The African Academy of Sciences

Driving Scientific and Technological Development in Africa

COUNTRY PROFILE

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Accelerating Namibia's R&D growth

Namibia is transforming its science, technology and innovation sector to become globally competitive. A science and technology policy adopted by Act 23 of Parliament in 2013 enabled the southern African country to set up the National Commission for Research, Science, and Technology, which has been instrumental in creating an R&D fund and conducting the country's first R&D survey. The survey revealed that Namibia has surpassed its target to increase its allocation for R&D to 0.3 % of GDP. It currently spends 0.34% with some of the funding spent through the National Research, Science and Technology Fund, which made its first disbursement jointly with South Africa in March 2014 funding 30 projects for a value of N$ 3 M (US$ 253,000). A first national disbursement in May 2014 funded 27 projects for N$ 4 M.

Spurring the transformation will provide the evidence and homegrown solutions for achieving the strategic goals of Vision 2030, which include addressing inequality; population, health and development; economic development; knowledge, information and technology, and human resources development and institutional capacity building. Indeed Vision 2030 identifies education, science and technology as the 'driving force' for achieving its development goals.

Partnerships will be key to successfully develop science, technology and innovation and harness it for socio-economic growth. Namibia's partnerships have seen 35.4% of its higher education R&D funded from international sources. Its collaboration with South Africa created its first R&D survey and funded collaborative research project that have laid a foundation for increased intra-Africa collaboration. The African Academy of Sciences is keen to see an Africa-led and Africa-centred approach to the development of STI. Increased support from African public, private, philanthropic sectors will promote ownership and ensure an Africa-driven science agenda. As such, the AAS is committed to partner with Namibia to drive this vision.

Namibia

Some of the young African scholars being trained through the AAS' programmes

Baitshepi Mokaleng,MPhil Trainee

Kaelo Seatla, PhD Trainee

Lucy Mupfumi, PhD Trainee

Leabaneng Tawe, MPhil Trainee.

Dorcas Maruapula, MPhil Trainee

Kesaobaka Molebatsi, PhD Trainee

Building a synergistic relationship between Namibia and the AAS

The manual for the operation of National Research, Science and Technology Fund has outlined some key issues to address to strengthen and harness science, technology and innovation.

Namibia strategic goals	Synergies with the AAS
Integrating capacities for managing research and innovation	Has built grant management capacities that have positioned it to be Africa's foremost grant making body. We are currently managing funding $150 M invested by our partners through the Alliance for Accelerating Excellence in Science in Africa (AESA), a funding and agenda setting platform that the AAS created in partnership with the NEPAD Agency. Namibia can leverage this expertise to build its grant making and research coordinating capacities.
Strengthening infrastructure: equipment, scientific instrumentation	Our programmes are geared to building R&D environments that support a vibrant research culture and leadership development over the long-term. Namibia can use this expertise to strengthen its research ecosystems.
Train, attract and retain world class scientists	Our programmes train scientists, help them develop their careers, and provide the infrastructure they need to conduct quality research. The ultimate goal is to retain them on the continent. Namibia's focus on training and retaining its scientists positions it for a collaboration with AAS that would be mutually beneficial. Through the Grand Challenges Africa programme, we are building the capacity of African researchers to apply for grants. Namibian researchers can benefit from this capacity building programmes, which is already seeing participants win international and AAS grants. We are also launching Africa Open, an open source publication, which would provide a platform for Namibia researchers to publish their research and increasing their scientific production.
Study of environmental phenomena and impact	The AAS' climate change programme, Climate Impact Research Capacity and Leadership Enhancement (CIRCLE), is training a future generation of African climate scientists and generating knowledge for the continent to effectively tackle climate change. Climate change has increased some countries in southern Africa's susceptibility to droughts, including Namibia. CIRCLE provides a training model for Namibia to replicate and invest in generate the evidence it will need to reduce the impact of climate change on agricultural productivity, ensuring food security and environmentally friendly production methods.
Increasing the number women researchers	The AAS is implementing interventions to attract more women into science, which has seen our programmes recruit a ratio of 50 % women as master's, PhD and postdoctoral Fellows. With 38 % of Namibian researchers being female, AAS programmes are a platform for the country to train its future women scientific leaders and promote gender equity in the scientific sector.

Exploiting the synergy

The AAS is aggressively building partnerships with African countries to ensure Africa-led investment of R&D. Countries which are collaborating with the AAS include:

- Nigeria, which provided US$5 M to an AAS Endowment Fund.
- South Africa, which invested close to US$1 M to support innovative health technologies through the Grand Challenges Africa programme.

South Africa's funding is managed by the AAS but supports its local innovators to collaborate with peers in other African countries, a partnership model that can be replicated between the Academy and Namibia.

Benefits of investing in research

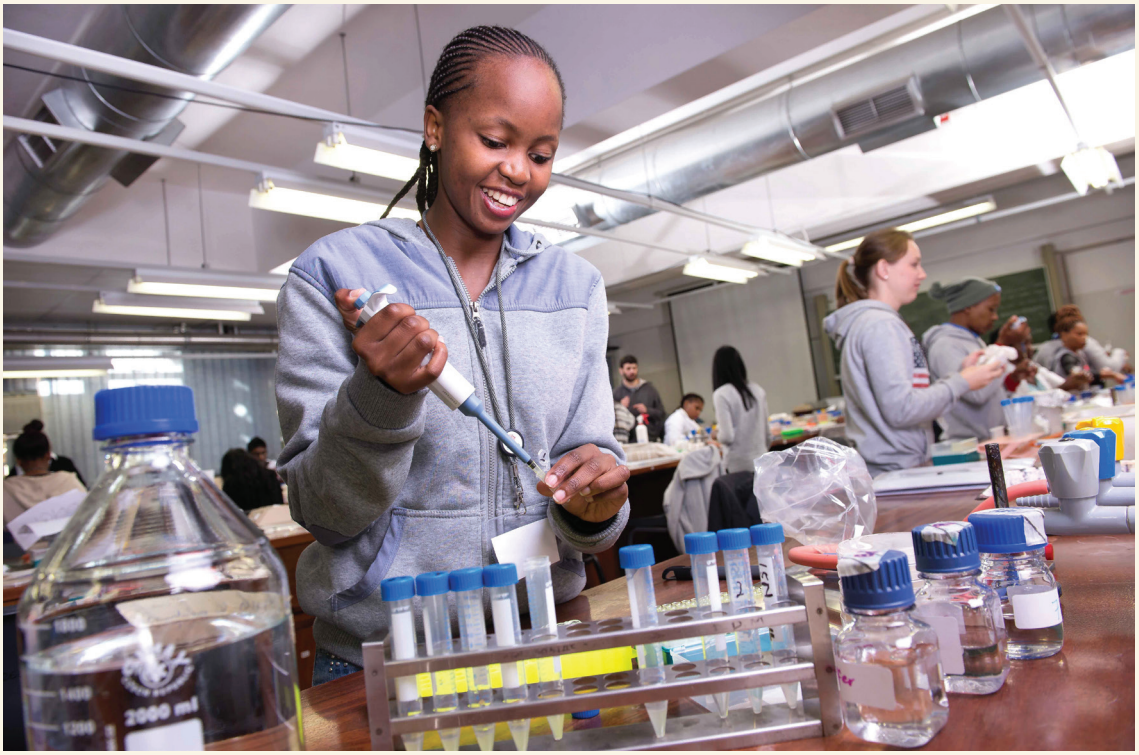
The benefits for Namibia include:

- Increasing Namibia's research output and making it globally competitive.
- Building capacity locally to ensure home grown solutions for achieving strategic goals of Vision 2030.
- Promoting gender equality in STI and building Namibia's capacity to conduct research.
- It will transform Namibia to a knowledge based economy that will spur socio-economic growth.

Next steps

Potential areas of partnerships are outlined below as per Namibia's goals for developing R&D. Exploring the partnership model that the AAS has with countries like Nigeria and South Africa, Namibia can invest in:

1. The Developing Excellence in Leadership, Training and Science (DELTAS) Africa, a programme led by AESA to develop world-class researchers and scientific leaders to conduct cutting-edge health research in infectious diseases, non-communicable diseases (NCDs), population and public health.
2. Grand Challenges Africa, which promotes Africa-led scientific innovations to help countries better achieve the Sustainable Development Goals by awarding seed and full grants to the continent's most impressive innovators. Current priorities include maternal, neonatal and child health, antimicrobial resistance, biomedical engineering and key areas of infectious diseases and NCDs.
3. The Human Heredity and Health in Africa (H3Africa) initiative, which aims to facilitate a contemporary research approach to the study of genomics and environmental determinants of common diseases with the goal of improving the health of African populations. H3Africa programes are focused on infectious diseases and NCDs including kidney disease, sickle cell anaemia, diabetes, hypertension, heart disease and stroke to lay the foundation for precision and genomic medicine in Africa.
4. AESA Postdoctoral Fellowship Programmes-through AESA, the AAS is implementing postdoctoral programmes to support early career researchers: the CIRCLE programme develops skills and research experience for early career African researchers in the field of climate change in five thematic areas of health, agriculture, water, energy and policy. The AESA-RISE postdoctoral programme will support postdoctoral training and research to produce leaders in areas that include material sciences, engineering, water resource management, marine biology and natural products.



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5. STEM Education where Science, Technology, Engineering and Mathematics (STEM) education focused on capacity building, mentorship and networking are promoted in ways that foster scientific research and ensure that higher education systems are equipped to meet the demands for emerging knowledge based economies.

6. Research Management and Good Financial Grants Practice Research thrives in environments with good research and financial management capacities. The Good Financial Grant Practice (GFGP) was established as an innovative tool for standardising, simplifying and strengthening financial governance, providing a specification for both grantors and grantees of what is good practice for financial management throughout the grant life cycle.

7. Policy and Advocacy, which provides horizon scanning of the scientific landscape, promotes research uptake, production of policy papers and convenes stakeholder forums.

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