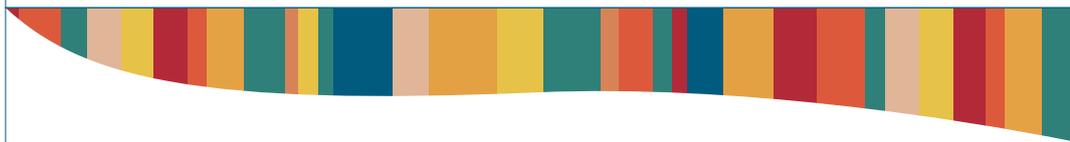


NATIONAL SCIENCE AND TECHNOLOGY FORUM

ANNUAL REPORT 2011

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BACKGROUND

THE NATIONAL SCIENCE AND TECHNOLOGY FORUM

LEGAL STATUS

The NSTF is a registered Section 21 company, trading solely as a Non-Profit organisation.

MANDATE

To promote science and technology to the benefit of all people in South Africa.

STAKEHOLDERS

The National Science and Technology Forum (NSTF) is a broadly-representative stakeholder body for all organisations with an interest in science, engineering, technology and innovation. The NSTF represents more than one hundred such organisations, councils and institutions, spanning both the private and public sectors. The individual representatives of member organisations include researchers (in various disciplines), scientists, engineers (in all branches of engineering), entrepreneurs, business people, technologists, technicians, teachers, administrators and academics. As such, the NSTF is a formidable gathering of expertise and experience.

The NSTF's membership gather, participate and contribute under the following sectors:

- Science Councils and Statutory Bodies;

- Small, Medium and Large Business and State Utilities;
- Civil Society and Labour Sector;
- Higher Education Sector;
- Government Sector; and
- Professional Bodies and Learned Societies – The professional bodies and learned societies are represented by the Professionals in Science, Engineering and Technology (proSET) which liaises with all sectors regarding all matters-professional.

BUSINESS

The NSTF acts as a consultative forum that seeks to influence science, engineering, technology and innovation (SETI) policy formulation and delivery in South Africa. We promote networking and debate about current SETI issues, and engage with government on SETI-related policy. All projects are typically collaborative in nature, and national in their reach.

The NSTF manages all aspects of the annual NSTF-BHP Billiton Awards, made possible by the collaboration of diverse organisations in the SETI community, in terms of sponsorship, attendance, nominations, and publicity. These Awards honour and celebrate outstanding contributions to SETI and have been in existence for 13 years, producing 135 winners.

NATIONAL FOOTPRINT

In addition to the hundreds of people who attend NSTF workshops throughout the country, the NSTF has touched the lives of many young South Africans in the review period as illustrated.



Incentive Bursary Scheme

Gauteng	21
Western Cape	14
KwaZulu-Natal	2
North West	6
Limpopo	3
Free State	1

Brilliant Awards

Gauteng	7
Western Cape	8
KwaZulu-Natal	2
Free State	1

National Youth Service

Gauteng	24
Western Cape	10
KwaZulu-Natal	12
North West	2
Limpopo	32
Free State	6
Mpumalanga	12



CHAIRPERSON'S MESSAGE

Many economists believe that the World stands on the brink of a second recession, yet in South Africa we have barely emerged from the first. While financial stress presents many pressures, the recession has not been all bad for us. For example, a decrease in emigration has been one of the silver linings. In addition, we have seen a greater interest in graduate education. In combination, these imply that our country is increasing its levels of skilled labour. We continue to have severe shortages of human capacity in science, engineering and technology (SET) but it is reassuring to see the brain drain slowing. It is also encouraging to see that some of our youngsters are returning to the country of their birth, hopefully with much needed knowledge and experience, which will surely promote the aims of the NSTF in the future.

Science and Technology surround us in South Africa, often in ways that we miss as we go about our busy lives. For example, those of us who live in Gauteng will remember 2011 as the year that the Gautrain connected Pretoria, Midrand and Johannesburg at a level never before imagined. Intriguingly, more Afrikaans has been spoken in Sandton than ever before and Sunnyside, just around the corner from our home, has been invaded by visitors from the other side of the Jukskei River. A trip on the Gautrain is currently not only a means to reach a destination but a new experience for many South Africans who are trying out this rapid transit system for the first time in their lives. The Gautrain is without question a phenomenon, but one that would not have been possible without significant skilled labour and engineering skills. This is all thanks to the fact that we enjoy one of the best developed infrastructures on the African continent and the NSTF seeks to ensure that this situation continues to grow and improve. I have no doubt that we are only just starting to appreciate how important this connectivity between Johannesburg and Pretoria and OR Tambo International Airport is to South Africa's largest economic hub. And for those of us that live in the area, it will certainly make attending NSTF plenary events much easier.

Another exciting development that has emerged this year is a much improved level of internet connectivity. Having access to the internet is no longer a "nice to have" convenience but a necessity, not much different from access to lights and water. This, linked to the smart or "android" mobile phones, means that we are raising a generation of South Africans who no longer know how to write as we did in the past BUT who are connected to everyone and everything, all the time. We have seen (not necessarily always positively) the impact that this technology has had in Egypt, Syria and England, all with unforeseen consequences. There is a saying "If a tree falls in a forest and no one sees it – it did not happen." These days there is little that is not recorded in some way or another – if not by a surveillance camera, then by somebody on a mobile phone. Little goes unrecorded, "blogged" or "tweeted". Certainly, the fabric of our society has never before been so strongly influenced by technological advances. Nothing will ever be the same and little is sacred. As South Africans, this means we are truly part of the Global Village and not an isolated country at the southern tip of Africa. And it is a wonderful time to be involved in Science and Technology and in an environment where the NSTF can make a difference.

CHAIRPERSON'S MESSAGE (CONTINUED)

The call for nominations for the 14th Annual NSTF-BHP Billiton Awards has just been launched. You will notice some changes to the announcement. We have joined forces with the Academy of Science for South Africa (ASSAf) and are in discussions with other science organisations to develop a single, national awards event. I urge all who read this message to be sure to nominate worthy candidates and to diarise the awards event as soon as it is advertised. The gala dinner for this event is about to become "the" awards event in the Science Calendar in South Africa. Minister Naledi Pandor is the patron of the event and we are grateful for the support that the Department of Science and Technology (DST) has provided to the NSTF during the course of the last year.

As Chairperson of the NSTF, I am very grateful for the tremendous support that I have received from colleagues, friends, the Executive Committee (Exco) and the NSTF members during the past year. The success of the NSTF lies firmly in the activities of the members and in those of the Executive Director, Jansie Niehaus¹, who is supported by the NSTF Secretariat. This includes Wilna Eksteen², Matome Mphela³, Tebogo Buntu⁴ and Rubenthri Naidoo⁵. I am also grateful for the help and synergy that comes from the volunteers of the National Youth Service (NYS) programme, Tshegofatso Monama⁶, Keabetswe Rakgwale⁷ and Siyakudumisa Mpokeli⁸ in running the NSTF office.

I wish you a happy and productive last few months of 2011. Together with the NSTF Executive, I am always happy to hear from members and to have your suggestions that might improve this important organisation. Thank you for your support and best wishes.



Prof. Brenda D Wingfield
Chairperson



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EXECUTIVE DIRECTOR'S REPORT PRESENTED IN ACCORDANCE WITH THE NSTF'S STRATEGIC PLAN, 2008 TO 2012

During the year 2010/11 the NSTF continued with projects in line with its Strategic Plan. The activities were focused around contracted projects for the DST, a series of workshops with NSTF members on relevant issues in science and technology, and the annual NSTF/BHP Billiton Awards processes.

These activities kept the office very busy, but the organisation itself and its systems need to be constantly improved and maintained as well. The database of members and subscribers is continuously updated, e-newsletters go out to about 6 000 contacts twice a month, and the website continues to play an important role in providing information and facilitating communication. The e-newsletters, particularly the NASTEF, are full of news of events, policy developments, and interesting happenings in the SETI community. We have sought ways to encourage new membership, and have successfully invited specific organisations to join and collaborate in the NSTF's ongoing efforts to have a positive impact on the SETI environment, SETI-related policies, and addressing problems in the skills 'pipeline'.

SUPPORTING THE IMPLEMENTATION OF THE DST'S YOUTH INTO SCIENCE STRATEGY

- The DST's National Youth Service (NYS)
- Incentive Bursary Scheme

The NSTF has, on various occasions, provided a platform for stakeholders to hear about the DST's plans and strategies related to ensuring that the youth take up and remain in SETI studies and careers.

The NSTF implements certain aspects of the Youth into Science Strategy (YiSS) on behalf of the DST, namely the NYS Programme, and the Incentive Bursary Scheme. In addition we are working on a web based science careers and bursary database.

The DST's National Youth Service

Government initiated the NYS as a way to address unemployment among the youth as well as equip the youth with the skills necessary to obtain employment or start small businesses. The DST's YiSS, launched in September 2007, aims to promote science awareness and understanding among the youth, encourage more young people to study in the sciences and engineering, and to pursue careers in those directions.

The DST's version of the NYS Programme is designed to assist in the implementation of the YiSS, in addition to the aims of the broader NYS Programme, by providing young SETI graduates to work at the Science Centres, and training them in science awareness work.

EXECUTIVE DIRECTOR'S REPORT (CONTINUED)

(Supporting a network of Science Centres is another component of the YiSS). A second Memorandum of Agreement (MoA) was signed between the DST and the NSTF, mandating the NSTF to continue with the implementation of the NYS until March 2012.

Placement

According to agreement, the NSTF is the Co-ordinating Institution for the DST NYS Programme, and the NYS volunteers are to be placed at the NSTF office as well as at 21 Host Institutions, being mainly Science Centres, in all nine provinces. Suitable volunteers were recruited through newspaper advertisements and through the NSTF's network, and further selected by the Science Centres themselves. The Centres selected up to six candidates each, depending on the needs of the particular institution. The total initial intake was 124 volunteers who were placed across the country. The number of volunteers has varied over the three years, as individuals have come and gone during the programme. During the past financial year a total of 69 new NYS volunteers were appointed, and at the end of March 2011, there was a total of 106 volunteers in the programme.

Training

No formal training courses were offered by the NYS Programme itself during the review period, due to prioritising the engagement of the maximum number of volunteers in the programme with the available budget. However, all volunteers learnt through the work they did at the Science Centres. They were instructed and trained by Science Centre staff in the tasks they had to perform, as the majority was totally unfamiliar with the Science Centre environment when they commenced work.

Volunteers were also encouraged to seek suitable placement in industry for up to three months per year, to acquire practical experience/training in a field compatible with their specific qualifications.

Exit Opportunities

One of the objectives of the NYS programme is to assist previously unemployed young people to find suitable opportunities to move on to. Thus the NSTF assisted the young graduates in the NYS programme to access information about opportunities for post-graduate study, bursaries, and employment opportunities within various SETI sectors. The graduates were encouraged to identify their own strengths and interests, network with professionals in their fields of interest, be pro-active in finding opportunities and build their own confidence and skills. It is hoped that the NYS Programme will equip them with skills they could not otherwise have acquired, and that it will assist in retaining talented young people in SETI careers.

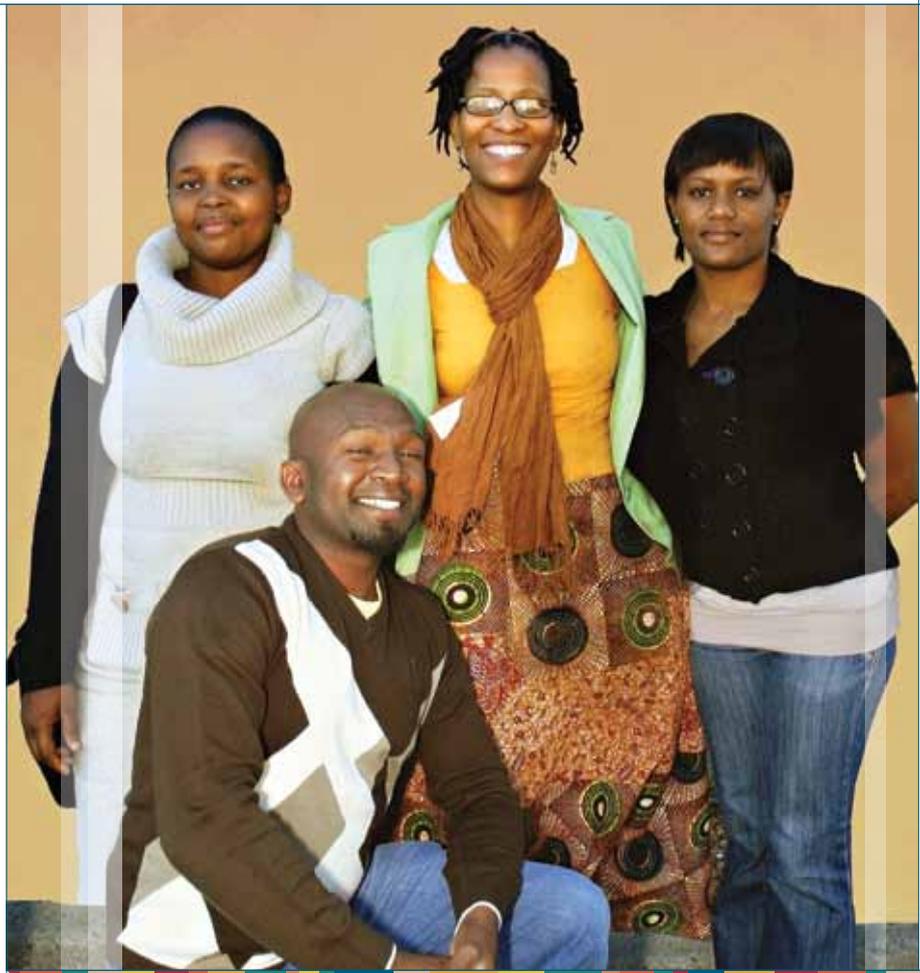
In some cases, the Science Centres and other Host Institutions assisted by actively mentoring some of the volunteers, as well as offering permanent employment to selected volunteers.

Evaluation and Reporting

Reports are received from the Host Institutions and the NSTF evaluates and submits these reports to the DST. The Executive Director reports on progress to the NSTF Executive Committee and to NSTF members at Plenary Meetings on an ongoing basis.

An evaluation of the NSTF's implementation of the NYS programme has been commissioned and is due to be completed in the next financial year.

From previous evaluation and monitoring processes, as well as communication with the Host Institutions, it appears that the NYS Programme is regarded as useful, and even essential, to its various participants – the graduates and the Host Institutions. NSTF members and contacts in industry have given positive feedback on the merits of the programme, and regard it as having further potential in recruiting suitable candidates for various positions and for bridging the gap between tertiary study and appropriate employment.



Incentive Bursary Scheme

This is the fourth year since the inception of the Incentive Bursary Scheme programme of the DST, and with the NSTF as the programme's implementing agency. The Bursary programme is part of the National Youth into Science Strategy of the DST. Its aim is to offer financial assistance to academically deserving students who are interested in pursuing a career in SETI related fields. Currently the programme consists of 47 students, of whom 29 are male and 18 female. Out of these 47 students, two are doing their BTech Degrees; six are fourth year undergraduate students, 18 third years and 21 second year students.

Our Bursary programme supports remarkable students who continually obtain good results at their respective universities. We acknowledge first year students that have performed extremely well academically by giving them laptop computers as a token of encouragement for their hard work in their first year of study. Last year's top three first year students are Vongani Manyange, studying towards a National Diploma in Extraction Metallurgy at the University of Johannesburg who obtained five distinctions out of nine modules, Madihlaba Roz Magabjane doing a Bachelor of Science in Chemical Science at the University of the Western Cape (with four distinctions out of four courses) and Macaera Kock, studying Bachelor of Engineering in Electrical and Electronics at the University of Stellenbosch (with six distinctions out of eight courses).

After four years since the establishment of the DST Incentive Scheme Programme, we finally have two graduates. Our first graduate Ms Siyakudumisa Mpokeli, is a young lady from the Eastern Cape Province. She made us proud as she walked across the stage in May this year to be conferred with a diploma in Chemical Engineering at Tshwane University of Technology (TUT). Ms Linda Nkosi from Mpumalanga Province also graduated with a National Diploma in Chemical Engineering at TUT in September. Siya and Linda, as they are affectionately called, are currently pursuing their studies in BTech: Chemical Engineering at TUT. We, as the NSTF, are indeed proud of them.

CONTRIBUTING TO THE FORMULATION, IMPLEMENTATION AND MONITORING OF SETI POLICIES, STRATEGIES AND LEGISLATION

The NSTF hosted five discussion forum events during 2010/11, on relevant and important issues:

1. Innovation and Commercialisation (Science Councils sector)
2. Biotechnology (in collaboration with the South African Agency for Science and Technology Advancement (SAASTA))
3. Agriculture (in collaboration with SAASTA)
4. National policies of the DST and DHET (38th Plenary meeting)
5. National policies of the Department of Energy (DoE) and Necsa's role (39th Plenary meeting)

During the year, a number of discussion forums were held to engage with SETI policies, strategies and proposed legislation. Four events (1 to 4 above) were arranged around specific topics, and the two Plenary Meetings were devoted to presentations and discussions on national SETI policy. The discussions of all events were recorded and summarised, and conclusions and recommendations were drawn up, to be used where necessary in lobbying the relevant authorities.

The informative presentations of the speakers at these events were posted on the NSTF website for access by anyone interested in reading or following up on them.

We hope that our engagement of SETI stakeholders and Government Departments has led to enhanced understanding and clarity on all sides, and to the fine-tuning of policy to the benefit of all.

All NSTF workshops are intended as a vehicle for sharing information, networking, and identifying serious concerns of stakeholders. These events provide a platform for information sharing on government policy developments related to a specific topic, and relevant research policies. The NSTF submits the most critical concerns of SETI Stakeholders to the DST, and to other decision-makers where relevant.

The monitoring of the implementation of SETI policies is being achieved mainly through the recording of feedback from stakeholders at forums organised or co-organised by the NSTF. Monitoring also takes place through the attendance and participation by the Executive Director, members of the secretariat and Executive Committee, in events and discussions organised by other parties.

Symposium of the Science Councils and Statutory Bodies sector of the NSTF

See report by the Chair of the Sector elsewhere in this Annual Report.

Critical Thinkers Forum on the Biotechnology Landscape in South Africa, held on 10 November 2010 in collaboration with SAASTA's Public Understanding of Biotechnology Programme, at the Cape Peninsula University of Technology (CPUT), Bellville, Cape Town

The speakers were:

- Dr Mapitso Molefe, DST
- Mr Simon Mpele, National Advisory Council on Innovation (NACI)
- Prof. Antonio Llobell, Technology Innovation Agency (TIA)
- Prof. Emile van Zyl, Stellenbosch University
- Prof. Michael Pepper, University of Pretoria
- Prof. Nceba Gqaleni, University of KwaZulu-Natal

Summary of recommendations:

Paradigm change

- Embrace and support the open (non-linear) innovation paradigm and models

Pipeline foci

- Create a better balance between basic and applied research
- Create the right balance between novel and incremental innovation
- Develop a long-term pipeline (medium to high risk)



EXECUTIVE DIRECTOR'S REPORT (CONTINUED)

Innovation

- Acknowledge the market as an innovation driver
- Carry out a deep-level market survey to establish South Africa's major needs (both current and projecting forward to the next 20 years)
- Select a limited number of projects from them
- Focus on developing pockets of excellence
- Manufacture Active Pharmaceutical Ingredients (APIs) locally
- Focus more on basic knowledge
- Develop state-of-the-art infrastructure – especially high-end Biotech (e.g. stepping up APIs)
- Consider best ways of facilitating commercialisation of South Africa's biodiversity

Wider collaboration

- More co-operation/collaboration with other African countries
- Encourage and increase international collaboration
- Expand markets into Africa and rest of the world

Financing

- Put funding into limited number of selected projects
- Consider developing tax or other incentives to attract Public Private Partnerships
- Consider providing financial resources to attract appropriate candidates to fill core vacancies
- Develop a holistic/systematic approach to R&D funding (sustainability)
- Fund renewable energy technologies to the same level as nuclear energy in the past
- Develop more incentives for Small and Medium Enterprises (SMEs) to become involved in renewable energy

Government

- Improve co-ordination and alignment between all the government departments involved in science and technology innovation
- Pay serious attention to direct and indirect impacts of legislation
- Bold leadership to iron out system inefficiencies regarding R&D
- DoE's direction and leadership required to take Renewable Energy (RE) policy (2003) forward
- Ensure legislation is enabling, not inhibitory
- Explore possibilities of aligning biotechnology with the policies in a way that promotes innovation and exploitation (IP, Biodiversity exploitation, etc.)
- Speed up regulatory approvals
- Bridge gaps between the 1st and 2nd economies
- Develop quality control regulations and guidelines for herbal industries (e.g. for safety and toxicity)

Keep interested bodies informed and involved

- Develop extension agencies in agricultural sector (to assist small, struggling farmers develop into sustainable SMEs)
- Keep consumers informed about novel innovations (e.g. Genetically Modified Organism (GMO) crops)
- Invite lawyers and potential funders to Biotech workshops

IP & patents

- Re-examine proposed legislation requiring researchers to inform technology transfer offices of potential IP within 90 days of identifying it
- Improve support for developing innovative ideas through to Proof of Concept (PoC), full-blown Patent Co-operation Treaty (PCT) and World Patents

Skills and capacity development

- Co-ordinate a national approach to post-graduate training, matching Biotech expertise with student availability – to ensure students receive training in market-driven areas of Biotech
- Capacity development particularly in Indigenous Knowledge (IK) sector (to enable scientists, doctors and communities to carry out the work)
- Enable students to get training overseas when they need it; but ensure that they come home
- Review the current strategy of only training PhD students – perhaps Masters students could also play a role
- Building capacity around pockets of excellence is one way of attracting top quality postgraduates and retaining them
- Build up proficiency and excellence in selected areas

Critical Thinkers Forum on Agriculture, Food Security and Emerging Technologies, held on 24 March 2011 in collaboration with SAASTA's Public Understanding of Biotechnology Programme, Bloemfontein, Free State

The speakers were:

- Dr Tsepang Makholela, Department of Agriculture, Forestry and Fisheries (DAFF)
- Prof. Mbewe, North West University
- Mr Andrew Makenete, Land Bank
- Mr Dawie Maree, Agric SA
- Ms Etresia du Plessis, Technology and Human Resources for Industry Programme (THRIP) of the National Research Foundation (NRF)
- Dr Jasper Rees, Agricultural Research Council (ARC)



Summary of discussions:

Government and policy perspectives

- The Department welcomes discussions on:
 - The R&D needs of smallholder and commercial farmers
 - Effective and efficient mechanisms to establish Public Private Partnerships (PPPs) that would assist technology transfer in particular to smallholder farmers
- Economics of agriculture should be considered as a crucial aspect of policy making
- The relevant policies should be put in place to create an enabling environment for agriculture and to ensure national and household food security

Getting agriculture back on the R&D agenda

- Investment in agricultural productivity through research and extension, the availability of credit, markets and infrastructure are important to ensure food security. There is a gap in R&D policy in relation to extension. The knowledge from research does not reach smallholder farmers

Biotechnology

- Increased investment is required in biotechnology for agriculture
- Public awareness is crucial
- Agriculture requires reassurance from scientists and government with regard to the safety of the biotechnology that farmers would like to use

The image of agriculture

- The poor perception of agriculture among young people should be addressed through information dissemination. An option of community service in the agricultural research environment could contribute towards improved perceptions. There is a lack of interest in agriculture as a career choice because farming is often not sustainable, there is no return on investment either for the individual or for the business, and there are high levels of crime on farms
- The DAFF and the DHET are considering the institution of a national agriculture week as a means to popularise agriculture to learners and the public
- Public engagement, outreach and awareness should become a key focus of the agriculture sector

The re-industrialisation of South African agriculture

- A new industrialisation drive and a new biotechnology approach would address the key challenges of agriculture in South Africa
- Although value chains are established, it is necessary to re-industrialise them
- The right policies will ensure that the agricultural sector is profitable (in order to attract finance), that the declines in the overall agricultural contribution to development are arrested, that South Africa is able to produce more of its own food and will enhance the role of commercial farmers in the country
- The size of the market, or the market opportunities have to be increased in order for the money that is spent on emerging farmers to bear fruit

Skills

- Skills are needed in areas where there is new growth in biotechnology, bio-energy, and biofuels

Two Science Communication workshops were presented together with SAASTA on 9 November 2010 (Cape Town) and 23 March 2011 (Bloemfontein), in conjunction with the Critical Thinkers' Sessions

The experienced journalist and science writer, Adele Baleta, facilitated workshops for scientists to learn to understand and work better with the media. It remains an ongoing challenge to ensure fairly accurate reporting of scientific findings, but greater awareness, planning and communication skills on the part of researchers should help to improve reporting in the mass media.



38th NSTF Plenary Meeting held on 5 October 2010, Gallagher Estate, Gauteng

The Plenary meeting was addressed by Dr Philemon Mjwara, Director-General of the DST, and Prof. Mary Metcalfe, Director-General of the DHET.

Summary of address by Dr Philemon Mjwara:

Science and Technology missions are founded on:

- South Africa's geographic advantage in the fields of astronomy, human palaeontology, biodiversity and Antarctic research
- Key technology platforms in advanced manufacturing, biotechnology, ICT and poverty alleviation
- Leveraging resource-based industries and developing new knowledge-based industries

R&D Strategy

The following progress in the human capital development aspects of the R&D Strategy was reported:

- The DST had recently completed a review of seven centres of excellence
- The DST continued to solicit funding for the South African Research Chairs Programme
- The programme for the establishment of Prestigious Post-Doctoral Fellowships was being expanded in institutions of higher learning and science councils
- The DST was considering Antarctic and Southern Oceans research as a strategic area that would be built
- The equipment programmes were important in supporting research efforts

Knowledge economy

The knowledge economy was based on the following four interconnected and interdependent pillars: Education, Innovation, Information and infrastructure, and Economic and institutional regime. Knowledge is the basic form of capital for innovation and requires knowledge generation, accumulation and exploitation. The DST hopes over time to identify areas of economic growth that are attributable to innovation through the national system of innovation. The key driver for innovation in the knowledge-based economy is 'high-end' human capital, namely, the PhD. South Africa is mid-way towards becoming the knowledge economy towards which it aspires, according to the assessment by the World Bank Institute, comparing countries in terms the global knowledge economy indices.

South Africa was at the stage of the investment-driven economy, in which the country aimed to invest 1% of GDP in R&D and was considering increasing the target to 1.5% by 2014.

In order to pilot the knowledge-based economy, the DST had highlighted the following Grand Challenges in the Ten-year Innovation Plan, which was an investment plan based on strategic priorities:

- Farmer to pharma: South Africa intends to develop the bio-economy
- Space science and technology: locally developed space products and local expenditure on such products (such as the deployment of satellites for scientific, security and specialised services for the government)
- Energy security, through a diversified and equitable supply of clean and sustainable energy. South Africa was investing heavily in hydrogen capacity and had a 25% share of the global hydrogen and fuel cell catalysis market
- Global-change science (climate change): South Africa is a world leader in climate science
- Human and social dynamics: This Grand Challenge is especially important if South Africa is to meet the Millennium Development Goal of halving poverty by 2014





The selection of the five areas as Grand Challenges should not be interpreted to mean that other R&D areas were not important.

Recent policy developments to bridge the innovation chasm

- The establishment of the Technology Innovation Agency
- IP initiatives, including the Intellectual Property Rights Act and the establishment of the National Intellectual Property Management Office and Offices of Technology Transfer
- Establishment of the South African National Space Agency
- Sectoral initiatives
- Increasing focus towards provincial innovation systems and growth strategies
- The implementation of the Ten-year Innovation Plan

Research areas identified in the Global Change Grand Challenge

- Understanding a changing planet
- Reducing the Human Footprint
- Adapting the way we live
- Innovation for Sustainability

The Global Change Performance and Investment Council had met twice. A centre of excellence had been established at the NRF called the Applied Centre for Climate and Earth Systems Studies (ACCESS) The DST intended to establish a Bureau on Global Change Science, as an accredited institution to access sound information on which a range of institutions could base their decision-making.

Summary of address by Prof. Mary Metcalfe:

The DHET is a new department which is responsible not only for higher education but also for skills training. The DHET was only formally established in the sense of having its own operating budget on 1 April 2010. The DHET was involved in post-school education and training, and not merely in a post-secondary education and training system.

South Africa's National Skills Development Strategy steers the Skills Levy funding and was developed after extensive consultation. In the National Skills Development Strategy 3, which was to be finalised by the Department of Labour by mid-October, research had been prioritised as well as critical skills in S&T.

Prof. Metcalfe believed that what the country needed was social organisations, employers, employer organisations, employees, labour organisations and the state working together to assess skills needs and how to address those within each sector.

Prof. Metcalfe emphasised the need for articulation in the post-school education and training system. There should be pathways across and within the system. Young people should be able to progress from colleges to universities or universities of technology. The qualifications of the National Qualifications Framework should be utilised to realise a joint offering of diplomas and certificates at universities, universities of technology and colleges.

Many young people have not achieved the education performance that enables them to proceed with their learning. The fact that they had not yet achieved was not a consequence of their ability but of their circumstances.

Workplace and workplace-integrated learning is critical for every component of the post-school education and training system. The concept of artisanship is well understood for college qualifications, but workplace-integrated learning also applies in many of the professions towards which students study at universities and universities of technology.

What are the problems we seek to address?

- Skill deficits and bottlenecks, especially in priority and scarce skills, contribute to the structural constraints to South Africa's growth and development path
- A skilled and capable workforce is critical for decent work; an inclusive economy; labour absorption; rural development; the reduction of inequalities and the need for a more diversified and knowledge-intensive economy. The focus of education and training should not be only on those who drive the knowledge-economy at the high end, but also on those that support them
- No existing mechanisms provide credible information and analyses on current and projected supply and demand for skills. The Human Resources Development Council of South Africa (HRDC) and the Joint Initiative for Priority Skills Acquisition (JIPSA) identified information as an obstacle to the supply of relevant skills for growing the economy
- Many South African learners are poorly-prepared to undertake further learning when they leave school and cannot access post-school education and training opportunities
- A large number of youth and adults who are not in employment, education or training have a poor educational foundation
- In addition to those young people that are excluded from education and training because they are inadequately prepared to proceed, there was also insufficient institutional capacity to absorb more students, despite the fact that the higher education system had grown enormously over the last ten years

The following information is quoted from the Community Survey. Prof. Metcalfe commented that in future, the DHET would use data from the Labour Market Survey, which was considered more reliable.

About 40% of South Africans between the ages of 18 and 24 were neither employed, nor in education and training. The percentages differed very little in each year group, which meant that there had been little qualitative change in the education system over the years reflected by the sample.

Seventy per cent of these young people did not have a matric. The post-school education and training system would have to respond to this situation. Another matter for concern was the large numbers of young people who had passed matric with an exemption, but still had no place for a range of reasons.

Young people between the ages of 18 and 24 who are not employed, and not in education and training (extract – see www.nstf.org.za for more complete information):

Qualification	Number
Certificate with Grade 12	47,035
Diploma with Grade 12	25,294
Bachelors degree	9,352
BTech	1,780
Postgraduate diploma	2,498
Honours degree	1,695
Masters/PHD	420
Total unemployed with qualifications (18–24 years)	88,074
Total unemployed (18–24 years)	2,8121,4471

Other problems with the system included:

- The strong division that existed between the 'supply-side' oriented post-school learning system (which is the responsibility of the DHET) and the 'demand-side' (which is the responsibility of the Department of Labour) and poor co-ordination between the two resulted in sub-optimal alignment and complementarity
- Universities are not producing enough appropriately skilled and qualified people in disciplines central to social and economic development. The data indicates that graduation rates are a key problem to achieving targets. It was a matter of huge concern that the system was producing more engineers than teachers, for example
- The number of people involved in research, knowledge production and innovation is low

Skills development had been neglected in the human resource development culture of South Africa. There were a range of stakeholder bodies that would have to be rationalised so as to be more effective. Prof. Metcalfe stressed the importance of the HRDC. Four subsystems were brought together in the HRDC as a single advisory council, which was chaired by the deputy president, Kgalema Motlanthe. The participating departments were Economic Development, Labour, Trade and Industry, Basic Education, and Higher Education and Training. The HRDC did not only involve government, but also key partners. The first deputy president was thus the deputy secretary-general of the Congress of South African Trade Unions (COSATU) (Bheki Ntshalintshali) and the second deputy president was Ms Nolitha Fakude, representing Business Unity South Africa (BUSA).

Ms Niehaus had particularly asked Prof. Metcalfe to speak about the Skills Summit, which had taken place in early September 2010. This important event had brought together the range of constituencies in the higher education sector in a way that had not happened for a very long time. The parties involved included council chairs, vice chancellors, worker organisations, student organisations and academic organisations. The Skills Summit had published a declaration, which had been signed by about 30 organisations including COSATU, the National Council of Trade Unions (NACTU), the Federation of Unions of South Africa (FEDUSA), BUSA, Higher Education South Africa (HESA), Further Education and Training (FET) colleges, Sector Education and Training Authorities (SETAs) and the NRF and thus represented broad consensus across the system with respect to what needs to be done to address the problems.

The Declaration acknowledges, among other key statements, that the human being is at the centre of all development activities; and that human resources are an essential means of achieving economic, social and development goals. Interventions in human resource development therefore represent an essential contribution to promoting the country's development agenda.

The parties to the Declaration resolved to build a "skilled and capable workforce to support an inclusive growth path" by:

- The establishment of a credible institutional mechanism for skills planning
- Increasing access to programmes leading to intermediate and high level learning, by:
 - Providing young people and adults with foundational learning qualifications
 - Increasing ABET level 4 entrants
 - Improving NC(V) success rates
 - Creating 'second-chance' bridging programmes (leading to a matric equivalent) for the youth who do not hold a senior certificate
 - Providing a range of learning options to meet the demand of those adults and youth with matric but who do not meet requirements for university entrance

EXECUTIVE DIRECTOR'S REPORT (CONTINUED)

- Increasing access to occupationally-directed programmes for adults and youth in needed areas and thereby expanding the availability of intermediate level skills (with a special focus on artisan skills) by:
 - Increasing artisan production in line with industry needs and the needs of the developmental state
 - Putting in place measures to improve the trade test pass rate
 - Increasing the number of learners on artisan and other immediate programmes
 - Establishing a system to distinguish between learnerships up to and including Level 5, and Level 6 and above
 - Increasing the number of unemployed people, especially young people, entering learnerships
 - Increasing the number of workplace learning opportunities for those who have completed vocational programmes, such as the 'N' or NC(V) programmes, through the provision of appropriately restructured learnerships, internships or apprenticeships
- Increasing access to high level occupationally-directed programmes for adults and youth in needed areas and increasing the graduate output in all areas of skills needs, but in particular:
 - Engineering Sciences
 - Animal Health
 - Human Health
 - Natural and Physical Sciences
 - Teacher Education
- Increasing research and innovation in human development for a growing knowledge economy by:
 - Increasing the output of Honours graduates, Research Masters, Doctoral graduates and Post-doctoral students
 - Providing increased support to industry-university partnerships
 - Increasing investment in research and development, especially in the science, engineering and technology sector.

She stressed the importance of a differentiated system of education and training, which was the purpose of the policy process, in which she hoped the NSTF and its members would participate. The Skills Summit had established the basis for a broad understanding to underpin the detailed work that would be required with a multitude of partners in order to achieve the outcomes.

39th NSTF Plenary meeting - 6 May 2011

The Plenary Meeting was addressed by Thabang Audat, Director: Electricity Supply in the DoE, on behalf of the Director-General of the DoE, on the Integrated Resource Plan 2010 (IRP 2010); and by Dr Ramatsemela Masango from Necsa, particularly on safety measures in the South African nuclear industry.

Audat familiarised delegates with the contents of the IRP 2010 report, as well as the consultation process that resulted in the final recommendations. IRP 2010 forecasts South Africa's electricity demand for the next 20 years up to 2030, and determines how this demand is to be met. It sets out the generation technologies to be used and the planned mix of primary energy options over this period, such as the mix between hydrocarbon (coal, gas, diesel), renewable (hydro, wind, solar), nuclear, pumped-storage and other power generation technologies. The final policy-adjusted IRP 2010 was approved by Cabinet on 16 March 2011.



Audat pointed out that the policy-adjusted IRP 2010 increased the new-generation capacity build over the next 20 years from the 52 248 MW proposed in the revised balanced scenario to 56 359 MW, with a somewhat revised technology mix. This capacity increase reflects a greater emphasis and commitment to renewable energy using solar photo-voltaic, concentrating solar and wind generation technologies.

Audat said, "This proposal is a major step towards building local industry clusters and assists in fulfilling South Africa's commitments to mitigating climate change as expressed at the Copenhagen Conference of the Parties (COP) climate change summit."

"The Durban negotiations for COP17 could be fatal to the plan for coal. We need to find a way to reduce emissions from coal-fired stations," he said.

Necsa's Dr Ramatsemela Masango described the regulatory framework of the nuclear industry in South Africa, gave an overview of the corporation's role and touched on issues such as nuclear safety. Delegates were particularly interested in Masango's comments regarding radiation dose limits.

She pointed out that 4 000mSv per annum was regarded as a lethal dose (acute exposure), while South Africa's National Nuclear Regulator specified the dose limit for radiation workers as 20mSv per annum, and for members of the public as 0,25mSv per annum. Masango explained that the majority of radiation workers in South Africa were exposed to far lower dosages, averaging less than 3.0mSv per annum over the past five to six years.

Delegates were relieved to hear that Koeberg was designed to withstand an earthquake measuring 7 on the Richter magnitude scale, and a tsunami event with a run-up of 4m, leading to an overall water level of $\pm 7m$ above sea level.

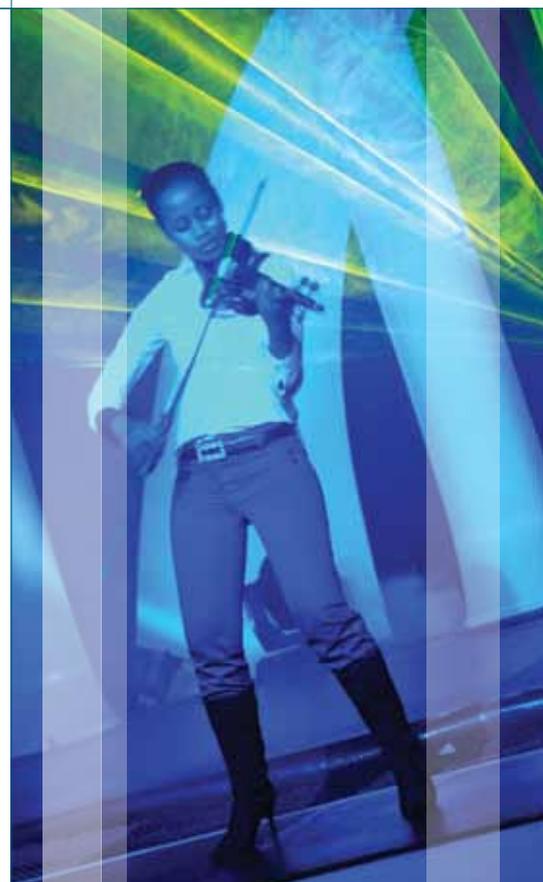
CELEBRATING, RECOGNISING AND REWARDING EXCELLENCE WITHIN THE SETI SECTOR: THE NSTF-BHP BILLITON AWARDS

Quality and Reach of the NSTF-BHP Billiton Awards

The NSTF joined forces with BHP Billiton this year by signing a five year agreement for the company to become a co-branding sponsor. This allows the NSTF to continue covering the annual costs of the Awards, to maintain the high standard it has set over the past few years, as well as expand its outreach to the youth as part of the Awards effort.

The 13th year of the Awards was celebrated on 26 May 2011 at Emperor's Palace in Kempton Park. The theme was Chemistry, in honour of the International Year of Chemistry as declared by the United Nations. The entertainment was in the form of a laser show. The choreographed combinations of music, patterns of light, and images symbolising chemistry and technology, projected on the walls of the venue, were accompanied by a dancing violinist. Even the Master of Ceremonies, Dr Gillian Arendse, cracked chemistry jokes.

The Minister of Science and Technology, Ms Naledi Pandor, graced the event with her presence, and presided over the presentation of the awards. The NSTF was once again honoured to welcome her as the Patron of the event, and to hear her address.



Extracts from Minister Pandor's speech

"I take this opportunity to pay tribute to the National Science and Technology Forum. It is an achievement to have both sustained and expanded these awards over 13 years."

"I note that this year's awards are called the 'NSTF-BHP Billiton Awards'. It's a welcome development that BHP Billiton has added its weight to the awards as the main co-branding sponsor."

The Minister repeated the good news which she had announced in the same week as the Awards: "Only a few days ago, in my budget-vote speech in Parliament, I made a commitment to equip all public university campuses with broadband connectivity to the South African National Research Network (SANReN) by December 2011. I also announced funding for 62 new research chairs under our South African Research Chairs Initiative (SARCHI). At the moment we spend R200 million a year on 92 chairs. By 2014 we will be spending over R400 million a year on 154 research chair professors."

She also announced: "Over the next three years the NRF will invest a further R1,4 billion in research equipment and infrastructure." All the above was outstanding news, worthy of a large celebration such as the NSTF-BHP Billiton Awards Gala Dinner.

Guest Speaker

The Guest Speaker at the Gala Dinner was Dr Mamphele Ramphele, Chair of the Technology Innovation Agency. The NSTF was thrilled to host this renowned champion of academic excellence, justice, improved living conditions for the majority of South Africans, and healing of the psychological wounds inflicted by our past.

Award Winners

The NSTF-BHP Billiton Awards again attracted a large number of nominations, and the inter-sectoral NSTF Adjudication Panel, after careful thought and much deliberation, selected twenty nine (29) finalists from sixty five (65) nominees, and finally awarded 12 winners.



sciencebursaries.org.za – S.E.T. FOR LIFE

A large number of the youth of our country is wandering the streets of our cities and townships looking for opportunities that could take their lives into a brighter future, an opportunity that could S.E.T. them up for Life.

The sciencebursaries.org.za web portal intends doing just that. The aim of this exciting web portal is to act as a “one-stop shop” for learners and students that are interested in pursuing a career in science, engineering and technology but do not have the means or access to get there and/or cannot afford to fund their own tertiary education. The web portal will also act as a source of information for careers guidance in SETI related fields. It will provide an interface that youngsters can relate to – inspiring them to realise their dreams – through a medium that has become so much a part of and intertwined with their daily lives – the internet.

The sciencebursaries.org.za web portal, unlike most websites, can also be used to search for available bursaries with a focus only on science related bursaries. The portal offers a function whereby bursary providers can register and upload the bursaries which they are offering. It also allows the bursary provider total editing control over their own bursary information on the site. The web portal uses the latest in web portal technology in order to make the site as user friendly as possible. Future endeavours will include the establishment of a mobile site and integration of the portal into social networks.

The slogan ‘S.E.T. for Life’ explains the purpose of this initiative fittingly as it is meant to provide the youth of our country, wishing to study further in the sciences, with the information and support they so desperately need to equip them for LIFE.

This initiative of the National Science and Technology Forum is jointly funded by the Department of Science and Technology and the United Nations Educational, Scientific and Cultural Organization (UNESCO) South Africa.

The launch of the portal is scheduled to take place at the 40th Plenary meeting and AGM of the NSTF on 14 October 2011 in Midrand, Gauteng.

Ms J Niehaus
Executive Director

PROFESSIONALS IN SCIENCE, ENGINEERING AND TECHNOLOGY (proSET) SECTOR REPORT

proSET (previously SETAG) is that sector of the NSTF membership comprising professional bodies and learned societies. It represents over 40 such organisations involved in science, engineering and technology.

The reporting period was again a quiet one for the proSET sector when it comes to activities carried out by the sector, mainly because it was awaiting the finalisation of the transfer of the old Associated Scientific and Technical Societies (AS & TS) Trust, which would provide the necessary funds that proSET desperately needs to carry out its objectives, but also because of changes in its leadership.

Prof. Stephanie Burton, the chair of proSET moved from the Cape Peninsula University of Technology to become Vice-Principal: Research and Postgraduate Studies at the University of Pretoria from 1 April 2011. Prof. Burton's new responsibilities made it impossible for her to effectively carry on with proSET's duties and she decided to step down, handing the reins to Mr Ralph Gunn, an Industrial Engineer representing the Engineering Council of South Africa (ECSA) and the Southern African Institute for Industrial Engineering (SAIIE), both members of the NSTF under the proSET sector.

The old AS & TS Trust, a Section 21 Company, like the NSTF, is an Association incorporated under Section 21 of the Companies Act, No 61 of 1973. The NSTF took over the administration of the AS & TS during 2003 and increased its membership from about 20 organisations to over 40.

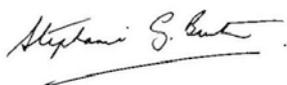
During July 2010, a resolution was signed by the Directors of the AS & TS Trust to wind-up and hand over to proSET. The NSTF Exco then appointed and registered three Directors to serve on the AS & TS trust as follows:

- Prof Brenda Wingfield, Chair and Director of the NSTF;
- Mr Ralph Gunn, new Chair of proSET; and
- Dr Takalani Rambau, Director of the NSTF and representative of the Science Councils and Statutory Bodies sector of the NSTF on the Exco.

These significant actions and progress should now set proSET on a path of action which will allow it to fulfill its goals namely:

- To assist in the provision of career guidance, expert knowledge and support for SET education at school and university level;
- To represent its members in issues of research, professional practice and skills development;
- To facilitate public understanding of SET; and
- To serve the DST as an advisory and a discussion forum.

With new opportunities open to proSET, renewed participation will be called for from its membership. The challenge remains for the NSTF and for proSET to define new roles which will fit strategically with the specific goals relevant to the professional sector of the NSTF. With this renewed shared vision, proSET has an important role to play in promoting science and technology in the country.



Prof. Stephanie Burton
Immediate Past Chairperson: proSET





SCIENCE COUNCILS AND STATUTORY BODIES SECTOR REPORT

The Science Councils and Statutory Bodies Sector is one of the NSTF sectors with representation on the Exco of the NSTF. It comprises the following Science Councils with a complementary focus:

- Agricultural Research Council (ARC);
- Council for Geoscience (CGS);
- Mintek;
- Council for Scientific and Industrial Research (CSIR);
- Human Sciences Research Council (HSRC);
- Medical Research Council (MRC);
- National Research Foundation (NRF) including the South African Agency for Science and Technology Advancement (SAASTA); and
- Water Research Commission (WRC);

and Statutory Bodies:

- Academy of Science of South Africa (ASSAf).

Member organisations and stakeholders from other constituencies that partner with the Science Councils and Statutory Bodies sector from time to time are:

- National Advisory Council on Innovation (NACI)
- The South African Nuclear Energy Corporation (Necsa)
- Technology Innovation Agency (TIA)

The Science Councils and Statutory Bodies Sector supports and promotes the NSTF by giving input to government policy and by providing its member organisations with a platform to express their views regarding SETI matters.

These institutions play a critical role within the South African National System of Innovation through undertaking scientific research that informs policy and economic development in the country, and initiating and developing innovations and technologies aimed at improving the standard of living for South Africans.

The sector has a committee, consisting of a representative of each member organisation, which meets three to four times a year to discuss issues that are cross cutting. The main purpose of the committee is to promote and extend communication, collaboration and information sharing among members.

To achieve this purpose, the delegates are asked to make presentations of new developments and major projects undertaken within their organisations. The NSTF online newsletter is also used as a platform to share upcoming initiatives in each of the member organisations.

In September 2010, the Science Sector organised a symposium titled 'Commercialisation of Research Outputs and Partnerships with Industry'. The symposium was attended by approximately 80 delegates from government departments, academia, the private sector, research institutions and even embassies. The symposium was addressed by the following high-profile speakers:

- Mr McLean Sibanda (TIA) on: An integrated approach to research, innovation and commercialisation
- Mr Simon Mpele (NACI) on: Commercialising research outputs in partnership with industry
- Dr Liesbeth Botha (CSIR) on: Roles in commercialisation: Lessons learnt and hypotheses

- On Commercialisation of research partnerships with industry, the following organisations presented experiences:
 - Dr Roger Paul (Mintek)
 - Dr Andrew Magadlela (ARC)
 - Dr Michelle Mulder (MRC)
 - Mr Lawrence Baloyi (WRC)
 - Dr Van Zyl de Villiers (Necsa)
 - Prof. Malek Maaza (iThemba Labs (Laboratory for Accelerator Based Science))
 - Dr Neo Molotja (HSRC)

On issues of an integrated approach to research, innovation and commercialisation the following extract summarises the views of invited speakers:

"It is necessary to adopt an ecosystem approach to innovation, understanding the strengths of each member within the ecosystem. Science Councils need to create stronger relationships with the universities, understand what research they are doing without competing with them, and pool resources for the benefit of the nation. Researchers need to understand what the market requires and communicate with industry and Science Councils. Creating a new company where the researcher is a shareholder is not necessarily the best approach, as the inventors are not always oriented towards business and marketing. Collaboration and development of strong intellectual property and technology portfolios is essential. It is important to integrate the various government policies and interventions to be able to deliver value and impact society. Government and government agencies have a role to play in promoting the various incentives, such as the tax incentive for R&D that is directed at companies that generate revenue. The establishment of the TIA and the promulgation of the IPR Act form part of a package of interventions for the commercialisation of innovations." (McLean Sibanda, TIA)

On lessons learnt regarding commercialisation of research outputs in partnership with Industry, the speaker stressed that:

"Sustainable growth requires interaction between business, university and government/public sector, representing the triple helix interaction, which results in new products, services and processes. However, the socio-economic issues and the involvement of communities in innovation need to be included in innovation policies and commercialisation strategies. Social entrepreneurship must be encouraged." (Mr Simon Mpele, NACI)

Another speaker emphasised the important contributions that teams/collaborators can play in commercialisation, saying that:

"In the deliberations concerning the commercialisation of products of research, we tend to forget or neglect the different roles that people must play as part of the commercialisation team. We tend to talk about organisations, systems and processes and not about the different roles played by people who are responsible for the commercialisation process. Systems can easily be created, but the systems must be promoted through a change in the behaviour of the individuals in the process who are ultimately responsible for ensuring an environment that is conducive to innovation. The team approach is essential in order to promote the system of innovation in South Africa." (Dr Liesbeth Botha, CSIR)

A presentation from MINTEK revealed that:

"Good, well-developed technology that is aimed at an industry need will always be relatively easy to commercialise and will minimise the innovation chasm. However, bad research, poorly developed, with an undefined or ill-defined end use will always be very difficult to commercialise and will expand the innovation chasm. The process of commercialisation and the interaction with industry starts with project selection." (Dr Roger Paul, MINTEK)



On issues of Intellectual Property Rights (IPR), a speaker from WRC hinted that:
"It is well known that knowledge becomes IP, which is produced, accumulated and traded like other goods and services. Accordingly, IP has become one of the important instruments in the commercial world and is considered the 'new wealth'" (Mr Lawrence Baloyi, WRC)

The experience of Necsa in commercialisation of research outputs is centred on the view that:
"An innovation strategy in the nuclear industry needs to take into account the long-term nature of the innovation as regards emerging forefront research areas, especially in terms of nuclear energy and the fuel cycle. It is necessary to focus on the core competencies of the institution in order to be successful in generating and exploiting new IP. The lessons learnt by Necsa in terms of the commercialisation of research output are:

- *Focus on core competencies*
- *Select and apply the business model*
- *Partner or perish, taking care to select suitable partners*
- *The principle of 'one size fits all' does not apply."*

(Dr Van Zyl de Villiers, Necsa)

In summary, the contributions to the symposium presented a wealth of information that needs to be interrogated in order to add value to addressing the country's socio-economic challenges. Research needs to address the two key outcomes in the R&D strategy, namely wealth creation and improvement of the quality of life for the people of this country. It is evident from the deliberations at this symposium that there are governance issues, both horizontal and vertical, that need to be addressed in order to optimise the commercialisation strategies of Science Councils. The presentations emphasised the critical aspects of IPR in the innovation value chain. However, most of the presentations viewed the commercialisation of research outputs within a linear model of innovation. The importance of strong, suitable partnerships and collaboration was evident, as well as the need to attract the necessary skills to the country's research agenda. Not many of the research projects and programmes engage the regional innovation systems. Provincial governments are well positioned to inform the social values of innovation and should be active participants and contributors to R&D.

The next symposium is scheduled for 22 to 23 September 2011 and will focus on collaboration of Science Councils, Universities and the Business sector in enhancing Commercialisation.



Dr Takalani Rambau

Chairperson: Science Councils and Statutory Bodies Sector

CORPORATE GOVERNANCE

The NSTF is an Association incorporated under Section 21 of the Companies Act, No. 61 of 1973. The 'National Science and Technology Forum' registration number is 2007/029165/08.

During the period of reporting, the NSTF was also registered as a Non-Profit Organisation, number 92042 on the Register of Non-Profit Organisations (NPOs) of the Department of Social Development, in compliance with NPO Act No. 71 of 1997. An NPO is defined, in terms of section 1 of the NPO Act, as a trust, company or other association of persons established for a public purpose and of which its income and property are not distributable to its members or office bearers except as reasonable compensation for services rendered. Non-Governmental Organisations (NGOs) and Community Based Organisations (CBOs) are collectively known as NPOs. In some instances, NPOs are also referred to as Civil Society Organisations (CSOs).

The registration is voluntary and enhances the credibility of the NSTF as it now reports to a public office, thus increasing the transparency and accountability of the organisation beyond its immediate role-players. This accountability and transparency also improves the governance of the NSTF as the organisation now complies with the requirements stipulated in the NPO Act. The NPO registration status is also a funding requirement for most donor and funding agencies. Through this NPO registration, the NSTF is brought into a public system that allows for information about the sector to be gathered and made publicly available.

BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE

During the reporting period, eight directors served on the Board of the NSTF as reported under the audited financial statements.

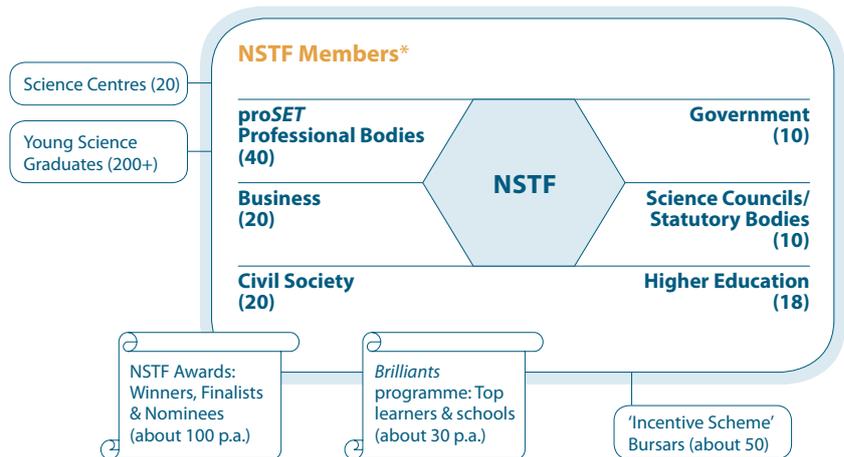
The members of the Executive Committee (Exco) representing the constituencies of the NSTF are:

1	Prof. BD Wingfield	NSTF Chairperson and Director of Company
2	Prof. S Burton	Vice-Chairperson, Professional Bodies/proSET: South African Society for Biochemistry and Molecular Biology (SASBMB) representative and Director of Company
3	Ms J Niehaus	NSTF Executive Director and Director of Company
4	Mr D Hunt	Business Sector: South African Chamber of Commerce and Industry (SACCI) & Director of Company
5	Dr P Mjwara	Government: DST
6	Mr D Kramer	NGOs and Civil Society: Sci-Bono Discovery Centre and Director of Company
7	Mr S Mpele	National Advisory Council on Innovation (NACI)
8	Prof. J Malherbe	Higher Education Sector: HESA and Director of Company
9	Dr WvZ de Villiers	State Utilities: Necsa and Director of Company
10	Dr T Rambau	Science Councils and Statutory Bodies: Academy of Science of South Africa (ASSAf) and Director of Company
11	Mr J Marriott	Immediate Past Chairperson
12	Ms WM Eksteen	NSTF Office Manager



MANAGEMENT STRUCTURE

The NSTF is a broad stakeholder forum, representing about 110 organisational members, in six distinct sectors.



* Approximate number of members per sector in brackets

Each member organisation is represented at the twice yearly Plenary Meetings of the NSTF, by an official representative appointed by the member organisation itself. The six industry sectors (listed at the outset of this report) elect representatives to the Executive Committee, which meets about ten times a year. Members of the Executive Committee are not remunerated for their service. The Annual General Meeting is held in October during the Plenary Meeting.

HUMAN RESOURCES

The secretariat consists of six staff members: the Executive Director, Office Manager, Office Administrator, Human Resource Officers and Financial Assistant (x 2) and Administrative Assistant. The roles are clearly defined in job descriptions and performance agreements are in place. The Office Manager is also the Financial Manager, and supervises the office as a whole.

The secretariat is assisted by two science graduates participating in the NYS Programme. They play a co-ordinating role with regards to all the NYS volunteers, and have specific responsibilities related to the Youth into Science Strategy, and make it possible for the NSTF to participate actively in these DST initiatives.

The one volunteer has specific responsibility for the bursary students in the Incentive Bursary Scheme, and the other is responsible for the web site and databases.

Breakdown of NSTF employees in terms of race and gender

The six members of the secretariat consist of five females and one male; two white females, two African females, one Indian female and one African male (thus 70% black or historically disadvantaged). The two NYS co-ordinators are one male and one female. Both are African (thus 100% black).

The breakdown for the eight people serving the NSTF office at year end is as follows: 63% African, 12% Indian, 25% White, 75% female and 25% male.

The breakdown of the 106 National Youth Service participants employed by the NSTF nationally at financial year end is approximately as follows: 92% African, 2% Coloured, 4% Indian, 2% White, and 53% of the participants employed are female.

ANNUAL FINANCIAL REPORT

FOR THE YEAR ENDED 31 MARCH 2011

The reports and statements set out below comprise the annual financial statements presented to the members:

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DIRECTORS' RESPONSIBILITIES AND APPROVAL

The directors are required in terms of the Companies Act of South Africa, No. 61 of 1973 (the Companies Act) to maintain adequate accounting records and are responsible for the integrity of the annual financial statements and related financial information included in this report. It is their responsibility to ensure that the annual financial statements fairly present the state of affairs of the Forum as at the end of the financial year and the results of its operations and cash flows for the period then ended, in conformity with South African Statements of Generally Accepted Accounting Practice. The external auditors are engaged to express an independent opinion on the annual financial statements.

The annual financial statements are prepared in accordance with South African Statements of Generally Accepted Accounting Practice and are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgments and estimates.

The directors acknowledge that they are ultimately responsible for the system of internal financial control established by the Forum and place considerable importance on maintaining a strong control environment. To enable the directors to meet these responsibilities, the board sets standards for internal control aimed at reducing the risk of error in a cost effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the Forum and all employees are required to maintain the highest ethical standards in ensuring the Forum's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the Forum is on identifying, assessing, managing and monitoring all known forms of risk across the Forum. While operating risk cannot be fully eliminated, the Forum endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The directors are of the opinion, based on the information and explanations given by management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the annual financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or loss.

The directors have reviewed the Forum's cash flow for the year to 31 March 2012 and, in the light of this review and the current financial position, they are satisfied that the Forum has or has access to adequate resources to continue in operational existence for the foreseeable future.

The annual financial statements set out on pages 32 to 38, which have been prepared on the going concern basis, were approved by the Executive Committee on 29 August 2011 and were signed on its behalf by:



Prof. BD Wingfield
Chairperson



Ms J Niehaus
Executive Director

REPORT OF THE INDEPENDENT AUDITORS

TO THE MEMBERS OF NATIONAL SCIENCE AND TECHNOLOGY FORUM

(ASSOCIATION INCORPORATED UNDER SECTION 21 OF THE COMPANY'S ACT)

We have audited the annual financial statements of National Science and Technology Forum (Association incorporated under Section 21 of the Companies Act), which comprises the directors' report, the statement of financial position as at 31 March 2011, the statement of comprehensive income, the statement of changes in equity and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory notes, set out on pages 31 to 38.

DIRECTORS' RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

The Forum's directors are responsible for the preparation and fair presentation of these financial statements in accordance with South African Statements of Generally Accepted Accounting Practice. This responsibility includes designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements to plan and perform the audit to obtain reasonable assurance that the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

QUALIFICATION

In common with similar organisations, it is not feasible for the National Science and Technology Forum to institute accounting controls over cash collections from donations, membership and subscriptions prior to the initial entry of the collections in the accounting records. Accordingly, it was impractical for us to extend our examinations beyond the receipts actually recorded.

OPINION

In our opinion, except for the omission of the information included in the preceding paragraph, the annual financial statements present fairly, in all material respects, the financial position of the Forum as at 31 March 2011, and of its financial performance and its cash flows for the year ended in accordance with South African Statements of Generally Accepted Accounting Practice, and in the manner required by the Company's Act of South Africa, 1973.



MDP Auditors Incorporated

Registered Auditors

JJ Marais

Pretoria

30 August 2011

42 Lebombo Road, Ashlea Gardens, Pretoria, 0081

DIRECTORS' REPORT

The directors submit their report for the year ended 31 March 2011.

INCORPORATION

The Forum was incorporated under Section 21 of the Companies Act on 10 October 2007.

REVIEW OF ACTIVITIES

Main business and operations:

The Forum is engaged in the promotion of science and technology in South Africa and there were no major changes in the Forum's activity during the year.

The operation results and state of affairs of the Forum are fully set out in the attached financial statements and do not in our opinion require any further comment.

EVENTS AFTER THE REPORTING PERIOD

The directors are not aware of any matter or circumstance arising since the end of the financial year.

DIRECTORS

The directors of the Forum during the year and to the date of this report are as follows:

Name	Changes
Prof. BD Wingfield (Chairperson)	
J Niehaus (Executive Director)	
FD Kramer	
JB Malherbe	
WVZ de Villiers	
MS Liphadzi	Resigned 1 September 2010
S Burton	
DF Hunt	
ST Rambau	Appointed 1 September 2010

SECRETARY

The secretary of the Forum is MDP Secretarial Services (Pty) Ltd:

Business address: 42 Lebombo Road
Ashlea Gardens
0081

Postal address: Private Bag 2006
Ashlea Gardens
0063

FIXED ASSETS

Fixed assets to the value of R89 955 were purchased during the year (2010 : R6 050).

STATEMENT OF FINANCIAL POSITION

AS AT 31 MARCH 2011

	Note(s)	2011 R	2010 R
ASSETS			
Non-current assets			
Equipment	2	90 847	25 770
Current assets			
Other financial assets	3	12 064 981	11 656 307
Trade and other receivables	4	577 171	515 846
Cash and cash equivalents	5	1 215 888	619 448
		13 858 040	12 791 601
Total assets		13 948 887	12 817 371
EQUITY AND LIABILITIES			
Equity			
Funding contributions		65 418	65 418
Accumulated surplus		4 261 857	4 419 348
		4 327 275	4 484 766
Liabilities			
Current liabilities			
Trade and other payables	7	526 775	535 400
Provisions	6	50 652	34 427
Other financial liabilities	8	9 044 185	7 762 778
		9 621 612	8 332 605
Total equity and liabilities		13 948 887	12 817 371

STATEMENT OF COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 MARCH 2011

	Note(s)	2011 R	2010 R
Revenue		2 588 501	3 471 553
Operating expenses		(3 453 906)	(2 692 879)
Surplus from operations	9	(865 405)	778 674
Investment revenue	10	605 502	966 288
Other income		102 412	-
Net (shortage)/surplus for the year		(157 491)	1 744 962
Total comprehensive income		(157 491)	1 744 962

STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED 31 MARCH 2011

	Funding contributions R	Accumulated surplus R	Total equity R
Balance at 31 March 2009	65 418	2 674 386	2 739 804
Changes in equity			
Funds for the year	-	1 744 962	1 744 962
Total changes	-	1 744 962	1 744 962
Balance at 31 March 2010	65 418	4 419 348	4 484 766
Balance at 1 April 2010	65 418	4 419 348	4 484 766
Changes in equity			
Shortage for the year	-	(157 491)	(157 491)
Total changes	-	(157 491)	(157 491)
Balance at 31 March 2011	65 418	4 261 857	4 327 275

STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 MARCH 2011

	Note(s)	2011 R	2010 R
CASH FLOWS FROM OPERATING ACTIVITIES			
Cash received from members and sponsors		2 314 021	3 319 180
Cash paid to suppliers and employees		(3 105 861)	(3 738 725)
Cash generated from operations	12	(791 840)	(419 545)
Interest received		605 502	966 288
Net cash from operating activities		(186 338)	546 743
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchase of equipment	2	(89 954)	(6 050)
Purchase of financial assets		(408 674)	(3 499 949)
Net cash from investing activities		(498 628)	(3 505 999)
CASH FLOWS FROM FINANCING ACTIVITIES			
Movement in financial liabilities		1 281 406	2 716 166
Net cash from financing activities		1 281 406	2 716 166
Total cash movement for the period		596 440	(243 090)
Cash at the beginning of the period		619 448	862 538
Total cash at the end of the period	5	1 215 888	619 448

ACCOUNTING POLICIES

FOR THE YEAR ENDED 31 MARCH 2011

1. PRESENTATION OF ANNUAL FINANCIAL STATEMENTS

The annual financial statements have been prepared in accordance with South African Statements of Generally Accepted Accounting Practice, and the Companies Act of South Africa, No. 61 of 1973. The annual financial statements have been prepared on the historical cost basis, and incorporate the principal accounting policies set out below. These accounting policies are consistent with the previous period.

1.1 Significant judgements and sources of estimation uncertainty

In preparing the annual financial statements, management is required to make estimates and assumptions that affect the amounts represented in the annual financial statements and related disclosures. Use of available information and the application of judgement is inherent in the formation of estimates. Actual results in the future could differ from these estimates which may be material to the annual financial statements. Significant judgements include:

Financial assets measured at cost and amortised cost

The company assesses its financial assets for impairment at the end of each reporting period. In determining whether an impairment loss should be recorded in profit or loss, the company makes judgements as to whether there is observable data indicating a measurable decrease in the estimated future cash flows from a financial asset.

The impairment for financial assets is calculated on a portfolio basis, based on historical loss ratios, adjusted for national and industry-specific economic conditions and other indicators present at the reporting date.

Impairment testing

The recoverable amounts of cash-generating units and individual assets have been determined based on the higher of value-in-use calculations and fair values. These calculations require the use of estimates and assumptions. It is reasonably possible that the forecasted cash flows and the discounted rate may change which may then impact our estimations and may then require a material adjustment to the carrying value of assets.

The company reviews and tests the carrying value of assets when events or changes in circumstances suggest that the carrying amount may not be recoverable. Assets are grouped at the lowest level for which identifiable cash flows are largely independent of cash flows of other assets and liabilities. If there are indications that impairment may have occurred, estimates are prepared of expected future cash flows for each group of assets. Expected future cash flows used to determine the value in use of assets are inherently uncertain and could materially change over time. They are significantly affected by a number of factors.

Provisions

Provisions were raised and management determined an estimate based on the information available.

1.2 Equipment

The cost of an item of equipment is recognised as an asset when:

- it is probable that future economic benefits associated with the item will flow to the Forum; and
- the cost of the item can be measured reliably.

Equipment is stated at historical cost to the Forum, less accumulated depreciation and any impairment losses.

Depreciation is provided on all equipment on the historical cost using the straight line method over the estimated useful lives of the assets. The methods and rates are determined by conditions in the relevant industry. Rates of depreciation are as follows:

Item	Useful life
Office equipment	16.67% (6 years)
Computer equipment	33.33% (3 years)
Computer software	55.00% (2 years)

The depreciation charge for each period is recognised in profit or loss, unless it is included in the carrying amount of another asset.

1.3 Financial instruments

Initial recognition

The Forum classifies financial instruments, or their component parts, on initial recognition as a financial asset, a financial liability or an equity instrument in accordance with the substance of the contractual arrangement.

Financial assets and financial liabilities are recognised on the Forum's balance sheet when the Forum becomes party to the contractual provisions of the instrument.

Financial assets consists of accounts receivable, investments and cash equivalents. Accounts receivable is stated at the total nominal value of such accounts and reduced by appropriate allowances for estimated irrecoverable amounts. Investments are stated at cost less any provisions for diminution in value. After initial recognition investments are measured at their fair value. Cash on hand is measured at its face value. Deposits held on call are classified cash and cash equivalents and are carried at amortised cost. Due to the short-term nature of these, the amortised cost approximates their fair value.

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements entered into. Significant financial liabilities include accounts payable. Accounts payable are stated at cost. Due to the short-term nature of the Forum's accounts payable, the cost approximates their fair value.

1.4 Cash and cash equivalents

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and are subject to insignificant risk in change in value.

1.5 Impairment of financial assets

At each reporting date the Forum assesses all financial assets, other than those at fair value through profit or loss, to determine whether there is objective evidence that a financial asset or group of financial assets has been impaired. Impairment losses are recognised in profit or loss.

1.6 Trade and other receivables

Trade receivables are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest rate method.

1.7 Provisions and contingencies

Provisions are recognised when:

- the Forum has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
- a reliable estimate can be made of the obligation.

The amount of a provision is the present value of the expenditure expected to be required to settle the obligation.

Contingent assets and contingent liabilities are not recognised.

1.8 Revenue

Revenue represents the invoiced value of membership fees and sponsorship received and is recognised at the date of accrual.

Interest is recognised, in profit or loss, using the effective interest rate method.

1.9 Leases

Operating lease payments are recognised as an expense on a straight-line basis over the lease term.

Any contingent rents are expensed in the period they are incurred.

NOTES TO THE ANNUAL FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 MARCH 2011

2. EQUIPMENT						
	2011			2010		
	Cost/ Valuation R	Accumulated depreciation R	Carrying value R	Cost/ Valuation R	Accumulated depreciation R	Carrying value R
Office equipment	103 179	(100 886)	2 293	103 179	(83 690)	19 489
Computer equipment	281 393	(256 208)	25 185	251 720	(251 719)	1
Computer software	22 133	(10 415)	11 718	15 458	(9 178)	6 280
Furniture and fittings	53 606	(1 955)	51 651	-	-	-
Total	460 311	(369 464)	90 847	370 357	344 587	25 770
			Opening balance R	Additions R	Depreciation R	Total R
Reconciliation of equipment – 2011						
Office equipment			19 489	-	(17 196)	2 293
Computer equipment			1	29 673	(4 489)	25 185
Computer software			6 280	6 676	(1 237)	11 718
Furniture and fittings			-	53 606	(1 955)	51 651
			25 770	89 955	(24 878)	90 847
Reconciliation of equipment – 2010						
Office equipment			36 686	-	(17 197)	19 489
Computer equipment			65 172	-	(65 171)	1
Computer software			5 437	6 051	(5 208)	6 280
			107 295	6 051	(87 576)	25 770
					2011 R	2010 R
3. OTHER FINANCIAL ASSETS						
32 Day deposit notice					-	11 652 561
Marketlink					-	3 746
Investec					12 064 981	-
					12 064 981	11 656 307
Current assets available for sale					12 064 981	11 656 307
4. TRADE AND OTHER RECEIVABLES						
Membership fees and sponsorship receivable					577 170	515 846
5. CASH AND CASH EQUIVALENTS						
Cash and cash equivalents consist of:						
Cash on hand					3 520	3 424
Bank balances					1 212 368	616 024
					1 215 888	619 448

6. PROVISIONS				
	Opening balance R	Reversals R	Additions R	Total R
Reconciliation of provisions – 2011				
Provision for leave pay	15 634	(15 634)	21 329	21 329
Provision for salary bonus	18 793	(18 793)	29 323	29 323
	34 427	(34 427)	50 652	50 652
Reconciliation of provisions – 2010				
Provision for leave pay	138 043	(138 043)	15 634	15 634
Provision for salary bonus	21 802	(21 802)	18 793	18 793
	159 845	(159 845)	34 427	34 427
			2011 R	2010 R
7. TRADE AND OTHER PAYABLES				
Sundry suppliers			317 667	282 512
Value Added Taxation			209 108	252 888
			526 775	535 400
8. OTHER FINANCIAL LIABILITIES				
National Youth Service Project				
Balance 1 April 2010			2 225 394	(747 886)
Net surplus/(deficit) for the year			2 449 886	2 973 260
Balance 31 March 2011			4 675 280	2 225 394
Incentive Scheme				
Balance 1 April 2010			5 395 478	5 762 357
Net surplus/(deficit) for the year			(1 264 271)	(366 879)
Balance 31 March 2011			4 131 207	5 395 478
FESTOC				
Balance 1 April 2010			141 906	31 959
Net surplus/(deficit) for the year			(67 006)	109 947
Balance 31 March 2011			74 900	141 906
SET Bursary Database				
Net surplus for the year			162 798	-
Total project funds			9 044 185	7 762 778
9. FUNDS FROM OPERATIONS				
Operating profit for the year is stated after accounting for the following:				
Depreciation on equipment			24 878	87 525
Employee costs			1 295 522	1 082 705
Operating leases – premises			53 332	29 104
10. INVESTMENT REVENUE				
Interest revenue				
Interest received: Bank			605 502	966 288
11. TAXATION				
Tax exemption was granted in terms of Section 10(i)(d)(iv)(bb) of the Income Tax Act.				

NOTES TO THE ANNUAL FINANCIAL STATEMENTS (CONTINUED)

	2011 R	2010 R
12. CASH GENERATED FROM/(USED IN) OPERATION		
Profit/(loss) before taxation	(157 491)	1 744 962
Adjustment for:		
Depreciation and amortisation	24 878	87 525
Interest received	(605 502)	(966 288)
Movements in provisions	16 225	(125 418)
Changes in working capital:		
Trade and other receivables	(61 324)	(152 373)
Trade and other payables	(8 626)	(1 007 953)
	(791 840)	(419 545)

13. CAPITAL RISK MANAGEMENT

The Forum's objectives when managing capital are to safeguard the Forum's ability to continue as a going concern in order to provide returns for members and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The capital structure of the Forum consists of debt, which includes the borrowings (excluding derivative financial liabilities) disclosed in notes 8, cash and cash equivalents disclosed in note 5, and equity as disclosed in the balance sheet.

Consistent with others in the industry, the Forum monitors capital on the basis of the gearing ratio.

This ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings (including current and non-current borrowings as shown in the balance sheet) less cash and cash equivalents. Total capital is calculated as 'equity' as shown in the balance sheet plus net debt.

There are no externally imposed capital requirements.

There have been no changes to what the entity manages as capital, the strategy for capital maintenance or externally imposed capital requirements from the previous year.

Financial risk management

The Forum's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk.

Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions. Due to the dynamic nature of the underlying businesses, the Forum treasury maintains flexibility in funding by maintaining availability under committed credit lines.

The Forum's risk to liquidity is a result of the funds available to cover future commitments. The Forum manages liquidity risk through an ongoing review of future commitments and credit facilities.

Interest rate risk

As the Forum has no significant interest-bearing assets, the Forum's income and operating cash flows are substantially independent of changes in market interest rates.

The Forum's interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose the group to cash flow interest rate risk. Borrowings issued at fixed rates expose the Forum to fair value interest rate risk.

Credit risk

Credit risk consists mainly of cash deposits, cash equivalents, derivative financial instruments and trade debtors. The Forum only deposits cash with major banks with high quality credit standing and limits exposure to any one counter-party.

Trade receivables comprise a widespread customer base. Management evaluates credit risk relating to customers on an ongoing basis.

ABBREVIATIONS

ACCESS	Applied Centre for Climate and Earth Systems Studies
API	Active Pharmaceutical Ingredient
ARC	Agricultural Research Council
AS & TS	Associated Scientific and Technical Societies
ASSAf	Academy of Science of South Africa
BUSA	Business Unity South Africa
CBO	Community Based Organisation
COP	Conference of the Parties
COSATU	Congress of South African Trade Unions
CSO	Civil Society Organisation
DAFF	Department of Agriculture, Forestry and Fisheries
DoE	Department of Energy
DST	Department of Science and Technology
ECSA	Engineering Council of South Africa
Exco	Executive Committee
FEDUSA	Federation of Unions of South Africa
FET	Further Education and Training
GMO	Genetically Modified Organism
HESA	Higher Education South Africa
HRDC	Human Resources Development Council of South Africa
HSRC	Human Sciences Research Council
IK	Indigenous Knowledge
IP	Intellectual Property
IPR	Intellectual Property Rights
IRP 2010	Integrated Resource Plan 2010
JIPSA	Joint Initiative for Priority Skills Acquisition
MoA	Memorandum of Agreement
NACI	National Advisory Council on Innovation
NACTU	National Council of Trade Unions
NGO	Non-Governmental Organisation
NPO	Non-Profit Organisation
NRF	National Research Foundation
NSTF	National Science and Technology Forum
NYS	National Youth Service
PCT	Patent Co-operation Treaty
PoC	Proof of Concept
PPP	Public Private Partnership
proSET	Professional in Science, Engineering and Technology
RE	Renewable Energy
SAASTA	South African Agency for Science and Technology Advancement
SACCI	South African Chamber of Commerce and Industry
SAIIE	Southern African Institute for Industrial Engineering
SANReN	South African National Research Network
SARCHi	South African Research Chairs Initiative
SASBMB	South African Society for Biochemistry and Molecular Biology
SET	Science, Engineering and Technology
SETA	Sector Education and Training Authority
SETI	Science, Engineering, Technology and Innovation
SME	Small and Medium Enterprises
THRIP	Technology and Human Resources for Industry Programme
TUT	Tshwane University of Technology
UNESCO	United Nations Educational, Scientific and Cultural Organization
YISS	Youth into Science Strategy



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