

**Minister Pandor's speech at the International Conference
on Scientometrics, STI Policy and Science Communication**

Department of Science and Technology

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19:30

STIAS, Stellenbosch

The contribution of South African universities to knowledge production in key areas such as the health sciences is globally recognised.

But how many of you know that the University of the Western Cape has been rated by the journal *Nature* as the top African university in the physical sciences, in some measure due to the university's involvement in the global Square Kilometre Array initiative.

Look at our research universities. We have six ranked as being among the top five hundred globally. And yet to many black people these institutions are considered islands of privilege and exclusion, and intellectually chauvinist.

The same or similar descriptions exist with respect to our science institutions. Black people and women appear to find it difficult to succeed and enjoy leadership in our institutions.

Science is a privileged sector in South Africa. It's a sector that has immense value for our development aspirations. Yet it's one that is held back by our past history of racial discrimination.

We have steered our small system to address as many of the results of apartheid exclusion as possible. We have increased funding for science significantly. We have expanded investment in future knowledge workers by increasing research grants for Masters and doctoral candidates. Research chairs and Centres of Excellence have been established to support our achievement of national objectives.

Ten years ago South Africa decided to establish 210 university research chairs. The programme was known as SARCHI. Its aim was to attract top-rank foreign scientists to South Africa to boost our scientific competitiveness. It was also designed to encourage South Africans to stay at South African universities in the face of what was seen at the time as a brain drain abroad of senior academics. It started with 21 chairs. A third of them came from outside South African universities, from universities in Germany, Sweden, Britain, Italy, the Netherlands, Ethiopia, Nigeria and Kenya. Some were South Africans coming home. The remainder were established professors set free of teaching and able to research full time.

Over ten years SARCHI has grown to 194 chairs. It still attracts a mix of foreigners, South Africans at home, and South Africans from abroad.

It's now a R404 million a year government funded programme.

But it's not only supported by public funds. The SARCHI leverages private funding. For every R1 of public funding in SARCHI another R2 is invested by industry. The total cumulative public investment between 2006 and 2014 amounts to R1.5 billion and SARCHI holders were able to leverage an

additional R3 billion from foreign sources, government departments, and private and industry funders.

The SARChI was established to attract leading scientists to undertake frontier research in South Africa. At the same time it strengthens the human capital development pipeline by training the next generation of researchers. Each research chair supervises, on average, three times the number of honours, master's and doctoral students supervised by other established researchers holding research grants. This is partly because each research chair has more than five times the number of postdoctoral fellows of other established researchers.

SARCHi is a huge opportunity for our country and our continent. It nurtures research talent. This is vital for our future prosperity.

The best scientists have a global choice of where to work. It's long been like this, a movement out of Africa to Europe and America. Universities have begun to mitigate this by offering joint appointments. This has allowed universities to attract and retain leading researchers.

We decided to expand SARCHi through various innovative approaches and started a country bilateral programme, first with Switzerland in global environmental health, now with the UK in food security and political science, and in the future with Germany in nano science and advanced materials.

International cooperation has consistently been an important aspect of our various national research and innovation programmes and strategies.

Turning to centres of excellence - the first Centres of Excellence were launched about two years after the publication of the R&D Strategy in 2002.

Over a decade of existence, the strength of the Centre of Excellence programme has been evident, to the point that this year we have increased the number of CoEs to 16.

And of course, as the name of this Centre of Excellence suggests - scientometrics - a Centre's purpose is not only to measure and analyse scientific research, but also to help us translate these findings into practical policy. Our R&D system is evolving at an impressive rate, so are our research and development needs.

Thus this Centre of Excellence builds on our existing capacities in scientometrics and innovation policy, fosters additional capacity, and takes our ability to understand and fine-tune our innovation environment and policy to a new level.

Professor Mouton, you and your team have made steady progress. A key aspect of your mission has been to institutionalise collaborative relationships with the various pockets of excellence in STI measurement and policy around the country. I have been kept up to date with your collaboration with the Institute for Economic Research on Innovation (IERI) at TUT; the Centre for Science Technology and Innovation Indicators (CESTII) at HSRC; the Centre for Higher Education Transformation (CHET); and others locally and internationally.

Professor Mouton, thank you for your leadership, and willingness to take on such a large and important collaborative task.

In closing, let me say that all your good work could amount to little, if we give in to the current call for free higher education now and for all. That call undermines the very foundation of our model for the funding of higher education, which is premised on cost sharing between government and students. If we sacrifice this principle, it would threaten the very sustainability of a quality university system, especially its capacity for scholarship and research.

Our policies (as reflected in Education White Paper 3) have always stressed that the 'direct cost to students should be proportionate to their ability to pay' and that a 'realistic fee structure must therefore go hand-in-hand with a sustainable programme of student financial assistance'.