

Address by the Minister of Science and Technology of South Africa, Naledi Pandor MP, at an extraordinary meeting of the European Parliament's Delegation for Relations with South Africa, Brussels, 7 November 2011

The Honourable Michael Cashman, Chair of the European Parliament's Delegation for Relations with South Africa;

Other Honourable Members of the European Parliament;

Distinguished Guests;

Ladies and Gentlemen;

I greatly appreciated the invitation to address this Extraordinary Meeting on science partnerships between Africa and Europe.

Honourable Members, there are long-standing political, economic and cultural ties between Africa-Europe.

Despite different socio-economic contexts, we know that research and innovation should be prioritized to encourage improved productivity, long-term growth and inclusive development.

Stronger scientific cooperation between Africa and Europe can make a special contribution to this priority.

It's important that science and technology cooperation between Africa and Europe is not restricted to the traditional areas of cooperation such as agriculture, health and environment research, as important as these topics are.

Cooperation should include a comprehensive series of engagements covering the entire research and innovation value chain, from fundamental and frontier research to the translation and commercialisation of the results of our research partnerships.

With several ongoing Africa-EU science cooperation initiatives and the potential to launch many more, it is important to guard against the potential fragmentation of efforts.

To mobilize resources for sustainable support, specific flagship initiatives are required.

Such large-scale initiatives will not only have the potential to transform the landscape of Africa-EU science and technology cooperation, but also deliver maximum impact for society.

I would like to present to you the case for radio astronomy - as a priority focus area for science partnerships between Africa and Europe.

Astronomy is a discipline where Africa enjoys a considerable comparative advantage, due to the excellent conditions for observation on our continent.

We have access to the Southern skies, with large territories unscarred by light pollution or radio-interference.

We are determined to exploit this geographic advantage for the maximum benefit for our people.

The South African Government is accordingly investing in astronomy as a priority science mission.

South Africa is home to the Southern African Large Telescope, the single biggest optical telescope in the southern hemisphere. It's a partnership that includes the involvement of several European countries.

South Africa is not the only African country, which plays host to leading global astronomy facilities. There is the HESS gamma-ray telescope in Namibia, a unique African-European partnership initiative, which in 2007 was awarded the European Union's prestigious Descartes Prize for scientific excellence.

Furthermore, in partnership with eight other African countries, South Africa is bidding to host the Square Kilometre Array or (SKA), which will be the world's most powerful radio telescope.

Dr Bernie Fanaroff will speak more on this initiative.

South Africa is also constructing the MeerKAT telescope. Prior to the completion of the SKA, it will be the most powerful radio telescope in the Southern Hemisphere.

There is much excitement in Europe regarding MeerKAT's potential and several of Europe's leading radio astronomers have already been afforded observation capacity to use this magnificent African instrument.

What excites me most is the potential of astronomy to encourage a greater interest in scientific careers among the youth.

Astronomy is proving to be an unrivalled instrument for science education in terms of the excitement it generates among our youth.

It is, thus, no surprise that astronomy's impact on development is enjoying increased policy attention, as recognised by the International Astronomy Union's decision to establish a dedicated office Astronomy for Development Office, the global headquarters, which are located in Cape Town.

Training programmes in radio astronomy are helping us to grow Africa's future workforce of knowledge workers and engineers. We already have promising results. As a result of the various human capital development programmes associated with Africa's SKA bid, new astronomy programmes have been established at several African universities, including at Kenya, Madagascar and Mozambique.

Policymakers often talk about brain circulation to mitigate brain drain.

Under our programmes several post-graduate African students are working at European universities, contributing to knowledge generation in Europe, but leading European astronomers have also been taking up positions in Africa through for example the South African Research Chairs programme.

A small statistic proves the impact of our initial investment in astronomy. In 2003 there were 12 practicing radio astronomers in Africa. Today there are more than 60, all contributing not only to Africa's growth and development, but also the global scientific enterprise of discovery.

Radio astronomy not only benefits human capital development. The development of research infrastructures is also significantly boosted through targeted investments in a discipline such as astronomy.

These investments also encourage the development of research infrastructures of use to the broader scientific community such as high-speed research networks and computing resources.

In this regard I would like to announce our exciting plans, which Dr Fanaroff will detail, to develop an African Very Long Baseline Interferometry, better known as VLBI, Network to contribute to global radio astronomy programmes.

South Africa and several partner countries in Africa have identified several ground satellite segment communication dishes across the continent, which have now become redundant because of the construction of optical fibre networks.

These dishes can be converted without major expense to form part of a VLBI Network. Already there is ongoing work by a group of African scientists and engineers on the conversion of a 32m satellite communication antenna in Kuntunse, Ghana and the initiation of preparatory work in Mozambique.

These are tangible steps taken by Africa to invest in research infrastructures, which will benefit global science.

We would greatly value European partners in this effort, for example by providing further support for the development of high-speed research networking capacities.

I must also stress that investments in research infrastructures contribute to socio-economic development in the regions where they are located. Employment

opportunities are created. Basic services and infrastructures are developed in regions, which are often in remote, rural areas. There are multiple opportunities for African and European industries to work together in this context.

I would like to suggest that radio astronomy is a flagship area for the Africa-EU Science, Information Society and Space Partnership, the so-called 8th Partnership of the Joint Africa-EU Strategy.

It brings together in one initiative the three focus areas of this Partnership, exploiting synergy between science, information society and space. Large-scale initiatives will focus our efforts, to avoid fragmentation of efforts and achieve maximum impact.

The African SKA bid and related radio astronomy initiatives has the potential to enhance and transform international scientific cooperation, to forge new alliances, and to bridge the traditional divide between developed and developing economies.

Policy-makers, scientists, civil society advocates, and other experts often refer to the need for global scientific cooperation to address the many shared global challenges, such as climate change, energy security or pandemic disease, confronting our planet.

Yet we will only be successful if we are able to draw on the collective resources and capacities of our planet in a fully inclusive manner.

Global scientific endeavour requires the contributions of all regions, especially those in the developing world excluded in the past.

I'm proud that the SKA project is well positioned, as evidenced by its phenomenal impact on the expansion of radio astronomy in Africa, to play a pathfinder role for a new generation of global science partnerships.

With its strong current footprint of initiatives on the continent, the SKA specifically and radio astronomy more generally, can play a dynamic role in harnessing Africa's science and technology capacities to contribute to global growth and development.

Honourable Members, it's my hope that our engagement today, will serve to further strengthen science partnerships between Africa and Europe.

We already have the enabling political framework of the Joint Africa-EU Strategy's Science, Information Society and Space Partnership, which will be presented by Prof Magalhaes later this afternoon.

It's time now to translate into action the commitments made by our Heads of State at the Africa-EU Summit last year. We count on the European Parliament's assistance in our efforts to mobilize resources, as we build lasting, truly mutually beneficial partnerships.