



ADDRESS BY THE MINISTER OF HIGHER EDUCATION, SCIENCE AND INNOVATION, DR BLADE NZIMANDE ON THE OCCASION OF THE NATIONAL RESEARCH FOUNDATION ANNUAL AWARDS HELD AT ALBERT LUTHULI AUDITORIUM – NRF HEADQUARTERS - PRETORIA

2 November 2021

Programme Director:

Deputy Minister of Higher Education, Science and Innovation, Mr Buti Manamela;

Ms Nompandolo Mkhathshwa, Chairperson of the Portfolio Committee on Higher Education, Science and Technology;

Chairprson of the NRF Board, Dr Nompumelelo Oboko and all Board members Present;

Director General of the Department of Science and Innovation, Dr Phil Mjwara;

CEO of the NRF, Dr Fulufhelo Nelwamondo;

DDG's present;

University and Science Councils representatives;

Researchers;

Members of the media;

Ladies and Gentlemen

Good evening,

It is my privilege and honour to address you at this auspicious occasion marking the 2021 Annual National Research Foundation (NRF) Awards.

Let me take this opportunity to congratulate the researchers whose work will be affirmed and recognised this evening.

Background

The purpose of the NRF Awards is to recognise excellence and achievement by South African scientists and researchers in knowledge creation and dissemination, as well as human capacity development and transformation of the national science system.

The awards are also meant to provide an opportunity to inspire new and emerging researchers to aim for and pursue the high research performance.

We are celebrating these Awards under the theme “***South African Science: Expanding the Global Frontiers of Knowledge***”

Ladies and gentlemen

To illustrate our continued commitment to advance science, technology and innovation, my Department of Science and Innovation developed a

new policy framework for science and technology which is contained in the new White Paper on Science and Technology and Innovation (STI).

To realise the objectives of the new White Paper, we have developed a Decadal Plan on STI, which will serve as an initial ten-year implementation plan over the period 2020-2030.

The decadal plan takes into consideration not only the White Paper, but also a review of the achievements and challenges from the Ten- Year Innovation Plan (2008-2018), which has seen the attainment of significant milestones within the sector.

To practically demonstrate our capacity as government, working together with the entire National System of Innovation, we have responded to the COVID-19 pandemic in line with our vision as contained in the Decadal Plan.

In responding to the COVID-19 pandemic, our South African researchers across the scientific spectrum rose to the occasion, committing their expertise, time and resources to developing solutions to manage the crisis, monitor its impact and, more importantly, found ways to fight the disease.

Our COVID -19 response was as a result of our science and innovation investments which we made as government in the past decades.

These investments led to us building expertise, infrastructure and research capacity needed in our response when diseases strike.

These investments and the talent brought into our national system of innovation, led our country to produce premier science that is not only assisting us locally, but also contributing to the global body of knowledge on COVID-19.

Our infrastructure in response to COVID 19 include:

- The KwaZulu-Natal Research Innovation and Sequencing Platform (KRISP) which saw local scientists lead investigations into the evolutionary characteristics of SARS-CoV-2 and detected a new variant, dubbed 501Y.V2;
- The Centre for Proteomic and Genomic Research (CPGR); and
- The South African Biodiversity Institute whose research and development portfolio includes pathogen genomics, and the skills needed in the areas of vaccines, biochemistry, microbiology and genetics, among others.

We also established an indigenous knowledge-based research team that is investigating seven mono-herbal and two multi-herbal medicine formulations with potential relevance to COVID-19.

We are also collaborating with the North-West University (NWU) to raise public awareness on the Protection, Promotion, Development and Management of Indigenous Knowledge Act.

Of course, COVID-19 is not the only time that the scientific community has tackled the challenges facing South Africa – the fight against HIV/AIDS and TB continues.

Progress is continuing to be made in finding ways to alleviate poverty and to improve education; and new discoveries are being made in areas such as energy, nutrition, nature conservation, economic development and more.

Through the efforts of the scientific community, South Africa is able to address these and other challenges.

Just to highlight the NRF contribution to support our human resource development drive, the NRF awarded at least 3 000 research grants to researchers based at various research-performing institutions in our country.

These include grants earmarked to support emerging and established researchers through various programmes such as Thuthuka, the New Generation of Academics Programme, NRF-rated researchers, established and unrated researchers, the South African Research Chairs Initiative (SARChI) and the Centres of Excellence.

I am proud to indicate that our scientists past and current endeavours has shown that South African science is at the global frontier of cutting-edge research and is helping expand the global frontiers of knowledge.

Thus the theme of these NRF Awards, ***“South African Science: Expanding the Global Frontiers of Knowledge”***.

Let me share with you some of the interventions our scientists in our national system of innovation have made.

They include:

- Data modelling, through the CSIR-CMORE situational awareness platform for COVID-19. This provides close to real-time data on the coronavirus outbreak per province, district, local municipality and ward;
- The SA Population Research Infrastructure Network (SAPRIN) random sample of household’s research to document the knowledge, behaviour and outcomes of these households in relation to non-pharmaceutical COVID- 19 measures;
- The Human Sciences Research Council surveys to measure the public response to COVID-19 and the effects of lockdown;
- The South African Radio Astronomy Observatory (SARAO) National Ventilator Project; and
- The deployment of hydrogen fuel cell systems in hospitals and medical facilities.

These infrastructure networks and investments were instrumental in allowing our government to respond quickly and effectively in managing the coronavirus outbreak.

They also demonstrated our world class competence in identifying variants and keeping science at the foundation of government decisions.

Cabinet has approved my Department of Science and Innovation strategy to drive a multipronged national vaccine production and development strategy to secure our nation's long-term pandemic preparedness.

In this regard, DSI is working closely with Biovac, in which the State has 47% shareholding, to increase the scope of public participation, and leveraging capital investment by domestic private and international vaccine players, to build South Africa's vaccine production resilience.

I am also particularly pleased at the commitment of expatriates, most notably, Dr. Patrick Soon-Shiong, a former graduate of Wits University, to invest in our nation's future pandemic security.

We also hope to build strong partnerships with China, Russia and other BRICS partners, as well as European and North American partners, including Cuba.

Wayforward

Going forward, one of our tasks is to ensure we increase our investment into research and development from the current 0,81% of the GDP to the target of 1,5% as contained in the National Development Plan.

We also need to give greater urgency to reversing the enduring vestiges of apartheid discrimination by attending to the training and development of a new capable cohort of scientists engineers and researchers. At the heart of the higher education, science and innovation landscape is the absolute necessity to transform the relations of knowledge production, especially their patriarchal, racial and class features. The NRF must be at the centre of this enormous task and challenge.

We need to undertake this, fully aware of the fact that training on its own is not sufficient if we are to ensure a capable, productive sector of researchers and innovators.

Mentoring beyond qualification, support to achieve senior degrees, training to manage science projects, to publish and to independently establish new researcher-led initiatives, must become part of our enterprise.

I say this fully cognisant of the excellent work led by NRF and the achievements we have attained in this regard.

However, it is clear to all of us that more must be done and that transformation requires dedicated stewardship if we are to succeed.

Our transformation efforts will need to focus on racial and gender imbalances - we will also have to devise strategies to retain young people in the innovation system.

We also need to position our NSI and our PSET together to bring all their institutional resources and human talent to tackle especially local-scale economic developmental challenges.

The District Development Model (DDM) provides a perfect opportunity for all our institutions – regardless of their typological ‘status’ – to become embedded in districts in which they are located.

It is in this context that my Ministry initiated the concept of district-level *Education and Innovation Precincts* to bring together otherwise disparate universities, TVET’s, CET’s, Setas, schools and other innovation players in particular parts of the country to focus resources and energies around socio-economic development issues.

We are planning three (3) such precincts in the first phase, the latest having been launched recently in the Imbali district in KZN.

At a policy and system-level, I believe the alignment of DHET and DSI under a single Ministry offers new and as yet unexplored opportunities for much greater synergy in our system.

We have already begun to experiment with ‘joining up’ of key policy levers to reduce wastage, optimize efficiency and exploit new opportunities more vigorously.

For example, in post-graduate bursary and scholarship funding, infrastructure funding, capacity development, and so forth.

But this needs to be ‘drilled down’ at the *level of institutions* and sectors within the NSI and PSET system to build our national capacity for large-scale innovation.

I however wish to point out that I am going to give added focus on HDIs, as well as extending support for innovation into the TVET College sector.

The Ministerial Task Team Report on the Higher Education, Science, Technology Innovation Institutional Landscape (HESTIIL) was recently submitted to the Ministry and we have been studying it carefully.

The Report makes some radical recommendations on recreating and expanding the capacity of our STI capabilities including the idea of a new Research and Innovation Foundation.

We will be releasing the report for public comments soon. I urge you to engage with it in the light of some of the issues raised above.

Ladies and gentlemen

Let me indicate that South Africa is fortunate in that it has a research sector that is improving its achievements consistently and an emerging national system of innovation which if appropriately supported could lead to us becoming one of the leading global research competent countries in the world.

We are already making our mark in this regard and I believe we can do more if we work collaboratively.

We can be further proud of our scientific abilities and achievements. We have achieved all our successes despite our size and inadequate resourcing.

The ambitions that we share impose several important tasks on the department of science and innovation, its entities and in all our science councils and universities. Let us keep the fire burning and find synergise to collaborate.

As I conclude, let me congratulate all who will be receiving awards this evening. You are all phenomenal and our nation's hope and pride.

I for one, I am indeed proud of you all.

I also take this wonderful opportunity to thank the NRF's Board, the Management, participating Universities, the adjudicators and all supervisors.

Thank you