



NEXT EINSTEIN FORUM

An  **AIMS** initiative in partnership with the Robert Bosch Stiftung

NEF MINISTERIAL MEETING – 29 NOVEMBER 2016

QUICK FACTS SHEET

At the first NEF Global Gathering 2016, held in Dakar, Senegal, this March, a first NEF Ministerial Meeting was held with over 40 participants. The meeting concluded with the following recommendations:

1. African universities must significantly increase the proportion of qualified teachers and researchers having PhDs and partnerships, local and global, must attain this objective.
2. Africa should create its own Science Funding Initiative. One realistic goal is to establish 100 research chairs.
3. A clear long-term strategy must be established, as well as an exit strategy with a sunset clause, for each partnership and collaboration.
4. There should be a focus on basic as well as applied research, including the commercialization of new discoveries/inventions pivotal to enhancing prosperity.
5. African philanthropists should be included in discussions of the allocation of STI investments.

Building on the first meeting, this ministerial session will discuss three themes stemming from the wider theme, “Collaborative Global Research Networks: Implementing Essential Actions”:

1. Increasing significantly the proportion of qualified teachers and researchers having PhDs at African Universities.
2. Creating a Pan-African Science Funding initiative (e.g. 100 Research Chairs) or other great opportunities.
3. Developing a long-term partnership and collaboration strategy between African countries and also with the rest of the world.

Theme 1: Increasing the Annum Rate of PhD Holders in Africa

As the growing demands for higher education due to the skyrocketed rate of undergraduates’ enrolments in African universities outpace the available infrastructure and faculty, increasing the number of African PhD students and graduates within African universities is now a “MUST”. While undergraduate enrollments have expanded by 9.6% annually, reaching over 10 million students, postgraduate enrolment both in masters and PhD programs makes up only for 8% of the total enrolment. For the decade ahead, a record number of youth bulge will

fuel tertiary education system: “the continent’s people between the ages of 15 and 24 hit 193 million in 2015; and will increase to 295 million by 2035,” predicts the United Nations (2016 Global Educational Monitoring Report). Therefore, to reach the goal of driving the continent towards a knowledge-based economy as emphasized in the African Union’s 2063 agenda, the proportion of PhD holders and university teachers ought to increase, because these are the brains, which will enhance Africa’s Science, Technology and Innovation (STI) and transform its youth into a qualified skilled force.

The meeting will discuss the three main challenges to increasing the number of PhDs: 1) poor implementation policies; 2) outdated design of PhD programs; and 3) inadequate infrastructure.

The meeting will also review possible implementation options including 1) Remodelling design & diversification of PhD programs segments and 2) Bidding on retaining Students Mobility within African Universities.

Theme 2: African Research Chair Initiative

Excellence in Science, Technology, and Engineering & Mathematics (STEM) is necessary for building successful knowledge-based economies. Several governments and multinational organizations have their own grand initiatives to support scientific activities. However, consensus within the Science & Technology Policy Studies literature is that STEM funding on its own does not enhance a nation’s science-technology capability. Indeed, government remains a crucial player in both funding and coordinating scientific activities. Yet, programs rarely succeed if the government is the only player. Effective program designs should also involve stakeholders from the academic community, industry and even civil society organizations in some cases. A setting like this would ensure that outcomes of research will cater for an already existing demand and consequently contribute to the Africa’s development needs.

One common way of implementing funding programs is through sponsoring Research Chairs. On the continent, there is the South African Research Chair Initiative. It started in 2006 as a strategic intervention by government to foster the country’s transition to a knowledge-based economy. It is also an important tool to attract good scientists from the diaspora. Universities openly bid for Chairs (with a maximum of 3 applications each). Currently there are 157 such chairs awarded in South Africa. They are distributed among 21 participating universities, and the system still seems to be growing.

The meeting will look at various structures of research chair programs including those not unique to governments. As well, the meeting will look at the creation and structure of a pan-African Secretariat to manage the African Research Chair Initiative.

Theme 3: Harnessing the Benefits of Research Mobility in Africa

Science, Technology and Innovation (STI) partnerships between Africa and the rest of the world is of global importance and relevance to many African countries that need to stimulate sustainable growth of their economies. While studies have

stressed the benefits of scientists' mobility and its impact on strengthening the STI base in countries/regions, more attention was given rather to the brain drain of scientists than to the short-term research visits. Nonetheless, the impact of building knowledge networks is regarded as a way to increase the efficiency of the knowledge production process as a whole. In January 2007, the African Union Assembly (AUS) of Heads of States and Governments endorsed the need for South-South and North-South cooperation in STI, and mandated the Commission to enhance its role in international partnerships. It further declared 2007 as the launching year for building constituencies and champions for STI in Africa. In this context, several strategic partnerships with the EU, South America, China, India and Japan through Tokyo International Conference of African Development (TICAD) started. Therefore, it is imperative for African countries to adjust their strategies and priorities in order to fully harness the positive benefits brought about by collaboration in STI, Information Communication Technologies (ICTs), and an education system that pays attention to science and research.

The meeting will review two options that aim to harness internal and external African researchers' mobility through long-term regional partnership strategy among African universities and between African regions as well as foreign private industries. These include 1) Bilateral partnerships between African universities and foreign industries based outside of Africa in order to revitalize regional research mobility in Africa and the creation of a 2) Africa Global-Local Research Visit Program where outstanding African researchers are incentivized to go on teaching/research visits to other institutions within Africa, by packaging the visit with another research visit to a recognised institution outside of Africa.

For more information:

Mimi Kalinda

Communications Director, AIMS Global Network

E: mkalinda@nexteinstein.org