OFFICE OF THE VICE-CHANCELLOR

KEYNOTE ADDRESS AT THE 10TH ANNIVERSARY CELEBRATION OF AFRICAN HIGHER EDUCATION CENTERS OF EXCELLENCE (ACE@10)

ADDRESS BY:

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LABADI BEACH HOTEL

ACCRA

PROTOCOL - ACKNOWLEDGEMENTS

- *President of the Republic of Ghana, Your Excellency John Dramani Mahama,*
- *Honorable Haruna Iddrisu, Minister for Education, Republic of Ghana,*
- *Honorable Ministers of Finance and Education from Participating ACE countries,*
- *Prof. Olusola B. Oyewole, Secretary General, Association of African Universities (AAU) and officials from the AAU Secretariat,*
- *Prof. Gaspard Banyankimbona, Executive Secretary, Inter-University Council for East Africa (IUCEA),*
- *Mr. Ousmane Diagana, Regional Vice President for Western and Central Africa, World Bank,*
- *Delegation from the African Union,*
- *Senior Officials from the World Bank and the French Development Agency,*
- *Representatives of Development Partners,*
- *Vice-Chancellors and Managers of Universities and Institutions of Higher Education,*

- *Centre Leaders and staff of the African Centres of Excellence,*
- *Private sector representatives,*
- *Invited Guests,*
- *The Media,*
- *Distinguished Ladies and Gentlemen*

1.0 INTRODUCTORY COMMENTS

I welcome you all to the heart of Accra, the capital city of Ghana. I extend an even warmer welcome, particularly to those of you visiting Ghana for the first time. In our Akan language, one of the dominant local languages, we say '*Akwaaba*" but this is rather too familiar so I would like you to learn how to say welcome in the Ga language, language of the natives of the Greater Accra region – *Miihere nye atuu* or simply put 'atuu'.

It is an honour to address this distinguished gathering of policy makers, university leaders, development partners and key stakeholders at this high-level forum celebrating the 10th anniversary of the African Higher Education Centres of Excellence. Your presence here affirms your conviction of the

power of research for global transformation and a commitment to higher education and innovation in Africa.

Reflecting on the past decade, it has been an incredible and remarkable journey, and indeed *"A decade of Impact, Innovation and Excellence"*. And I would like to thank the organizers for the opportunity to share some perspectives on **"The vision for Higher Education for Africa *and the Journey so far – 10 years of ACE"*.** In the next few minutes, I would like us all to reflect on a decade of the establishment of the African Centres of Excellence, and more importantly, strategize for a more impactful decade ahead.

2.0 SETTING THE CONTEXT

2.1 Background: Historical Perspective

Why was the establishment of the African Centres of Excellence (ACE) Necessary?

A decade ago, African governments together with leaders of higher education on the continent, identified that the region was faced with a critical gap:

- Limited access to high-quality postgraduate education
- Underinvestment in research
- Poor linkages between universities, industries, and communities
- Imported solutions to address Africa's challenges.

It was against this background that the bold and visionary idea for the establishment of the African Centres of Excellence emerged. The focus was on nurturing centres of excellence in specialized fields that could transform African countries' ability to address local challenges and contribute to global scientific and technological advancements.

The idea appeared simple yet profound:

- Create institutions that would serve as beacons of innovation, collaboration, and knowledge transfer,

harnessing the immense potential of Africa's intellectual capital.

- Develop African-grown solutions, by African Scientists to address Africa's developmental challenges
- Support advanced studies in science, technology and mathematics-related disciplines as a critical aspect of Africa's economic transformation.

Launched in 2014, the ACE initiative is a collaborative effort by African Governments, supported by the World Bank and other Funding Institutions with the conviction that Africa can and must drive global development.

Distinguished ladies and gentlemen, today, it is evident that the ACE project is a working model which is achieving strong results on the ground and supporting Africa's jobs & economic transformation agenda.

2.2 Statistics on the African Centres of Excellence (ACE)

Where are we now?

- More than eighty (80) African Centres of Excellence
- Over 50 participating universities
- Presence in 20 countries:
    - Nigeria – 19/17
    - Ghana – 9
    - Malawi – 6
    - Burkina Faso – 5
    - Senegal, Uganda, Rwanda, Ethiopia, Tanzania, Cote D'Ivoire – 4
    - Niger, Djibouti, Kenya, Togo, Benin – 3
    - Guinea, Mozambique, Zambia – 2
    - Cameroon, The Gambia - 1

3.0 SUCCESS STORIES – ACE Achievements and Impact

What have we achieved and what impact have we made over this past decade?

- ***Post-graduate expansion in critical fields***. The ACEs have enrolled over 90,000 students across Africa, including 7,650 PhDs and 30,200 Masters. More than

10,350 research outputs have been published and serving the region.

- ***Increase in female researchers and scientists.*** Currently, about one-third (about 32%) of all students enrolled at ACEs are female, as a result of a deliberate attempt to increase female enrolment.
- ***Meeting global benchmarks****:* 130 programs have obtained international accreditation, including programs in poultry science, crop seed science and technology, molecular cell biology of infectious diseases, and water supply and treatment technology.

- ***Improved linkages with industries and Communities***. There exist stronger collaborations among the Centres, industries, and communities.
- ***Improved teaching and learning environment***. Infrastructural facilities, including laboratories, teaching and learning equipment, and technologies in host institutions, have been upgraded to world-class standards.
- ***Cross-border Collaboration***. A key aspect of the ACEs is partnership and collaboration within the region and

globally, fostering greater impact.

- ***Development Impact***. Beyond statistics, the ACEs have directly improved people's lives, developing solutions and innovations that are tailored to Africa's and global challenges.
  - *In Ghana and Nigeria, genomics researchers played a key role in sequencing the COVID-19 and Ebola genomes, contributing to global efforts to combat these pandemics.*
  - *In Ghana and Kenya, agricultural biotechnology breakthroughs have led to the development of improved seeds, enhancing food security and the resilience of agricultural systems to environmental challenges.*
  - *In Senegal, cutting-edge medical training programs now enable complex surgeries, reducing reliance on overseas treatments and improving access to specialized care.*
  - *In Nigeria, Senegal, and Rwanda, the integration of artificial intelligence is preparing a new generation of professionals for the jobs of the future.*

- *In Tanzania, SACIDS Foundation for OneHealth at Sokoine University has developed a digital surveillance tool 'Afyadata' that allows health workers and others to serve as disease detectives.*
- *In Kenya, the incubation center at Moi University has successfully commercialized economic ways to generate energy and produce building materials from waste products.*

Ghana's ACE with a focus on the University of Ghana Success Story

Mr. President, distinguished ladies and gentlemen, Ghana hosts the second highest number of the African Centres of Excellence. Kindly permit me to highlight these flagship research centres and their contributions to the country, the region, and the world at large.

	ACE	**Host**	**Mandate**	**Impact**
1.	Africa Centre of Excellence for Coastal	University of Cape Coast	To train young African Scientists and	ACECoR has enrolled 160 PhD and 78

	Resilience (ACECoR)		professionals capable of developing integrated solutions to address coastal degradation in coastal countries on the continent	MPhil students from 20 African countries and graduated 105 PhD and 30 MPhil students from 16 African countries. ACECOR has also published 245 research articles in peer-reviewed journals, improved over 195 varieties of staple crops released

				in 7 countries, and raised over $37million in grants and partnership secured by its alumni.
2.	West African Centre for Water, Irrigation and Sustainable Agriculture (WACWISA)	University for Development Studies	To undertake cutting-edge research and training in irrigation, drainage, water resources management, sustainable agriculture,	WACWISA has enrolled 755 students including 248 female students and 266 students from the region; 90 research publications

			climate change, environmental sustainability, and food and nutrition security.	have been published in recognized scientific journals; 50 internships have been created between students and local organizations in the sector; and over $500,000 raised in external revenue.
3.	Regional Centre for	University of Energy and	Leading internationall	RCEES has enrolled 547

	Energy and Environmental Sustainability (RCEES)	Natural Resources	y accredited Centre of Excellence that provides quality research and postgraduate education in energy and environmental sustainability.	students, including 88 female students and 126 students from the region; 103 research publications have been published in recognized scientific journals; 71 internships have been created between students and local organizations

				in the sector; and over $800,000 raised in external revenue.
4	Regional Transport Training and Research Centre (TRECK)	Kwame Nkrumah University of Science and Technology, Kumasi (Ghana)	A leading hub for advancing applied research knowledge, developing and adapting innovative technologies, and technology transfer in transport, mobility and	TRECK has enrolled 300 students including 76 female students and 167 students from the region; 128 research publications have been published in recognized

			integrated logistics.	scientific journals; and over $550,000 have been raised in external revenue.
5.	KNUST Engineering Education Project (KEEP)	Kwame Nkrumah University of Science and Technology (KNUST)	To contribute to Ghana and the sub-region's industrial and digital revolution through excellence in engineering education and research and innovation to	KEEP has achieved the following under the ACE program: 383 students enrolled including 59 female students and 52 students from the region; 69

			serve industry and society.	internships created between students and local organizations in the sector; and over $800,000 raised in external revenue.
6.	West Africa Center for Cell Biology of Infectious Pathogens (WACCBIP)	University of Ghana	WACCBIP seeks to improve the diagnosis, prevention, and control of tropical	It successfully sequenced genomes of SARS-CoV-2 (COVID- 19 virus) and also tracked

			diseases in sub-Saharan Africa by providing advanced-level training and research excellence in cell and molecular biology	mutations of the virus leading to the discovery of the new variants in the respective host countries and the continent at large. Establishment of Yemaachi Biotechnology founded by Dr. Yaw Bediako, a WACCBIP faculty member. The

				flagship company aims to become Africa's biggest Cancer Biotech company. WACCBIP has enrolled 422 students, including 114 female students and 93 students from the region, 197 research

				publications published in recognized scientific journals, 17 internships created between students and local organizations in the sector, and over $78 million raised in external revenue. WACCBIP offers for the usage of its scientific

				technology platforms and high-end equipment. These include i) Flow Cytometry, ii) Next Generation Sequencing, iii) Protein Expression, iv) Advanced Microscopy and Imaging, v) High-Performance Computing, vi) Bioinformatics and data

				Management, and vii) Quality Management Systems.
7	West Africa Centre for Crop Improvement (WACCI)	University of Ghana	WACCI joined the ACE program in 2014 to train plant breeders in Africa working on the improvement of African crops in local environments for farmers.	WACCI has graduated 120 students in its PhD Plant Breeding programme and 110 students in the MPhil in Seed Science and Technology programme. To date, the

				Centre has graduated 117 PhD and 60 MPhil students from 15 African countries. The faculty and students have published over 260 publications in high-impact journals The Centre has also established

				the Kofi Annan Enterprise Hub for Agricultural Innovation (KAEHAI) Developed an improved variety (high-yielding and pest-resistant) of crops, including tomatoes, rice, cassava,

				groundnut, cowpeas and maize What WACCI staff are doing The Centre was recently selected as one of three key hubs for the Vision for Adapted Crops and Soils (VACS) Capacity Building Programme

8.	West African Genetic Medicine Centre (WAGMC),	University of Ghana	WAGMC is a World Bank Africa Centre of Excellence dedicated to genetic research, postgraduate training, and community outreach.	Launched the Ghanaian Genome (GhGenome) project in 2022 to engage key traditional leaders and media outlets across the country in a major public education and health screening focused on genetic disorders.

				Undertook the first population DNA sequencing project in Ghana and in sub-Sahara Africa as part of the GhGenome project. 675 children with sickle cell disease are having their entire genome sequenced. This is the first of such studies in

				Africa, and among the first in the world. In Education, WAGMC has developed and are offering the first graduate training programme in genetic counselling in sub-Sahara Africa, and the only genetic counselling programme in

				Africa to be internationally accredited. We also developed and offered the first genomics short course for allied health professionals in Ghana and Nigeria.
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4.0 RESEARCH AND INNOVATION AS A CATALYST FOR NATIONAL, REGIONAL AND GLOBAL DEVELOPMENT

Why is all of this important?

Research, as we know, plays a crucial role in development across various sectors of an economy, providing evidence-based insights that inform policies, drive innovation, social

change, capacity building and generally improve quality of life.

Research contributes to global and national development by providing critical insights which fuel economic growth through innovation, helping to create jobs and improve productivity.

We know of countries like South Korea, Germany, Singapore, the United States of America, Brazil and China which have leveraged research to drive their economies. In the narrative above, it is obvious that Africa is lagging.

Global Research Output

Data from Nature Index 2024 Research Leaders and the 2023 National Science Foundation indicate that:

- Asia: Contributes approximately 35% of global research output, with China rapidly increasing its share to 23%, surpassing the U.S. in recent years.
- North America: Accounts for about 30% of the world's total research publications, with the U.S. leading significantly.

- Europe: Comprises around 30% as well, with countries like Germany and the UK contributing heavily.
- Oceania: Represents about 3% of global research output, primarily from Australia.
- Africa: Contributes around 2% to 3%, with increasing efforts in health and agriculture research.
- South America: Accounts for about 4% of global output, with Brazil being the largest contributor in the region.

Africa's Research Landscape

According to the 2021 UNESCO Science Report, Africa contributes:

- 2.4% of global researchers
- 2.6% of global scientific output
- 0.45% of GDP spent on research and development.

Distinguished ladies and gentlemen, if we want to contribute significantly to the global agenda on the United Nations Sustainable Development Goals (SDGs) and the African Union's Agenda 2063, then these questions are critical:

- How much effort does Africa invest in research at the continental, national and institutional level?
- Do we put our money where our mouth lies?
- Are we using science to build the future we want?

5.0 THE WAY FORWARD -

So what is the way forward?

To sustain and scale up the impact of research in addressing regional and global issues, there is a need for:

- **Partnerships and Collaboration: The ACE DNA**

  No single university, ministry, or country can achieve this transformation alone. Recognizing the global knowledge economy's increasing importance, there is a need for cross-border collaboration, involving global institutions and the private sector as well.

- **Attracting and Retaining Top-Tier Global Researchers**

  There is a need to create a conducive environment and institute measures that would attract and retain the bright talent being developed on the continent.

- **Support from African Governments**

  Last but certainly most important, there is the need for political will, domestic financing, and policy support from African governments to enable the Centres of Excellence to operate at their optimum.

6.0 CALL TO ACTION – Sustaining and Scaling up the ACE

Your Excellency, President of the Republic, Honourable Ministers of Education and Finance across the continent here in gathered here, I have a passionate appeal to make - we as Africans, must begin to put our money where our mouth is. With recent developments in the West, it is becoming abundantly clear that we cannot continue to rely on external support.

We must, as a matter of urgency, plan and make sufficient budgetary allocations towards research and innovation to spur the desired growth and development on the continent.

7.0 CONCLUSION

As I conclude, I would like to re-iterate the need to leverage on the research outcomes of the ACEs to address global and continental challenges in areas such as energy, health systems, agriculture, digital development, and other priority sectors.

As Vice-Chancellor of the leading University in Ghana, I advocate that universities and research institutions must be considered as key players in national and global economies.

I end by reiterating the question asked by the 2021 UNESCO Science Report: "Are we using science to build the future we want?" I believe these few thoughts will set the tone for an even deeper reflection during the subsequent plenary and other sessions as we strive towards a more impactful decade ahead – a decade of boundless opportunities.

Me da mo ase, to wit, thank you for your attention.

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