement of financial performance				Revised estimate 2011/12	Medium-term estimate		
R thousand	Audited outcome				2012/13	2013/14	2014/15
	2008/09	2009/10	2010/11				
Revenue							
Non-tax revenue	-	-	48	41 900	48 500	49 503	50 765
Sale of goods and services other than capital assets	-	-	-	41 900	48 500	49 503	50 765
<i>of which:</i>							
<i>Sales by market establishments</i>	-	-	-	41 900	48 500	49 503	50 765
<i>Other non-tax revenue</i>	-	-	48	-	-	-	-
Transfers received	-	-	9 528	122 855	99 039	114 247	119 262
Total revenue	-	-	9 576	164 755	147 539	163 750	170 027
Expenses							
Current expenses	-	-	4 861	143 964	143 700	152 659	160 639
Compensation of employees	-	-	2 530	63 155	70 315	75 441	80 299
Goods and services	-	-	2 331	80 809	73 385	77 218	80 340
Total expenses	-	-	4 861	143 964	143 700	152 659	160 639
Surplus / (Deficit)	-	-	4 715	20 791	3 839	11 091	9 388

Table 34.32 South African National Space Agency (continued)

Statement of financial position	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Carrying value of assets	–	–	25 013	162 765	286 451	457 958	677 037
<i>of which:</i>							
Acquisition of assets	–	–	3 820	17 745	13 700	21 257	17 488
Investments	–	–	–	49 745	97 004	101 830	106 897
Inventory	–	–	–	49 745	1 200	1 236	1 273
Receivables and prepayments	–	–	–	–	21 919	23 015	24 165
Cash and cash equivalents	–	–	893	22 336	20 024	21 226	22 499
Non-current assets held for sale	–	–	20 300	15 031	7 213	7 429	7 652
Defined benefit plan assets	–	–	–	10 510	–	–	–
Total assets	–	–	46 206	310 132	433 812	612 695	839 525
Accumulated surplus/(deficit)	–	–	25 013	162 765	286 451	457 958	677 037
Capital and reserves	–	–	–	28 969	30 707	32 550	34 503
Capital reserve fund	–	–	–	28 969	30 707	32 550	34 503
Accrued interest	–	–	–	25 013	223 147	391 959	607 774
Trade and other payables	–	–	18 416	–	21 026	21 656	22 739
Provisions	–	–	–	11 472	16 585	16 834	17 086
Total equity and liabilities	–	–	45 311	265 561	611 902	956 883	1 397 120

Expenditure trends

Over the medium term, the agency aims to: achieve good corporate governance and clean audits; develop human capital; advance science among the youth; engage the public in science programmes; conduct high impact research projects in remote sensing, earth observations, space science, satellite engineering; and grow global partnerships.

The agency's main source of revenue is transfer payments from the department, which are projected to decrease from R122.9 million in 2011/12 to R119.3 million in 2014/15, at an average annual rate of 1 per cent. Other revenue makes up an average of 29.6 per cent of the agency's revenue over the medium term. Other revenue is projected to increase from R41.9 million in 2011/12 to R50.8 million in 2014/15, at an average annual rate of 6.6 per cent, in line with inflation projections.

Expenditure is expected to increase from R144 million in 2011/12 to R160.6 million in 2014/15, at an average annual rate of 3.7 per cent, in line with inflationary projections. Expenditure on compensation of employees is projected to increase from R63.2 million in 2011/12 to R80.3 million in 2014/15, at an average annual rate of 8.3 per cent, due to the entity increasing its staff complement from 141 to 164 staff members. Expenditure on goods and services is projected to decrease from R80.8 million in 2011/12 to R80.3 million in 2014/15, at an average annual rate of 0.2 per cent.

Personnel information

Table 34.33 South African National Space Agency

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid-year ¹	Medium-term estimate		
				2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive board members	11	6	–	–	–	9	11	11	11	11
Executive management	3	3	–	–	–	1	3	3	3	3
Senior management	8	7	1	–	–	–	7	8	8	8
Middle management	19	19	–	–	–	–	19	20	20	20
Professionals	23	23	–	–	–	–	23	34	34	34
Skilled	51	51	–	–	–	–	51	57	57	57
Semi-skilled	19	19	–	–	–	1	19	23	23	23
Very low skilled	8	8	–	–	–	–	8	8	8	8
Total	142	136	1	–	–	11	141	164	164	164
Compensation (R thousand)				–	–	2 530	63 155	70 315	75 441	80 299
Unit cost (R thousand)				–	–	230	448	429	460	490

1. As at 30 September 2011.

The entity had an approved establishment of 142 posts as at 30 September 2011, 6 of which were unfunded in 2011/12 as a result of budget constraints. Personnel numbers are expected to increase from 141 in 2011/12 to 164 in 2012/13 as a result of the organisational requirements in delivering on the entity's mandate. Staffing is projected to remain at 164 staff members over the medium term. Further increases in staffing requirements over the medium term are inevitable given the expansion of the entity, but will be considered subject to the availability of additional or available funding. The ratio of support staff to line staff of 1:5.

Technology Innovation Agency

Overview: 2008/09 – 2014/15

The Technology Innovation Agency is a national public entity that draws its mandate from the Technology Innovation Agency Act (2008). The agency is an intervention to improve research and development from higher education institutions, science councils, public entities, private companies, etc., and commercialisation; thereby increasing technological innovation in the economy. Technological innovations are essential for sustained economic growth, and for supporting the development of technology based commercially viable enterprises.

To deliver on its mandate, the agency has set the following strategic objectives: stimulate the development and commercialisation of technology based services, processes and products; support the establishment and development of technology based commercially viable enterprises; leverage agency funds for co-investment; optimise the implementation of statutory requirements; facilitate the development of human capital for technology commercialisation and innovation; and build a culture of technology innovation.

The agency draws its strategic objectives from a number of policy initiatives and strategic documents of the department and government, such as the 1996 White Paper on Science and Technology, and the 10-year innovation plan.

The agency aims to use such infrastructure to address a number of national priorities such as: diagnosing and treating human and animal diseases by developing commercial pharmaceutical drug delivery technologies for communicable and non-communicable diseases; diagnosing crop and food pathogens; and providing a technology nursery for entrepreneur led research and development to lower the risks in developing hi-tech start-up ventures.

The agency's mandate is driven by delivery in the industrial and biotechnology sectors. Biotechnology programmes include technologies in the agriculture and agro-processing, and health and industrial sectors. The industrial sector programme includes technologies for resource based industries such as mining and energy, and applications based industries such as ICT and advanced manufacturing. Innovation in these sectors will be supported by providing structured financial and non-financial products. Financial products will include funding in the form of royalty grants, loans and equity channelled through mechanisms such as the Industry Matching

Fund, the Technology Development Fund, Youth Technology Innovation Fund, Idea Development Fund and the Equity Fund.

The agency has also developed targeted technology infrastructure programmes to support industry and the research community. This programme consists of technology platforms and technology stations. These are housed at universities around the country. They are crucial to delivering technology assistance to SMMEs and entrepreneurs. Technology platforms and stations are equipped with state of the art equipment and are resourced by highly competent individuals in specialised fields.

Performance

Over the medium term, the agency intends to establish five regional offices; launch one high impact flagship project per year; fund 24 new technology products, processes and services by 2014/15; and commercialise 8 new technology products, processes or services by 2014/15. The agency also intends to increase the number of technology based enterprises supported per year from five in 2011/12 to 10 in 2013/14 and the number of green technology based enterprises supported per year from one in 2011/12 to two in 2014/15. Meeting these targets will depend on finding suitable commercially viable investments and identifying co-funding opportunities.

Selected performance indicators

Table 34.34 Technology Innovation Agency

Indicator	Programme/Activity/Objective/Project	Past			Current	Projections		
		2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of Technology Innovation Agency regional offices per year	Stimulate the development and commercialisation of technology based services, processes and products	-	-	-	3	2	-	-
Number of high impact (flagship) projects launched per year	Stimulate the development and commercialisation of technology-based services, processes and products	-	-	-	1	1	1	1
Number of new technology products, processes and services developed with Technology Innovation Agency funding per year	Stimulate the development and commercialisation of technology-based services, processes and products	-	-	-	22	23	24	24
Number of new technology products, processes and services commercialised per year	Stimulate the development and commercialisation of technology-based services, processes and products	-	-	-	7	7	7	8
Number of technology based enterprises supported per year	Stimulate the development and commercialisation of technology-based services, processes and products	-	-	-	5	5	5	10
Number of green technology based enterprises supported per year	Support the establishment and development of technology based commercially viable enterprises	-	-	-	1	1	1	2
Number of promotional events where the agency is showcased per year	Build the culture of innovation	-	-	-	4	4	4	6

Programmes/activities/objectives

Table 34.35 Technology Innovation Agency

R thousand	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Stimulate the development and commercialisation of technology-based services, processes and products.	-	-	220 653	178 663	187 468	196 949	208 766
Support the establishment and development of technology-based commercially viable enterprises	-	-	96 005	77 736	81 566	85 692	90 833
Leverage the agency's funds for co-investment	-	-	150 638	121 972	127 983	134 456	142 522
Facilitate the development of human capital for technology commercialisation and innovation	-	-	3 712	3 006	3 154	3 315	3 512
Optimise the implementation of statutory requirements	-	-	15 395	12 885	13 520	14 204	15 055
Build culture of innovation	-	-	49 624	35 216	36 953	38 819	41 152
Total expense	-	-	536 027	429 478	450 644	473 435	501 840

The Technology Innovation Agency had a total budget of R429.5 million in 2011/12, of which 41.6 per cent was used to stimulate the development and commercialisation of technology-based services, processes and products.

Savings and cost effectiveness measures

The ratio of administrative costs to functional costs stands at 40:60. This is due to the merger of seven entities. The entity aims to lower this ratio after it has completed its recruitment process and incurred other related indirect costs.

Expenditure estimates

Table 34.36 Technology Innovation Agency

Statement of financial performance				Revised estimate	Medium-term estimate		
R thousand	Audited outcome			2011/12	2012/13	2013/14	2014/15
	2008/09	2009/10	2010/11				
Revenue							
Non-tax revenue	-	-	15 739	6 659	7 151	7 437	7 729
Sale of goods and services other than capital assets	-	-	-	102	112	123	136
<i>of which:</i>							
Administration fees	-	-	-	102	112	123	136
Other non-tax revenue	-	-	15 739	6 557	7 039	7 314	7 593
Transfers received	-	-	590 908	433 816	455 196	478 217	506 910
Total revenue	-	-	606 647	440 475	462 347	485 654	514 639
Expenses							
Current expenses	-	-	224 681	170 159	177 526	186 505	197 694
Compensation of employees	-	-	83 052	83 382	86 487	90 861	96 313
Goods and services	-	-	135 502	82 288	86 714	91 519	97 331
Depreciation	-	-	6 127	4 489	4 325	4 125	4 050
Transfers and subsidies	-	-	311 346	259 319	273 118	286 930	304 146
Total expenses	-	-	536 027	429 478	450 644	473 435	501 840
Surplus / (Deficit)	-	-	70 620	10 997	11 703	12 219	12 799

Table 34.36 Technology Innovation Agency (continued)

Statement of financial position	Audited outcome			Revised estimate	Medium-term estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
R thousand							
Carrying value of assets	–	–	28 879	28 728	28 955	29 612	30 632
<i>of which:</i>							
Acquisition of assets	–	–	18 109	4 338	4 552	4 782	5 070
Investments	–	–	162 550	155 032	135 000	125 000	115 000
Receivables and prepayments	–	–	4 996	5 052	5 557	6 113	6 724
Cash and cash equivalents	–	–	201 823	198 936	129 163	64 970	120 064
Total assets	–	–	398 248	387 748	298 675	225 695	272 420
Accumulated surplus/(deficit)	–	–	70 622	81 619	69 916	57 697	44 898
Capital and reserves	–	–	271 820	246 534	161 809	136 464	194 538
Finance lease	–	–	35 889	35 889	35 889	–	–
Trade and other payables	–	–	14 794	18 904	21 457	23 084	25 734
Provisions	–	–	5 123	4 802	9 604	8 450	7 250
Total equity and liabilities	–	–	398 248	387 748	298 675	225 695	272 420

Expenditure trends

The 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 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 of technology innovation.

Revenue is generated mainly from transfers received from the department and other income made up of royalties, interest income and dividends received on investments. Revenue is expected to increase from R440.5 million in 2011/12 to R514.6 million in 2014/15, at an average annual rate of 5.4 per cent, in line with expected inflationary adjustments to the transfers received from the Department of Science and Technology.

Expenditure is projected to increase from R429.5 million in 2011/12 to R501.8 million in 2014/15, at an average annual rate of 5.3 per cent, due to investment expenses which are expected to grow in line with the growth in revenue. Expenditure on compensation of employees and on goods and services is expected to increase from R165.7 million in 2011/12 to R193.6 million in 2014/15, at an average annual rate of 5.3 per cent, in line with projected inflationary adjustments. The surpluses projected over the MTEF period of R36.7 million will be used to fund capital expenditure, with National Treasury approval.

60 per cent of the agency's allocation over the MTEF period will be spent on supporting the commercialisation of technology based products, services and processes. This will be done through investing in projects and technology development initiatives. A further 16 per cent of the allocation will be on initiatives intended to support these investments and in developing technology driven industries. By focusing its allocation in this manner, the entity will achieve the goal of using technology innovation to address issues of national importance, such as poverty alleviation, job creation and reducing the burden of disease. The investment portfolio of the agency is still growing and returns will be realised in the near future, with revenue starting in about four years.

Over the MTEF period, the agency will spend R20 million, or approximately 4 per cent of its total allocation on consultants to assist with the ongoing establishment of systems and processes. This figure is expected to decrease by 50 per cent once the entity is fully established.

Personnel information

Table 34.37 Technology Innovation Agency

	Personnel post status as at 30 September 2011			Number of personnel posts filled / planned for on funded establishment						
	Number of posts on approved establishment	Number of funded posts	Number of vacant posts	Actual			Mid-year ¹	2012/13	2013/14	2014/15
				2008/09	2009/10	2010/11				
Executive board members	–	–	–	–	–	7	8	8	8	8
Executive management	7	10	–	–	–	24	27	27	27	27
Senior management	24	23	–	–	–	22	22	23	23	23
Middle management	25	24	–	–	–	84	93	94	94	94
Professionals	63	78	–	–	–	37	37	43	43	43
Skilled	44	39	–	–	–	10	11	11	11	11
Semi-skilled	28	7	–	–	–	–	–	–	–	–
Very low skilled	6	6	–	–	–	–	–	–	–	–
Total	197	187	–	–	–	184	198	206	206	206
Compensation (R thousand)				–	–	83 052	83 382	86 487	90 861	96 313
Unit cost (R thousand)				–	–	424	407	406	427	452

1. As at 30 September 2011.

The growth of the staff complement is based on the agency's five-year strategic plan and employment equity plan, which caters for launching five new regional branches over the medium term. The ratio of support staff to line staff was 1:1 as at 2011/12. This ratio will change as new appointments are made since the current vacancies are mainly in line staff functions. The entity aims to achieve a ratio of support staff to line staff of 1:2.3.

There were 13 vacant posts as at 2011/12, mainly with the sectors. The posts are vacant because this is a new entity. The entity has focused on filling vacancies at senior level. With the appointment of all sector general managers, the sector strategies have been developed and recruitment for positions below general management level is currently in progress.

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	2010/11		2010/11	2011/12			2011/12
Administration	182 932	185 683	188 858	192 116	3 585	195 701	195 701
Research, Development and Innovation	1 284 040	826 848	802 774	854 610	–	854 610	854 610
International Cooperation and Resources	135 111	135 978	131 384	137 194	–	137 194	137 194
Human Capital and Knowledge Systems	1 748 671	1 763 964	1 754 144	1 950 427	–	1 950 427	1 950 427
Socio Economic Partnerships	1 264 787	1 215 510	1 174 742	1 270 271	(1 200)	1 269 071	1 269 071
Total	4 615 541	4 127 983	4 051 902	4 404 618	2 385	4 407 003	4 407 003

Economic classification

Current payments	361 969	370 089	331 698	369 713	(4 410)	365 303	365 303
Compensation of employees	214 971	223 691	190 629	225 251	2 385	227 636	227 636
Goods and services	146 998	146 398	140 736	144 462	(6 795)	137 667	137 667
Interest and rent on land	–	–	333	–	–	–	–
Transfers and subsidies	4 249 472	3 752 822	3 709 582	4 031 647	6 795	4 038 442	4 038 442
Departmental agencies and accounts	2 081 974	2 266 593	2 243 054	2 619 942	13 606	2 633 548	2 633 548
Higher education institutions	–	32 880	173 200	–	–	–	–
Public corporations and private enterprises	900 637	1 002 445	1 246 280	924 764	–	924 764	924 764
Non-profit institutions	1 266 861	450 904	46 070	486 941	(6 811)	480 130	480 130
Households	–	–	978	–	–	–	–
Payments for capital assets	4 100	5 072	10 603	3 258	–	3 258	3 258
Machinery and equipment	4 100	5 072	10 603	3 258	–	3 258	3 258
Payments for financial assets	–	–	19	–	–	–	–
Total	4 615 541	4 127 983	4 051 902	4 404 618	2 385	4 407 003	4 407 003

Table 34.B Summary of expenditure on training

	Audited outcome			Adjusted appropriation	Medium-term expenditure estimate		
	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Compensation of employees (R thousand)	141 585	167 488	223 691	227 636	242 302	253 366	275 048
Training expenditure (R thousand)	2 023	3 219	2 792	4 553	4 729	5 229	5 543
Training as percentage of compensation	1.4%	1.9%	1.2%	2.0%	2.0%	2.1%	2.0%
Total number trained in department (headcount)	141	180	117	260			
<i>of which:</i>							
Employees receiving bursaries (headcount)	46	131	185	216			
Learnerships (headcount)	–	–	–	n/a			
Internships (headcount)	–	22	22	19			

Table 34.C Summary of donor funding

Donor R thousand	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Medium-term expenditure estimate			
							2008/09	2009/10	2010/11	Estimate 2011/12	2012/13	2013/14	2014/15
Foreign In cash	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' mature relationship with the Department of Health and South African National AIDS Council impacts key policy decisions such as the evaluation and redefining of the national space programme. Increased capacity of especially young South Africans to perform gender sensitive, policy impacting epidemiological research	1 236	4 227	4 870	4 870	4 717	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate		
							2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
R thousand Foreign In cash European Union	Sector budget support	Socio Economic Partnerships	3 years	300 000	Departmental agencies and accounts	Contribute to South Africa's harmonious and sustainable economic and social development through programmes and measures designed to reduce poverty and encourage economic growth which benefits the poor	-	20 000	30 000	95 000	10 000	-	-
Finland	Cooperative Financial Institute of South Africa	International Cooperation and Resources	3 years	30 000	Departmental agencies and accounts	Programme aimed at supporting the development of provincial and local systems of innovation, especially in Eastern Cape, Gauteng and Western Cape	11 789	10 023	-	-	-	-	-
Finland	South Africa- Finland Knowledge Partnership on ICT	International Cooperation and Resources	3 years	30 000	Departmental agencies and accounts	Aims to 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	10 000	10 000	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome				Medium-term expenditure estimate			
							2008/09	2009/10	2010/11	Estimate 2011/12	2012/13	2013/14	2014/15	
R thousand Foreign In cash Finland	Finnish-Southern African partnership on biosciences	International Cooperation and Resources	3 years	30 000	Foreign governments and international organisations	Strengthening of the Southern Africa Biosciences Network secretariat; development of the operating environment; capacity development; network creation and dissemination; and identification, development and implementation of projects by the network	-	10 000	10 000	10 000	10 000	-	-	-
United States Agency for International Development (Australia)	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	-	-	-	-	-	-
United States Agency for International Development	SADC capacity building in relation to the risk and vulnerability atlas	Socio Economic Partnerships	2 years	1 168	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	584	584	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Medium-term expenditure estimate			
							2008/09	2009/10	2010/11	Estimate 2011/12	2012/13	2013/14	2014/15
R thousand Foreign In cash													
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	-	-	244	-	-
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 2007-2009 action plan	-	348	-	-	-	-	-
Australia	Regional support for science and technology policy training and the development of a science and technology climate change framework	International Cooperation and Resources	2 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	-	-	1 500	-	-	-	-
Japan	IPR Training National Intellectual Property Management	Research, Development and Innovation	1 year	383	Foreign governments and international organisations	To equip the Department of Science and Technology and National Intellectual Property Management Office staff with skills in the evaluation of patent and other intellectual property data	-	-	-	-	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Medium-term expenditure estimate			
							2008/09	2009/10	2010/11	Estimate 2011/12	2012/13	2013/14	2014/15
R thousand Foreign In cash													
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	-	-	-
United States Agency for International Development	Human Health Risks and coping mechanisms to environmental population in the Lower Olifants with Mozambique	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	-	-	-
In cash 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 countries on science and technology innovation	-	-	684	684	684	-	-
European Union	Network for the Coordination and Advancement of Sub-Saharan Africa-EU Science and Technology Cooperation	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	514	514	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Medium-term expenditure estimate			
							2008/09	2009/10	2010/11	Estimate 2011/12	2012/13	2013/14	2014/15
R thousand Foreign In cash													
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		220	-	-
European Union	European-South Africa science and technology advancement programme	International Cooperation and Resources	3 years	5 000	Goods and services	Advancement of South Africa/EU collaboration	-	1 667	1 667		1 667	-	-
European Union	Information Society Technologies in Africa	Socio Economic Partnerships	2,3 years	661	Goods and services	Improving the overall ICT policies and creating systems for each African country to ensure a consolidated, effective regional impact through information society in Africa	-	287	287		287	-	-
European Union	Europe research area Africa	International Cooperation and Resources	3 years	2 345	Goods and services	Implementing 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	-		267	-	-
European Union	BioCircles2	International Cooperation and Resources	2 years	419	Transfers to Higher Education Institutions		-	-	-		210	209	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate 2011/12	Medium-term expenditure estimate			
							2008/09	2009/10	2010/11		2012/13	2013/14	2014/15	
R thousand Foreign in cash														
European Union	General budget support	Socio Economic Partnerships	3 years	143 500	Foreign governments and international organisations	Establishing the link between science and technology opportunities for practical policy influence	-	-	-	-	35 900	47 800	59 800	
In kind														
Japan	Senior Technical Assistance	International Cooperation and Resources	4 years	6 800	Foreign governments and international organisations	Assistance in the creation, implementation and design of joint initiatives. Improved bilateral relationships with the Japanese national system of innovation	2 000	2 000	2 000	500	-	-	-	
Japan	Science centre senior volunteers in Limpopo	Human Capital and Knowledge Systems	10 years	5 152	Foreign governments and international organisations	Support science centres in developing teaching material for science and maths education, and develop exhibitions. Systematise the newly developed exhibitions to ensure knowledge gain by science centres	1 800	1 200	950	1 200	900	900	-	
Japan	Science centre senior volunteers in Eastern Cape	Human Capital and Knowledge Systems	7.3 years	5 600	Foreign governments and international organisations	Support science centres in developing teaching material for science and maths education, and develop exhibitions. Develop additional low cost exhibitions	1 200	1 200	900	600	500	1 200	-	

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate 2011/12	Medium-term expenditure estimate		
							2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
R thousand Japan	Productivity training	Human Capital and Knowledge Systems	2 years	1 100	Goods and services	Increase the employability level of science and technology graduates	500	400	400	-	-	-	-
Japan	Climate change regional conference	International Cooperation and Resources	1 year	600	Goods and services	Support the SADC climate change agenda. Workshop held in partnership with S.Acess. Report published	600	-	-	-	-	-	-
Japan	Science centre baseline study on learning material	Human Capital and Knowledge Systems	1 year	200	Goods and services	Provide quality baseline data on what learning materials are available in science centres and recommend a standardisation of learning material	200	-	-	-	-	-	-
Japan	Intellectual property rights training and national intellectual property management	Human Capital and Knowledge Systems	1 year	1 200	Provinces and municipalities	Equip the Department of Science and Technology and National Intellectual Property Management Office staff with skills in the evaluation of patent and other intellectual property data	1 200	-	-	-	-	-	-
Japan	Hitachi scholarships	Human Capital and Knowledge Systems	4 years	2 400	Goods and services	Three Hitachi scholarships for South African engineers in the area of electricity generation and transmission	-	600	900	900	900	-	-
France	Partnership on in vitro screening of inhibitors to plasmodium falciparum glutathione s-transferase platform	Research, Development and Innovation	1 year	150	Goods and services	Finalise the work between the Council for Scientific and Industrial Research and France on this drug development platform	150	-	-	-	-	-	-
Japan	Science centre senior volunteers in KwaZulu-Natal	Human Capital and Knowledge Systems	1.75 years	1 050	Foreign governments and international organisations	Support science centres in developing teaching material for science and maths education, and develop exhibitions. Systematise the newly developed exhibitions to ensure knowledge gain by science centres	-	-	-	600	450	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate	Medium-term expenditure estimate			
							2008/09	2009/10	2010/11		2011/12	2012/13	2013/14	2014/15
R thousand in kind														
Japan	Science centre senior volunteers in North West	Human Capital and Knowledge Systems	1 year	600	Foreign governments and international organisations	Support science centres in developing teaching material for science and maths education, and develop exhibitions. Systematise the newly developed exhibitions to ensure knowledge gain by science centres	-	-	-	150	450	-	-	-
Japan	Climate simulation and projections for adaptation impact in the 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	10 000	-	-	-
Foreign														
In cash														
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	3 200	3 200
Germany	Technical assistant	International Cooperation and Resources	2 years	838	Goods and services	Improved bilateral relationships with the German national system of innovation	449	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	-	-	-	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental Programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Estimate 2011/12	Medium-term expenditure estimate		
							2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
R thousand Foreign In cash 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	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	-	-	180	-	-	-	-
France	South African Nuclear Energy Corporation trip to France	Research, Development and Innovation	1 year	315	Goods and services		-	-	315	-	-	-	-

Table 34.C Summary of donor funding (continued)

Donor	Project	Departmental programme name	Period of commitment	Amount committed	Main economic classification	Spending focus	Audited outcome			Medium-term expenditure estimate			
							2008/09	2009/10	2010/11	Estimate 2011/12	2012/13	2013/14	2014/15
R thousand													
Foreign In cash													
United States Agency for International Development	SADC Capacity Building in relation to the risk and vulnerability atlas	Socio Economic Partnerships	2 years	1 929	Goods and services	Build capacity in SADC member states in understanding information on climate change impact and risk in the context of the SADC early warning mechanisms	-	-	-	965	-	-	-
United States Agency for International Development	Tenofovir microbicide gel for HIV prevention	Research, Development and Innovation	2.5 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 grand challenge Canada	South African participation in the grand challenge call on point of care diagnostics	Research, Development and Innovation	3 years	6 892	Transfers to Higher Education Institutions	Support the development of new technology in improving existing point of care diagnostic tests	-	-	-	2 498	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	-	-	-
Total				804 745			21 638	84 670	84 723	214 411	155 972	64 336	63 000

Table 34.D Summary of expenditure on infrastructure

Project name R thousand	Service delivery outputs	Current project stage	Total project cost	Audited outcome			Adjusted appropriation 2011/12	Medium-term expenditure estimate		
				2008/09	2009/10	2010/11		2012/13	2013/14	2014/15
Infrastructure transfers to other spheres, agencies and departments										
Square Kilometer Array	Construction of telescopes	Construction	1 649 195	264 264	490 293	–	–	218 738	328 107	347 793
Space infrastructure	Satellite construction	Construction	290 791	14 199	36 403	51 390	–	–	–	–
Hydrogen strategy	Purchase of equipment	Various	440 714	40 500	44 229	48 361	51 903	54 498	57 223	66 000
National nanotechnology centres	Equipping centres	Various	309 954	–	34 905	38 337	42 400	44 520	46 746	50 022
South African National Research Network	Broadband connectivity	Various	883 190	89 000	93 474	98 783	104 710	99 946	104 943	11 298
Total			3 573 844	407 963	699 304	236 871	199 013	417 702	537 019	475 113

National Treasury
BUDGET 2012
ESTIMATES OF NATIONAL EXPENDITURE

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national treasury

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