



14th

AAU

General Conference

& Golden Jubilee

Celebrations

RAPPORTEUR

GENERAL'S REPORT



Contents

Opening Ceremony.....	4
Press Conference	10
PLENARY SESSION I: AAU Business Session I.....	12
Constitution of the 14th General Conference Bureau	12
Presentation of Secretary-General’s Report (2013-2017)	12
PLENARY SESSION II: Achievements, Challenges & Prospects of Higher Education in Africa	23
PLENARY SESSION III: Higher Education for Innovation, Employability & Entrepreneurship (Panel discussions).....	27
Sub-theme 1: Promoting Science, Technology and Innovation through Higher Education	27
Sub-theme 2: Curriculum Reform as Key to Graduate Employability and Entrepreneurship	28
PLENARY SESSION IV: Elements of Higher Education Sustainability	28
Sub-theme 3: The Role of Higher Education in Managing the Environment	30
Sub-theme 4: Higher Education as a Tool for Promoting Democratic Governance	31
Sub-theme 5: Mobilizing Resources for Higher Education in Africa	33
PARALLEL SESSION 1: Presentations on the Conference Subthemes.....	34
PLENARY SESSION V: Harmonisation in African Higher Education: The Contribution of the HAQAA Initiative.....	52
PLENARY SESSION VI: International Contributions to Higher Education in Africa.....	53
PLENARY SESSION VII: (Round Table Discussions): Management of Higher Education in Africa.....	56
Session I: Improving management of higher education institutions for quality, relevance and sustainability	56
Session II: Relevance of TVET for sustainable development in Africa	57
Launching of Higher Education Cluster.....	57
PLENARY SESSION VIII: Reports	60
SIDE EVENT: African Open Science Platform – Research Data Alliance Workshop, 7-8 June .	62
PLENARY SESSION IX: AAU Business Session II.....	63
Constitutional amendments and Bye-laws reviews for ratification	63
Ratification of New Admissions	64
Elections of the new Governing Board	65
PLENARY SESSION X: Closing Ceremony	65
Presentation of the Conference Communique	65

14th AAU General Conference & Golden Jubilee Celebrations Draft Rapporteur General's Report

BACKGROUND

1. The Association of African Universities (AAU) held its **14th General Conference** and marked its **Golden Jubilee Celebrations** on 4-8 June, 2017 at the La Palm Royal Beach Hotel in Accra, Ghana, under the theme *“AAU@50: Achievements, Challenges and Prospects for Sustainable Development in Africa”*.
2. The theme took up the view among many development players, policy makers, and relevant organisations that higher education must be centrally placed in the strategic development plans of African nations for a meaningful and sustainable economic development. For higher education to deliver on this developmental aspiration, it must prepare its graduates to effectively use new technologies, develop new tools and skills, as well as promote job creation capabilities and entrepreneurship. At the same time, higher education must nurture democratic governance and leadership skills to provide countries with talented graduates who can establish policy environments and practical frameworks favourable to environmental management and other developmental challenges in Africa.
3. The reality against which the Conference theme was designed had many strands. For instance, there was the paradox of the gross tertiary enrolment ratio for Sub-Saharan Africa remaining the world's lowest, even though African higher education has recorded unparalleled expansion in the last decade. Also, resources (especially qualified faculty and infrastructure for teaching, research and innovation) continued to diminish in the face of this numerical expansion, putting further strains on access and quality. Lastly, questions were increasingly being raised about the employability of Africa's higher education graduates.
4. Given this reality, there was a high potential that the capacity of Africa's higher education to supply key drivers for development (allocative and technical efficiency, research and innovation, and export competitiveness) on the continent, would be compromised. To deliberate, harvest evidence, and proffer actions around the context and the theme of the Conference, AAU designed the following five key sub-themes:
 - A. Promoting science, technology and innovation through higher education
 - B. Curriculum reform as key to graduate employability and entrepreneurship
 - C. The role of higher education in managing the environment

- D. Higher education as a tool for promoting democratic governance
- E. Mobilising resources for higher education in Africa.

5. These sub-themes were addressed over four days in 10 plenary sessions and two parallel sessions with 25 paper submissions.

Opening Ceremony

6. **The Conference commenced with a warm welcome** to participants from across the length and breadth of Africa, Europe, Americas, Asia and beyond, by the AAU Secretary General, Professor Etienne Ehouan Ehile and the AAU Governing Board President, Professor Olusola Oyewole.
7. Professor Ehile outlined the history, role and impact of AAU over the last 50 years. Founded on 12 November, 1967 in Rabat, Morocco by 34 of the then existing 46 higher education institutions in Africa, AAU today has a membership of 386 African Higher Education Institutions (HEIs) from 46 countries in Africa and one outside Africa. AAU has lived in Ghana for 47 out of its 50 years of existence. During this period, it has benefited tremendously from the benevolence of the Government and People of the Republic of Ghana. The latest of this benevolence are the investments made towards the construction of the new ultra-modern AAU Secretariat which was officially opened on 6 January, 2017. Professor Jane Naana Opoku-Agyemang, who was then the Minister of Education in Ghana, played a significant role towards the project coming to fruition.
8. As the apex organization and principal forum for consultation, exchange of information and co-operation, AAU represents the voice of Higher Education in Africa. It supports networking to improve the quality of teaching, research, information exchange and collaboration among African HEIs and with external stakeholders. AAU aligns itself with the continental educational policies such as the African Union's (AU) global *Agenda 2063*, the *Continental Education Strategy for Africa (CESA 16-25)*, the *Science Technology and Innovation Strategy for Africa (STISA 2024)*, the *Comprehensive ICT Strategy for Africa* and the *Technical, Vocational Education and Training (TVET) Strategy for Africa*. And, it subscribes to the *Global 2030 Sustainable Development Goals Agenda*.
9. AAU has worked with several development partners all over the world for capacity building, research, and collaboration. For instance, it worked with the World Bank to strengthen 22 Africa Centres of Excellence (ACEs) in West and Central Africa; and with the African Union Commission (AUC) to develop the Pan African Quality Assurance and Accreditation Framework (PAQAF) and the associated African

Quality Rating Mechanism (AQRM). It has also partnered with the European Union to strengthen Quality Assurance and Harmonization of the diverse higher education systems in Africa. Along the way, AAU has become the Regional Implementing Unit for the Partnership for Skills in Applied Science, Engineering and Technology (PASET) Regional Scholarship and Innovation Fund, to which African Governments will commit resources for the training of 10,000 PhDs. So far, the Governments of Senegal, Ethiopia, Rwanda and Kenya have pledged to commit a total of US\$8million towards this Fund.

10. Professor Ehile concluded by emphasising that the Golden Jubilee Celebrations and the Conference should provide the opportunity for members to reflect on where AAU has come from and where it is going.
11. Professor Oyewole thanked participants for coming. He noted that the goal of the founding members, was to improve the quality and relevance of higher education and strengthen its contribution to Africa's development. This was to be achieved by: fostering collaboration among members; supporting the core functions of teaching, learning, research and community engagement; and facilitating critical reflection on, and consensus building around, issues affecting higher education and the development of Africa. He reiterated that those objectives are still relevant today. In this light, AAU as the voice of higher education in Africa has the daunting task to always ensure that African higher education produces educational delivery that is relevant, innovative and learner-centred; high quality graduates that are ready for the labour market; and ground-breaking research that addresses societal challenges.
12. Professor Oyewole invited participants to use the platform of the Conference to share experiences, discuss and learn from one another, as well as know of relevant best practices. In all this, greater attention should go to strengthening industry linkages with the academia for mutual benefits and for promoting graduate employability.

Goodwill messages were received from several bodies:

13. Government of Gambia, represented by Hon. Dr. Badara Joof, Minister of Higher Education, Research, Science and Technology. Dr Joof appreciated the role of Ghana in its return to constitutional rule. Drawing on a quote from Ghana's first President, Dr. Kwame Nkrumah, that "the independence of Ghana is meaningless without the total liberation of the African continent", he stated that African higher education is meaningless without freedom from corruption, liberation skills, revitalisation of agriculture, freedom from poverty, and development of peace and human rights.

He urged African youth to desist from embarking on the treacherous journeys across the Sahara and the Mediterranean seeking “gold” in Europe and elsewhere, when they can find such green pastures in Africa.

14. Government of Sudan, represented by Minister for Higher Education and Scientific Research, Hon. Professor Eltigani Mustafa Mohamed Salih. Professor Salih challenged African governments to work together to mitigate poverty, and support researches to find solution to Africa’s development problems. African universities must collaborate and seek strategic partnerships to enhance education. Sudan Government has developed some strategies to enhance science and education, and has pledged 50 scholarships to contribute to AAU’s educational fund.
15. Education Sub-Saharan Africa (ESSA), represented by Dr Olaf Hahn, Senior Vice President/Director. Considering the dire situation with faculty in African universities, Dr Hahn said the commitment of African Governments to train 10,000 PhDs from the PASET Fund is not ambitious enough. Much more is required to leverage the importance of university education. He wished AAU well into the future.
16. African Capacity Building Foundation (ACBF), represented by Dr. Folasade Ayonrinde who stood in for Professor Emmanuel Nnadozie, Executive Secretary. ACBF is pleased to sustain its engagement with AAU, and pledged its continued support in the areas of research, community service and revitalization of Africa’s higher education generally. The Foundation would continue with its investment because it recognises that capacity is vital for solving Africa’s numerous challenges.
17. African Development Bank (AfDB), represented by Dr Patience Ugonma Ekoh, Senior Education Analyst. Dr Ekoh commended AAU for its contribution towards building human capital to address Africa’s challenges. Twenty-one per cent of AfDB’s education investment has gone to higher education and the Bank continues to recognise intervention in higher education as a priority.
18. European Commission, represented by Ms. Deidre Lennan, Directorate-General for Education, Youth and Culture. The Commission has been actively involved in Africa since 2009 and will continue to support efforts at enhancing higher education on the continent. AAU remains a reliable partner.
19. European University Association (EUC), represented by Ms. Elizabeth Colucci, Education Policy Adviser. EUC has contributed to the efforts of AAU since 2010, and expressed support toward a successful Conference.

20. Association of Commonwealth Universities (ACU), represented by Dr John Kirkland, Deputy Secretary General. If it's any consolation, ACU is still grappling with challenges facing higher education in the Commonwealth even after 104 years in existence. AAU should take the opportunity of its Golden Jubilee Celebrations to reflect on its achievements and brace up for the next 50 years.
21. UK Department for International Development (DfID), represented by Dr Joseph Hoffman. DfID has collaborated with AAU since 1989. Only the achievements of member Universities can make the achievement of AAU possible. Dr Hoffman urged the universities to consider first year students in their respective universities as future leaders and to reflect on the kind of foundation needed to equip these students for the future of Africa.
22. In the **Golden Jubilee Addresses**, AUC, represented by Dr Beatrice Njenga, Head of Education, informed the participants about its intervention in higher education in Africa. All the nine elements of this intervention converge around spearheading the development and harmonization of education policies and programmes on the continent, towards achieving the AU vision of prosperity, peace and integration. The policies and programmes are designed to revitalize research, nurture quality, and exemplify excellence so that African higher education can become more attractive, globally competitive and relevant to Africa's need. AUC acknowledged that AAU has been a critical ally.
23. The European Union (EU) Ambassador to Ghana, His Excellency William Hanna, informed the participants about the Union's scholarship programmes in Europe every year for African staff and students. For instance, about 1000 Ghanaians have benefitted from these programmes. The Erasmus Mundus programme, in particular, funds mobility as well as informal education to build civic skills, entrepreneurship, and critical thinking. He assured AAU of EU's ongoing partnership and willingness to engage and to share ideas for the promotion of higher education in Africa.
24. Professor Is-haq Olanrewaju Oloyede (former AAU President and currently Registrar/Chief Executive, Joint Admissions and Matriculation Board, Nigeria) delivered the Golden Jubilee lecture, titled "The Contributions of AAU to the development of Higher Education in Africa - From Early Independence to the Present". He noted, early on in the lecture, that AAU is waiting to enjoy its moment of criticism, critical scholarship and fame from both the social sciences and the humanities research perspectives, considering its enormous achievements in Africa's higher education space in the last 50 years.

25. He also noted that the AAU Golden Jubilee Celebration, like every celebration of an anniversary, was a stark reminder that those who have come a long way would always discover they have a long way to go. Therefore, AAU needs to be aware of its position in-between the world of imagination from which it was birthed and the world of reality in which it is situated. AAU, like other associations, would be held in the jugular by the gravity of history and the historical or by the reality of existence and the existential.
26. In what he characterized as 'Education: An Obstructive Catalyst to African Development', Professor Oloyede argued that Africa will certainly move further if it can develop African science and technology, medicine and social science in such a way that it will not be so dependent in virtually every sphere of life, as exemplified in the construction of the AU Secretariat. He called for African solutions to African problems, involving African governments not just busy spending money but actually investing sufficiently in higher education. Here, there is a large scope for AAU to continue to play a mobilising role.
27. Arguably, Africa has a long history of higher education, stretching back to the establishment of al-Qayrawan University by Fatima al-Fihri in Fez, Morocco in 859 CE (probably the first of such to be known to the world), al-Azhar University in Cairo, Egypt (970-972) and the Sankore University in Mali (989). Today, higher education in Africa has generally witnessed a surge, with increasing number of students leading to overcrowded classrooms. However, only 6 per cent of young people in sub-Saharan Africa are enrolled in HEIs compared to the global average of 26 per cent. Thus, participation rate remains an issue, along with other issues like: how to 'Africanize African Universities' without paying close attention to the politics and discourse of cultural hegemony and homogeneity; how to sustain African universities' identities in the global world without meshing those identities into the global stream at a time academic freedom and institutional autonomy are contending for attention; and how to recover responsible governance in the continent that can develop universities as cultural 'capitals' of their host societies, as Africa's post-independence leaders did.
28. By way of achievements, AAU has done a lot to be commended in line with its mandate. In the 1970s, it published a *Handbook on Academic Freedom and University Autonomy* and the *Code of Conduct for Academics* which have proved impactful in changing the pattern or direction of minimising government control of higher education in Africa. The AAU's internship programme has become a source of pride and highly successful. AAU promoted staff exchange among various institutions, in line with its regional integration and staff mobility initiatives. Thirteen of such exchange missions, involving local and international high-level professionals/faculty, were successfully undertaken. Perhaps one of the major

indirect contributions of AAU to African education is the establishment of U6 Initiative for African Development which is unique in partnership among African Universities.

29. Professor Oloyede branded Ghana as “The Champion of Champions of the AAU” to acknowledge the role of Ghana in the acceleration of education in Africa through its unquantifiable support for AAU and Higher Education in Africa. This role is unique and a model in commitment, integrity and honour. Without the extraordinary support of Ghana, symbolised by the interventions of many of its past Presidents and the presence of the current President, His Excellency Nana Addo Dankwa Akufo-Addo at the conference, AAU would not have achieved much.
30. AAU, blessed with its own dedicated leaders and guided by clearly articulated Strategic Plans, has become a magnificent structure that provides a veritable platform for research, reflection, consultation, debates, co-operation and collaboration on issues pertaining to higher education in Africa.
31. AAU needs to strengthen her performance in some critical areas including: building more intra-African universities collaborations in teaching, research and publication; preventing politicization of the establishment of universities that have little regard for quality requirements; making African universities ‘developmental universities’ which may mean unbundling conventional universities for new universities to emerge with a greater degree of specializations in critical sectors of African life; and encouraging big international corporations to partner with African universities for new infrastructures and cutting edge research on the continent, beyond their corporate social responsibility scholarships.
32. Refocusing African higher education along the mantra, “each gives what he has” rather than copying others, is another challenge that AAU must confront. African universities should research, develop and make global indigenous products of Africa, such as herbal medicine, traditional sports, music and banking. Intensifying the advocacy for good governance under which African intellectuals and professionals in diaspora can come back to make such educational innovations thrive, is another dimension of this challenge. Furthermore, AAU needs to leverage the diversities in the continent, with focus on the use of local resources and gender friendliness, to become better at realizing its mandate.
33. **The Opening Ceremony was concluded by the Official Opening** where His Excellency Nana Dankwa Akufo-Addo, President of the Republic of Ghana, honoured the Celebrations by his presence and declared the Conference open. In his address, he:

- a. challenged the AAU to work on a central repository for its collective achievements, as a higher education community in Africa, from which it can showcase its contributions to the development of Africa;
 - b. pleaded with the AAU and its members to engage more with the private sector, governments and development agencies at all levels, including appointment of the representatives of these external bodies on university advisory boards; and
 - c. encouraged Africa's higher education institutions to continue to place emphasis on youth development, inclusive and equitable education, good governance and accountability in education management.
34. The Session was brought to a close by the cutting of the Golden Jubilee cake and group photographs.

Press Conference

35. The AAU Governing Board held a press conference to brief the media about the 14th General Conference and the Golden Jubilee Celebrations. Media outlets, including the University World News, Voice of America -Africa, and Nairobi GP, were present.
36. Professor Olusola Oyewole (AAU President), commenced the briefing by outlining the history and programmes of AAU. He emphasised the achievements of AAU over the last 50 years, noting that its programmes on university staff training, mobility, harmonisation of curricula and credit systems, the leadership and management workshops, and the promotion of the African Centers of Excellence, have all improved higher education in Africa. "African higher education", he said, "is where it is today because of what AAU has done". He noted that AAU looks forward to doing more; and then opened the briefing for questions.
37. Media questions revolved around AAU's role in issues of harmonisation, publication of journals in African universities, research in STI, duplication of projects by development partners, and gender mainstreaming.
38. The point was made that AAU is key to fostering a common vision and lifting higher education in Africa. Since integration is an element in AU's vision, it was necessary to work on harmonisation through the Tuning Project. Over 200 universities in Africa are participating in the Project. This would help to enhance transferability among faculty and students on the continent.

39. Embedded in the harmonisation initiative is the development of a quality rating mechanism. This is given specific focus in the Harmonisation of African Higher Education Quality Assurance and Accreditation (HAQAA) Initiative (2016 – 2019), being funded by the EUC.
40. The establishment of the Pan African University is evidence that the continent is travelling well on the integration journey. It also contributes to the building of a common accreditation framework. African Governments are urged to sign the Addis Ababa Convention to facilitate this journey towards the common ground. AAU is a coordinating agency in all these initiatives.
41. AAU does not publish any journal at this stage. However, it publishes a Newsletter which is one of the vehicles for disseminating information to members and the wider world. Regarding the low STI research and publications, some actions can help. Good governance, starting the campaign from the primary school level, getting the multinationals to invest their research and development funds in Africa, African Governments doing more to stop the brain drain from among the 25 per cent that take to STI studies, and collective fight against corruption, would take the continent a long way in the right direction. An innovative strategy is for Africa to leap-frog through setting up a well-resourced science village (as China has done) and bringing top scientists from all over the world to nurture STI on the continent.
42. Other matters, such as gender mainstreaming, are being addressed through some issue-specific policy frameworks. For instance, AU has strategies to encourage female students to go into STI disciplines. Appointment and promotion exercises in universities are being sensitised to address gender balancing.
43. Professor Oyewole thanked all those who turned for the media briefing and declared the session close.

PLENARY SESSION I: AAU Business Session I

Session Chair: Professor Olusola Oyewole, AAU President.

Constitution of the 14th General Conference Bureau

44. The Conference constituted the Conference Bureau Committee, comprising:

Professor Oyewole OLUSOLA (AAU President)	Chairperson
Professor Orlando QUILAMBO (Vice President, AAU)	Dep Chair
Professor Etienne EHILE (Secretary-General, AAU)	Member
Professor Ddumba SSENTAMU (Eastern Africa)	Member
Dr. Osei K. DARKWA (Chair, Private Univ. Assoc, Ghana)	Member
Professor Jonathan Chuks MBA (Chairperson of AAU Organising Committee)	Member
Professor Paul OMAJI (Rapporteur General)	Member

Adoption of Conference Programme

46. The Draft 14th Conference Programme was adopted without amendment.

Announcement of Nominations to the Board

47. Under this Programme item, the Conference constituted the 14th General Conference Elections Committee, comprising:

Prof. Karrar Ahmed Bashir ELABBADI (AAU Vice President)	Chair
Prof. D D KUUPOLE (Board member, AAU)	Vice Chair
Prof. Tolly MBWETE (Eastern Afr. Rep)	Member
Prof. Comfort EKPO (Western Afr. Rep)	Member
Prof. Amvam ZOLLO (Central Afr Rep)	Member
Prof. Hester Catharina KLOPPER (Southern Afr. Rep)	Member
Prof. Etienne EHILE (Secretary-General, AAU)	Member
Ms Nodumo DHLAMINI	Rapporteur

Presentation of Secretary-General's Report (2013-2017)

48. Professor Ehile (Secretary-General, AAU) presented a report on behalf of the Board, detailing how AAU discharged its statutory functions since 2013. He started by informing the participants about the death of some colleagues: Prof Russel Botman, VC of Stellenbosch & Vice President of AAU Board (June, 2014); Prof Alexander

Kwapong, first African VC of Univ. of Ghana, & founding members of AAU (October, 2014); Prof Lindela Ndlovo, VC of National University of Science and Technology, Zimbabwe & AAU Board member (Nov. 2015); and Prof. Primrose Kurasha, Vice Chancellor of the Zimbabwe Open University (Feb. 2017). He also mentioned the devastating effect of Ebola in 3 West African countries (Guinea, Liberia and Sierra Leone) and, to a lesser extent, in Nigeria, Senegal and Mali.

13th General Conference

49. The Conference was held in Libreville, Gabon (May 28-31, 2013) on the theme: *“Transforming African Higher Education for Graduate Employability and Socio-Economic Development”*. This theme was examined under five sub-themes: the Connect between Higher Education and the Productive Sector; Graduate Employability; the Role of the Organised Private Sector; Socio-political Environment and Employability; and Funding Issues.

50. The Conference ratified 22 Full Members and 14 Associate Members that the Governing Board had admitted since the Conference of Rectors, Vice Chancellors, and Presidents (COREVIP) 2011. AAU’s Constitution and Bye-Laws were amended to provide for the legal personality of the Association, co-option of Immediate Past President to the Board, the President not to be elected from the country of the current Secretary-General, and the admission of South Sudan as an Independent Country. The Conference also approved AAU’s Core Programme (2013-2017); and the election of new Board comprising the President, 3 Vice-Presidents, Members of the Governing Board, and co-option of outgoing President (2009 – 2013).

COREVIP 2015

51. The Conference was held in Kigali, Rwanda (June 2-5, 2015), on the theme: *“Internationalisation of Higher Education in Africa”*. This theme was examined under five sub-themes: Harmonisation and Quality; Mobility and Transferability of Credits; New Modes of Teaching and Learning; Curriculum Relevance and Employability; and Emerging Centres of Excellence in Africa.

52. The Conference issued a communique which, among other things, urged AAU to develop strategies to reach North African Universities and to focus on programmes not receiving desired attention to facilitate spread across the Continent. Further, AAU was to encourage national governments to carry out a safety audit of African HEIs; and to undertake as strong advocacy on political actors to facilitate harmonisation in Africa.

Meetings of the Board

53. During the 2013-2017 period, there were four regular Board meetings and three Executive Committee meetings. These meetings addressed key issues, including: the finalisation of the 3rd AAU Strategic Plan; admission of 32 Full Members and 12 Associate Members; recommendations on AAU finances and programme implementation; and the planning of Golden Jubilee celebrations.

Golden Jubilee Launch

54. The Golden Jubilee was officially launched at La Palm Royal Beach Hotel, Accra, Ghana on 10 November, 2016, by Hon. Professor Naana Opoku-Agyemang, then Minister of Education of Ghana. It was decided that the theme would be *AAU@50: Achievements, Challenges & Prospects for Sustainable Development in Africa*; and the celebrations would be co-hosted by the Government of Ghana, National Council for Tertiary Education and Vice Chancellors in Ghana. It was also agreed that AAU anthem be developed.

55. As a prelude to the Golden Jubilee Celebrations and the 14th General Conference, a two-day pre-Conference event, captioned *African Research and Innovation Summit*, was held at the AAU Secretariat from June 1-2, 2017. Over 350 graduate students met with academics, industry players and policy makers for mentoring. The event was financed by ADEA/WGHE; Global Wings Travel & Tours, Clarivate Analytics (formerly Thomsen Reuters), Voltic Mineral Water and IFP Ghana Alumni.

African University Day Celebrations

56. AAU organized African University Day Celebrations during the reporting period under relevant themes: 2013 - Changing Higher Education Landscape in Africa: Highlighting Success Stories; 2014 - How Can African Universities Enhance Capacity for Job Creation?; 2015 - Internationalization of Higher Education; and 2016 - Entrepreneurial Learning & Communities of Practice.

The AAU Secretariat issues

57. The Secretariat was highly engaged with the development of the 3rd Strategic Plan (2016 - 2020), initiation of Constitutional Amendments, and the implementation of the Core Programme (2013 - 2017).

58. There was high turnover of Senior Staff (nine professional staff left) due, mainly, to the fact that their funded projects came to an end. On the other hand, the Secretariat made three new full-time appointments, along with some yearly recruitment of interns.

Relocation of the AAU Secretariat and Progress on Secretary General’s Residence

59. The Secretariat relocated to its new ultra-modern permanent building at East Legon, which was wholly funded at the cost of \$3.9 million by the Government of Republic of Ghana through the Ghana Education Trust Fund (GETFUND). With pictorial slices, Professor Ehile showed that the building took 24 months from commencement until it was officially inaugurated on the 6th January 2017 by former President of Ghana, His Excellency John Dramani Mahama. The old building is being refurbished for handing over to the Ministry of Education; and the new building needs additional office infrastructure.

60. Work on six-bedroom one-storey Secretary-General’s residence is on-going - about 80 per cent of the physical structure complete. It is located just behind the new Secretariat, and is a project also wholly funded at the cost of \$475,000 by the Government of Republic of Ghana.

61. Professor Ehile expressed profound gratitude to the Government of Ghana and appreciation to the Governing Board for their support and guidance during this period.

Programmes implementation

62. Various activities were undertaken under Core Programme, going by the Sub-themes and their corresponding programme areas as outlined in the following table:

Sub-Theme	Programme Areas
<p><u>Sub-Theme 1</u> Strengthening HEIs’ Delivery Capacity in Africa</p>	<ul style="list-style-type: none"> • Enhancing Leadership & Management Capacity in African HEIs. • Improving ICT Infrastructure and Capacity for Knowledge Management • Improving Quality Assurance in African HEIs

	<ul style="list-style-type: none"> • Promoting the African Centres of Excellence
<u>Sub-Theme 2</u> Promoting Knowledge Generation and Management	<ul style="list-style-type: none"> • Improving Research Governance in African HEIs • Supporting Policy Relevant Research • Facilitating Academic Staff Mobility (Twinning African HEIs) • Promoting Scholarships for Doctoral Studies for Staff Development in African HEIs • Increasing Access to African Scholarly Work
<u>Sub-Theme 3</u> Promoting the Socio-Economic Relevance of the African University	<ul style="list-style-type: none"> • Strengthening University-Industry Linkages • Developing the Employable African Graduate • Promoting Human Health: Managing HIV & Other STIs in African HEIs and their communities • Promoting Sustainable Development in Africa • African Universities as Grounds for Peace and Peace-Building
<u>Sub-Theme 4</u> Networking, Strategic Alliances, and Funding Issues	<ul style="list-style-type: none"> • Collaboration among African HEIs and between AAU and African Sub-Regional HE Associations • Diaspora and Alumni Relations
<u>Sub-Theme 5</u> Special Issues and Emerging Opportunities	<ul style="list-style-type: none"> • New Initiatives that cannot be accommodated under <i>Themes 1 - 4</i>

63. The costs of some of the programmes' elements that were implemented were met from the funding by AAU partners, including:

- Africa Centres of Excellence (2014-2018) - US\$ 4 million; funded by the World Bank
- Research Cooperation between Swedish International Development Cooperation Agency (SIDA) & AAU (Dec 2013 - Dec 2017) - US \$2 million; funded by SIDA
- Capacity Development Project for the Revitalization of Higher Education Institutions-Phase II (Dec 2012 - Dec 2016) - USD3,500,000; funded (ACBF)

- ECOWAS Nnamdi Azikiwe Academic Mobility Scheme (ENAAMS) (2015-2018) - US\$ 4.6 million; funded by ECOWAS
- Partnership for Skills in Applied Science, Engineering & Technology (PASET) (2016-2017) - US\$150,000; funded by African Governments
- Working Group on Higher Education (WGHE) (2016-2017) - US\$100,000 per annum; funded by the ADEA
- Harmonisation of African Higher Education Quality Assurance and Accreditation (HAQAA) Initiative (2016 - 2019); funded by the EUC.

64. Professor Ehile highlighted some milestones in the implementation of the core and new in-house programmes, as follows:

- Leadership Development Workshops (LEDEV): target - 120 participants, actual - 135 participants.
- Graduate Internships (2014-2016): target - 90 beneficiaries, actual: 167 beneficiaries.
- University Advancement Workshop series - run in collaboration with Stellenbosch University
- Basic Higher Education Teaching Skills - run to upgrade the teaching skills of university staff both in the classroom and through distance delivery
- Social Media workshop series
- University-Industry workshop series
- Training Workshops organized July 2016-May 2017:

Name of Workshop	Country Organised	Females	Males	Total Participants
Basic Higher Education Teaching Skills Course	Ghana and Zimbabwe	28	64	92
Leadership Development (LEDEV)	Ghana	3	21	24
University Industry Linkages	Zambia, Mauritius and Nigeria	16	39	55
University Advancement	Uganda, Ghana and Zimbabwe	9	45	54
Social Media Seminars	Swaziland and Burkina Faso	14	15	29

E-learning Seminars	Ghana	3	12	15
TOTAL		73	196	269

65. Webinar series – 10 webinars facilitated by eminent resource persons have been held from August 2016 to date, in collaboration with ADEA’s WGHE. This was an innovative approach to reach out to the public on different thematic issues. The Series was publicised online at: <https://www.aau.org/webinars/stream.html>; and each webinar attracted at least 40 live listeners. The Series has also attracted funding from Carnegie Foundation through Trust Africa. The themes of the webinars were:
- i. Revitalizing research and innovation to address continental challenges and promote global competitiveness in Africa.
 - ii. Promoting quality assurance through harmonization and accreditation in Africa.
 - iii. Promoting Peace Education and Conflict Prevention and Resolution In African Universities.
 - iv. Promoting Entrepreneurship in African Universities.
 - v. The Role of Women in Fighting Against Climate Change.
 - vi. Financing Model for African Higher Education.
 - vii. TVET Strategy for African Technical Universities.
 - viii. Promoting High Quality Open Access Journals in African Higher Education.
 - ix. Strategic Fundraising for African Higher Education.
 - x. Système Informel D’enseignement et de Formation Techniques et Professionnels: Leçons pour doter L’Afrique de Compétences.

AAU Communication Services

66. The following AAU websites were redesigned and launched:

- Main AAU Website: <https://www.aau.org/>
- Blog: <http://blog.aau.org/>
- Events: <http://events.aau.org/>
- HAQAA: <https://haqaa.aau.org/>
- AFRIQAN: <https://afrigan.aau.org/>
- ENAAMS: <https://ams.aau.org/>
- Online Forums: <https://forum.aau.org/>
- AAU produced 54 weekly issue of its Newsletter
- The Academy of Science of South Africa (ASSAF) provided the Database of African Theses and Dissertations (DATAD) platform with a more reliable hosting venue and also upgraded the system to include Research Articles. The URL is: <http://datad.aau.org/>

67. A number of Computerized Systems were developed:

- Online Applications and Online Reviews for Small Grants, Graduate Internships, and ENAAMS
- Membership Applications
- PASET Regional Scholarship & Innovation Fund Application
- 14th General Conference Registration System
- 14th General Conference Papers Submission and Review
- HAQAA Initiative Systems

Memoranda of Understanding (MoUs) signed

68. AAU signed a number of MOUs with partners to define frameworks for its operations:

- ADEA to host WGHE
- Blue Crest College, Ghana
- Government of Senegal (acting on behalf of the PASET Steering Committee)
- West and Central African Research and Education Network
- Association of African Higher Education Financing Agencies - represented by the Students Loan Trust Fund of Ghana
- African Union Commission in Dec. 2016 with focus on attainment of Agenda 2063 through its frameworks: STISA (2024), CESA (16-25), and Continental Strategy on TVET
- eLearnAfrica
- Education Sub Saharan Africa (ESSA)
- CABI International - to promote co-operation in open access development

Funding

69. AAU funding came mainly from membership subscriptions and grants

70. Membership increased from 268 in 2012 to 386 as at May 2017, meaning AAU gained 122 new members. The regional spread of the total membership of 386 was as follows:

Region	Number of Institutions
West Africa	133
Eastern Africa	101
Southern Africa	71

Region	Number of Institutions
Northern Africa	49
Central Africa	31
Outside Africa*	1
TOTAL	386

*Gulf Medical University, United Arab Emirates

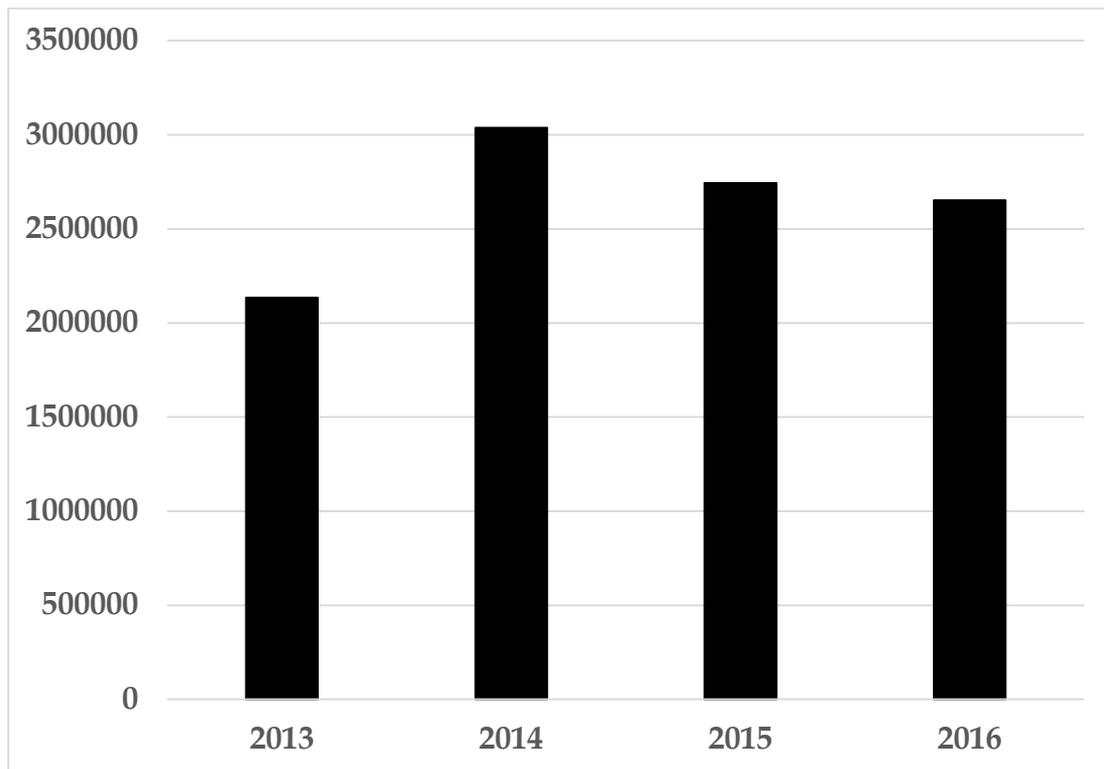
71. Subscription Payment Trends, 2005/6 – 2015/6, were as follows:

Year	Total Members	Expected receipts (US\$)	Actual receipts (US\$)	Variance (US\$)	Average receipt (US\$)
2005/6	193	585,000	442,583	142,417	2,293
2006/7	205	585,000	378,267	206,733	1,845
2007/8	213	597,000	405,275	191,725	1,902
2008/9	217	612,000	618,955	-6,955	2,852
2009/10	250	624,000	480,177	143,823	1,902
2010/11	263	645,000	694,503	-49,503	2,641
2011/12	268	658,000	522,801	135,199	1,951
2012/13	280	691,000	637,839	53,161	2,278
2013/14	293	712,000	568,649	143,351	1,941
2014/15	320	790,000	611,675	178,325	1,911
2015/16	377	1,091,000	445,889	645,111	1,183
Total		7,590,000	5,806,613	1,783,387	2,064

72. Subscription arrears from all the regions stood at a total of **US\$ 3,212,500** as of May, 2017: Northern Africa - US\$1,221,000; Western Africa - US\$ 951,000; Eastern Africa - US\$ 470,500; Southern Africa - US\$ 347,000; and Central Africa - US\$ 221,000.

73. Grants received, 2013 – 2016 (US\$), were as follows:

a. Figure 1: Grants Received, 2013 – 2016 (US\$)



AAU Strategic Plan, 2016-2025

74. Professor Ehile reported that the *AAU Strategic Plan 2016-2025* was developed after a careful review of AAU strengths and challenges.

75. Strengths:

- Continental association with membership across five regions of Africa;
- International recognition as the continental voice for higher education in Africa;
- Credibility with international development partners, ECOWAS Commission, African Union, European Union Commission and World Bank;
- Demand by member institutions for AAU programmes /expertise in many academic areas and governance;
- Institutional capacity for programme development and management;
- Competent, quality, dedicated and experienced Secretariat staff,

- Functional governance structures;
- Good financial reporting systems.

76. Challenges:

- Weak management information systems for monitoring performance of HEIs and education targets in CESA 16-25;
- Weak systems for knowledge sharing and application among HEIs themselves; and among HEIs and industry;
- Weak linkages between HEIs and other levels of education, eg TVET institutions, secondary and primary levels;
- Security risks posed by implementing programmes in fragile states
- Limited support from governments and industry in local resource mobilisation to pursue HE agenda;
- Relatively weak financial resource base;
- Over-reliance on external grants and membership dues as primary sources of funding;
- Weak links with Africans in the Diaspora.

77. All the earmarked programmes for the Plan have been placed within a Logframe of seven Key Results Areas (KRA) under three Strategic Goals, as follows:

Strategic Goal 1: Building capacity within member institutions

- KRA 1: Strengthening HEIs' Delivery Capacity in Africa
- KRA 2: Knowledge Generation, Management and Dissemination

Strategic Goal 2: Building capacity of member institutions to meet more broad societal needs

- KRA 3: Supporting HEIs' Respond to Local and Regional Needs
- KRA 4: Engaging with African and International Partners in Development for Improved Collaboration
- KRA 5: Promoting HEIs Engagement in Communities

Strategic Goal 3: Organisational matters specific to AAU

- KRA 6: Strengthening Capacity for Service Delivery at the AAU Secretariat
- KRA 7: Improving AAU Membership Size, Quality and Commitment.

78. The Plan is subject to mid-term review in 2018, and its implementation is predicated on some essential considerations around the existing AAU Flagship Training Workshops and projects, including:

- LEDEV/LEDEV+
- MADEV/MADEV+
- UNIVAD
- UNIV-INDUSTRY LINKAGES
- DATAD
- ACE
- QA

- Academic Mobility (such as ENAAMS)
- PASET-RSIF.

79. Professor Ehile concluded the report by highlighting some actions that are crucial for going forward with the AAU Programmes. Given that the financial situation is dire, there is need for:

- increased membership subscription;
- increased subvention from African Governments and the African Union;
- increased collaboration between AAU and sister regional organisations in Africa;
- increased collaboration between AAU and other development partners; and
- diversified funding sources for AAU programmes.

80. Participants commended AAU for the significant achievements and its sterling accountability. Regarding funding, AAU would do well to strategically partner with more corporate bodies that have money; and to pursue membership subscriptions, especially the arrears that stood at US\$ 3,212,500 as of May 2017. Vice Chancellors should be encouraged to build the subscriptions into their budgets. Similarly, AUC should urge the Governments of AU member states to contribute to AAU.

PLENARY SESSION II: Achievements, Challenges & Prospects of Higher Education in Africa

Session Chair: Professor Tolly Mbwette (Member, AAU Board), in the absence of Professor Akilagpa Sawyerr (former Secretary-General, AAU) who was originally scheduled to chair.

Higher Education Situation in Senegal

81. Professor Mary Teuw Niane, Minister of Higher Education and Scientific Research of Senegal, who was to present this paper was absent.

Higher Education in Africa and Prospects for Sustainable Development through Continental Education Strategies

82. Dr. Patience Ugonma Ekoh, Senior Education Analyst, AfDB, outlined six key issues confronting higher education in Africa, the continental education strategies developed to address them, and AfDB's response within its "high 5's agenda" to support the revamping of the higher education for the continent. Regarding the issues, there is the population of 2.3 billion people mostly youths projected for 2050. These will be the continent's greatest asset or risk, depending on whether they are

harnessed and channelled to the productive sectors of the economy or neglected and lost to the world of social disorder.

83. Also, higher education, the key vehicle to channelling the youth into the human capital needed for development, is faced with inadequate investment. This has resulted, among other things, in overcrowding due to limited number of teaching staff and infrastructure to create the enabling environment for effective teaching and learning. Even the expansion witnessed in higher education over the last 15 years has not occurred in those science-based disciplines that can build skills required for the next economic revolution and for Africa's technological advancement. Linked to this issue, are matters to do with lack of qualified teaching staff in the relevant disciplines, and the curricula that are mostly outdated and lacking the necessary input from the private sector/industries in order to make training more relevant and to increase employability.
84. Aging faculty and brain drain, due to unattractive working conditions, aggravate the aforementioned issues; and this is compounded by the few graduate level (MSc and PhD) student enrolments. Another issue arising from the situation with faculty, consists of weak research and innovation capacities. This is tied to, among other things, the fact that there is little investment in research and innovation, particularly in high priority areas, such as agriculture, natural resources, applied sciences, health sciences, engineering and technology; thus limiting their capacity to integrate themselves into the global knowledge networks and meaningfully contribute to Africa's development. The gross domestic expenditure on Research and Development (R&D) in Africa represents only 0.8 per cent of the GDP, which is below the one per cent target agreed by AU Member States as the desired minimum expenditure on R&D. Little wonder that only five African universities are among the Top 500 worldwide according to international rankings of world class universities (one in Egypt and four in South Africa).
85. Dr Ekoh argued that the strategies for redressing the situation lie, first, in African Governments increasing funding to education and the education administrators efficiently using available resources. This must be supplemented by more resources mobilized from donors as well as the private sector, and by the promotion of ICT in the teaching and learning process. Second, there must be systemic reforms of the higher education to make it more responsive to the expectations of employers; the establishment of support mechanism for teachers for their professional development and permanent improvement of their teaching practices; strengthening of science and mathematics curricula and dissemination of the scientific culture in African higher education system; and the development of functional and efficient Labour Market Information System to track training demand in relation to the diverse needs of the industries.

86. AfDB has responded to Africa's higher education challenges in diverse ways. Between 2005-2016, the Bank approved more than 60 education projects amounting to US\$ 1.6 billion, and benefitting over 6 million young Africans. Thirty nine per cent of the funding went to higher education STI. The Bank has contributed to: increasing access to higher education opportunities; improving quality and relevance in service delivery especially through capacity development of teaching staff; furniture and equipment with learning materials; ICT connectivity; support for quality assurance frameworks; involvement of industry in training and internship programmes; and the design of monitoring tools to assess the relevance of training for the labour market. The Bank is also active in raising political awareness for smart investments in higher education STI by organising two ministerial fora on STI in 2012 and 2014. The third STI Forum is being organized in Egypt towards the end of 2017.
87. Through two flagship programmes, 'Rethinking Education and Learning for Africa's Transformation' and 'Boosting Science, Technology and Innovation', the Bank is re-positioning itself to address the systemic weaknesses in the African Education system in High 5 priority sectors, including Agriculture, Energy, Infrastructure, Pharmaceuticals, ICT, Nutrition, Green and Blue Economies. The goal is to improve education quality and support the Regional Member Countries to build STI to drive the jobs of tomorrow, in line with the Sustainable Development Goals (SDGs) and the AU's Agenda 2063.
88. AfDB looks forward to working closely with AAU, stakeholders in the education sector, and other development partners in financing and revamping the higher education sector in Africa.

Leading up to the Africa-EU Summit: Advancing Knowledge and Skills

89. Ms. Deirdre Lennan, Directorate-General for Education, Youth and Culture, European Commission, noted that EU and Africa have built a strong political and economic partnership over the past decades. What the EU wants is to further deepen that partnership for prosperity and stability, with a focus on a number of strategic objectives: strengthen governance systems; prevent conflicts, address crisis and build peace; energise Africa; transform African agriculture and fisheries; manage migration and mobility; advance knowledge and skills; and attract responsible and sustainable investment.
90. In relation to advancing knowledge and skills, Ms Lennan highlighted four higher education opportunities that EU has made available:

- i. International Credit Mobility: EU is opening its Erasmus programme to the World to provide short-term mobility for students (3-12 months) and staff (5-60 days); and mobility for Bachelor's, Master's, PhD studies. In 2016, EU funded 7,980 mobilities for 35 African countries and, in 2017, 14,000 mobility requests have been received from 46 African countries.
 - ii. Capacity Building for Higher Education: This comprises two categories of projects. (1) Joint Projects involve new curricula and degrees; learning and teaching methodologies; upgrade of facilities; staff development; QA; governance; and University-Enterprise cooperation. (2) Structural Projects involve reforms at national level with Partner Country authorities for policy modernisation, governance and management of higher education systems. Both categories are accessed through applications from 'partner countries'.
 - iii. Erasmus Mundus Joint Master Degrees. These are excellent courses offered by consortia of HEIs from Programme (& Partner) Countries to attract best students worldwide through high-level scholarships. They are integrated (12, 18 or 24 months) study programmes, leading to the award of a double, multiple or joint degree. In 2016, 4796 students applied and 158 African students were selected for scholarships.
91. Jean Monnet activities will support 400 teaching posts and 600 short courses globally; they will also be available in over 100 Centres of Excellence around the world.
92. The renewed impetus for the African-EU Partnership has a strong focus on education and youth; and aims to launch new, or boost existing, initiatives including:
- more African participation in the Erasmus+ programme: mobility of staff and students and academic cooperation to improve students' skills and education quality and relevance and innovation on higher education
 - further support to the harmonisation of higher education in Africa
 - new pilot projects to extend Erasmus+ VET mobility schemes to Africa
 - developing the capacities of organisations that support young peoples' mobility and active participation in society
 - support for alumni networks and activities in Africa.
93. Participants' interventions in this Session revolved around the concerns that AfDB actually fund AAU and that the Africa-EU Partnership initiatives are substantively beneficial to Africa and non-Eurocentric.

PLENARY SESSION III: Higher Education for Innovation, Employability & Entrepreneurship (Panel discussions)

94. This Session focused on sub-themes 1 and 2 of the Conference, dealing with 'Promoting Science, Technology and Innovation through Higher Education' and 'Curriculum Reform as Key to Graduate Employability and Entrepreneurship'. These were discussed one after the other.

Sub-theme 1: Promoting Science, Technology and Innovation through Higher Education

Moderator: Professor Tolly Mbwette (Member, AAU Governing Board)

Panelists: Professors Kiamba, Joy Owango, Charles Nkoumbah, and Ms. Elizabeth Colucci and Ms. Gai Doran.

95. The Session noted that, in the 21st century of the knowledge economy and information era, advancing science, technology and innovation (STI) has become an undisputed imperative to promote social and economic development. The 17 SDGs are essentially STI competencies. Critical as STI are to Africa's socio-economic development and growth, the investment in them remains rather low. Consequently, HEIs, which are the central location of STI research and development, have continually underperformed with respect to innovations that can build and sustain Africa's socio-economic welfare and integration into the global economy.

96. Discussions raised a number of things that can be done to advance STI: the triple helix of University-Industry-Government linkages should be leveraged to raise needed investment for innovation centres and mentorship; research administrators must be raised in universities as brokers of innovation; effective intellectual property rights (IPR) protection regimes must be established - AAU to bring in IPR agencies to encourage African researchers; universities and industries must improve feedback to each other to drive innovation in areas of need; and AAU should set up a high-powered team to determine the indigenous technology and 'frontier science' that Africa can pursue through regional groupings to optimise research infrastructure.

Sub-theme 2: Curriculum Reform as Key to Graduate Employability and Entrepreneurship

Moderator: Emeritus Professor PAI Obanya (Educationist, Institute of Education, University of Ibadan, Nigeria)

Panelists: Professor Rosemond Boohene; Prof. Paul Ginies; Dr. Fred Kyei Asamoah; Prof. Ushotanefe Useh; Professor Karambiri; and Dr Joseph Hoffman.

97. Graduate unemployment has become one of the main challenges facing nations across the continent, with higher education sector taking much of the criticism for not preparing competent and capable graduates for the world of work. The argument is that there is lack of coherence among job needs, graduate attributes, curricula, the world of work and the economy at large. Another factor is that the African economy is not yet robust to absorb the surging numbers graduates.
98. Discussions focused on how curriculum reforms can foster employability skills and entrepreneurship as solutions. Thinking outside (or without) the box, leadership, creativity, communication and team building were highlighted as crucial employability skills. Entrepreneurship should be seen basically as the transformation of innovation to create value which nurtures a mindset of change.
99. Two main posers were raised: whether it is not too late to get higher education before introducing entrepreneurship; and whether the major constraint has to do with curriculum or with pedagogy. In any event, it is necessary for higher education institutions in Africa to: establish entrepreneurial incubators, offer graduate programmes that have practical components with clearly defined competencies, and apply 'research for relevance' (changing lives in the community) as a key criterion for funding research proposals.

PLENARY SESSION IV: Elements of Higher Education Sustainability

100. This Session took individual presentations on "Africa, Data and Open Science" - presented by Professor Joseph Muliaro Wafula, Jomo Kenyatta University of Agriculture and Technology on behalf of the African Open Science Platform project (AOSP) - and "Report on Higher Education in Ghana" - by Professor Mohamed Salifu (Executive Secretary, National Council for Tertiary Education, Ghana). Thereafter, discussions were held on the Conference sub-themes 3 to 5, dealing with the role of higher education in managing the environment, higher education as a tool for promoting democratic governance, and mobilizing resources for higher education in Africa; and the student's voice in learning, harmonisation, entrepreneurship, innovation and engagement.

101. Presenting AOSP, Professor Wafula argued that the data from many research projects conducted in Africa are not looked after very well by universities whose essential role it is to manage them. These institutions need to present their research outputs, including data, as a 'shop window' and a record of their activities, achievements and impact. The African Open Science Platform Project is designed to ensure that Africa's research data are as 'open as possible, and as closed as necessary' so that they can become FAIR Data (Findable, Accessible, Interoperable, Reusable). This would bring Africa in line with the Science International Accord on Open Data in a Big Data World (see <http://www.science-international.org/>), and help African universities benefit from the data revolution. The campaign for endorsement of this Accord has secured acceptance in over 100 organisations. African HEIs are urged to endorse the Accord. The Accord presents major opportunities for universities, including effective world class data stewardship, status of excellence as Open FAIR data collectors, improved measurement of contribution to research of both the individual researcher and the institution, and enhancement of grant funding success.
102. Professor Salifu outlined enrolments, funding and general challenges in tertiary education in Ghana; and some recent responses to these challenges. The overall enrolment trends since 2010 have been gradual. While the desirable postgraduate enrolment rate was 25 per cent, the actual remained at 7.5 per cent and only 0.9 per cent is for PhDs.
103. The funding operates on the policy of cost-sharing in line with the percentages agreed by stakeholders at the Akosombo Accord in 1997: Government - 70 per cent, Student fees - 10 per cent, institution's internally generated fund (IGF) - 10 per cent, and industry/commerce - 10 per cent. The public expenditure on tertiary education as a percentage of GDP was around 1 per cent, 2011-2016. The proportion of the total funding of the tertiary education that came from the internally generated fund was, on average, 35 per cent in the 2011-2015 period. There is still a funding gap of about 20 per cent between budgetary requirements and the expected revenue. This has implications for research, infrastructural expansion, and general operations of the institutions.
104. The general challenges have to do with: limited access, arising from limited infrastructure capacity; gender imbalance in enrolment; weak linkage with industry for practical training; declining quality due to high student/staff ratios; limited employment/employability of graduates; and inability to adequately monitor and ensure the quality of online providers.

105. Some recent interventions are directed at these challenges. For instance, a draft policy framework on **National Vision and Plan** and **Action Plan** has been developed to focus on matters of 'Differentiation and Diversification', Sustainable Funding, Cross-border Education, and the Siting of Tertiary Institutions. Also, a business case has been developed for the establishment of the Open Universities Ghana, to leverage technology to address access constraints and physical barriers, and to support flexible and lifelong learning. Recently, Government has established a University of Environment and Sustainable Development (UESD) under an Act of Parliament (ACT 898 of 2015). And, legislation has been passed to establish other new tertiary institutions (Colleges of Education) and to convert Polytechnics to Technical Universities.
106. Further, actions are being taken to transform the delivery of pre-service teacher education and learning through support to relevant national bodies and institutions. Similarly, a Senior Academic Leadership Training (SALT) Programme has been organized to build the capacity of tertiary education senior managers in governance, academic leadership, financial management, research management, quality assurance and leadership. Lastly, three of the African Centres of Excellence Project, sponsored by the World Bank, are located in Ghana and would help to strengthen post-graduate programmes, offer specialized courses for industry professionals in the region, and provide learning resources and minor rehabilitation.

Sub-theme 3: The Role of Higher Education in Managing the Environment

Moderator: Professor Akpezi Ogbuigwe (Director, Advantages and linkages Centre, River States University of Science and Technology, Port Harcourt, Nigeria)

Panelists: Dr Olaf Hahn, Education for Sub-Saharan Africa and Robert Busch Foundation; and Professor Adelaide, West African Science Service Center on Climate Change and Adapted Land Use (WASCAL).

107. The saying, "how the environment is, so go we", underscores the fact that we are all products of our environments. Africa deals with several environmental challenges, including serious air and water pollution, vast deforestation, reckless natural resource extraction and chemical and waste disposal, massive erosion, hazardous emissions, and mismanagement of wildlife. All these have been noted by the SDGs as needing urgent redress.

108. The Panel made the point that African higher education must play multiple roles in advancing the preservation, management and improvement of the continent's environment. In particular, the sector must address the multiple attacks from local actors (governmental and non-governmental) and multinational corporations that exploit, operate, and manage African resources.
109. Since charity must begin at home, discussions urged all African higher education administrators to also work towards making their institutions 'green campuses' by ensuring that their infrastructures are (re)built in an environmentally sustainable way. For example, the Federal University of Technology, Abeokuta Nigeria was mentioned as a 'green campus' university. The institutions and other professionals should also apply the 'agricultural extension services' model to engage the wider populace in environmental sensitivity in a language that is simple and accessible.
110. Discussions also urged other capacity-building bodies to make environmental health one of their core foci. The West African Science Service Center on Climate Change and Adapted Land Use (WASCAL) has exemplified this point when convened a stakeholders meeting to identify environmental problems that can be solved through research. It has now produced Policy Briefs from this engagement, and currently supports 6 PhD programmes and 256 masters' students. Similarly, the Southern African Science Service Center on Climate Change and Adapted Land Use (SASCAL) has included Botswana Airport in its strategic goals, to be addressed as a postgraduate project.
111. The University of Botswana has designed Masters and PhD programmes on environment in collaboration with SASCAL. Also, the University of Boya, Cameroon, is building the capacity of women through seminars to replace firewood cooking with greener energy, and has taken education on the environment to the street, promoting sustainable energy sources such as solar energy.

Sub-theme 4: Higher Education as a Tool for Promoting Democratic Governance

Moderator: Dr. Emmanuel Akwetey (founding Executive Director, Institute of Democratic Governance, Ghana)

Panelist: Dr. Josephine Larbi-Apau; Dr. John Kirkland; etc.

112. In the last decade, Africa has seen a surge in political pluralism, democratic governance, successful elections, and the decline in civil war. Africa, once described as a "Hopeless Continent" at the turn of the 21st century, is now dubbed

“The Hopeful Continent”. Against this backdrop, has arisen a paradox. The thriving economies (currently, Ethiopia and Rwanda) that sustain the ‘hopeful’ characterisation of Africa are, by and large, not the multi-party countries with inordinately expensive political bureaucracies.

113. Dr Larbi-Apau described the differences among democracy, governance, and democratic governance. She then stated that higher education for democratic citizenship must manifest: quality and value-centered education; greater recognition of social relations and cultural diversity; tolerance for political ideologies; and pluralism, economic empowerment, and academic identity.
114. Discussions raised the question as to what type of democratic governance Africa really needs in order to develop. Higher education should investigate this question. It is also expected of African higher education (especially Universities) to model and nurture the indices of the ‘hopefulness’, namely the practice of good governance, conflict resolution and respect for human rights. All this goes to the of issue of relevance of higher education on the continent.
115. Democracy is not all about ‘public balloting’. It also calls for ‘public reasoning’; and universities should nurture the environment for it. Discussions highlighted the differences among ‘democratic governance’, ‘good governance’, and ‘leadership’. It was argued that Africa’s higher education institutions must, as a matter of urgency, model and nurture leadership - the type that is inclusive, transformational, and sacrificial for the long-term redemption of the continent. University administrators need to foster the capacity of students to learn and exercise the virtues of democratic values and human capital (political, religious and cultural). They must do this, while firmly dealing with factional attacks, and vicious and intolerant partisanship which are a threat to socio-economic development. Ultimately, universities should produce graduates who value social inclusion, set examples of participativeness, think and treat alternatives with respect and tolerance.
116. Questions were raised as to whether there is a home-grown democracy in Africa. Is Rwanda an example of such political arrangement? Also, whether there should be a limit to which academicians should participate in national politics. Kenya was cited as one country where academicians can join political parties.

Sub-theme 5: Mobilizing Resources for Higher Education in Africa

Moderator: Professor Peter Okebukola (former Executive Secretary, National Universities Commission, Nigeria)

Panelists: Dr. Folasade Ayonronde; Dr. Justine Cresswell; Mr. Patrick Dunne; Taya Owens; Prof. Paul Ventura

117. Higher education is an expensive enterprise, requiring significant human, financial, logistical, and technical resources. While the problem of resourcing of HEIs is worldwide, nowhere in the world is such resourcing more problematic than in sub-Saharan Africa. The unit cost of delivering high education on the continent is uniquely high. The pressure of having to simultaneously increase access (enrolments) and improve quality is heavier than in other regions. Further, there is the weak political will as well as the deflating effects of the structural adjustment programmes of the 1980s, the economic crisis of the mid-1990s, and the more recent international debt and resource crises. Overlaying all of this, is the ominous corruption that still pervades the continent.
118. With resources not usually provided in sufficient amounts and in a regular or predictable manner, many African HEIs struggle to operate at an acceptable level of academic competence that is fitting for the competitive global knowledge economy of today.
119. The Session took comments from development partners and Vice Chancellors. ACBF, UNESCO and ESSA shared their works with AAU and emphasised right partnerships and networks as critical to resource mobilisation. Discussions raised issues about how higher education administrators can leverage the enormous expertise and entrepreneurial spirit within their institutions to generate significant finances for their operations. Attention was drawn to the exemplary efforts of the University of Cape Coast, Ghana in this regard. Participants strongly urged Governments, businesses, development partners, parents and students to meet their financial obligations to higher education in a timely manner, and partner with the higher education institutions to expand and consolidate their resource bases.
120. The AfDB's plan with ADEA to establish Africa Education Fund was commended. Participants urged the Bank to deploy the Fund at the earliest possible time and much more than the level it did for the 2005-2016 period. The perennial needs of higher education are huge and urgent. Vice Chancellors should be encouraged to change from 'budget-thinking' to 'investment-thinking' in their planning, and to

tap into the wide resources of technical and professional development resources in UNESCO.

121. In terms of what is novel in resource mobilization, some institutions shared their experiences. For example, Ambrose Ali University, Ekpoma Nigeria introduced an 'incentive': using ICT system, students cannot register for courses or write examinations until they have paid all the required fees. The University has been able to get over 90 per cent of students paying up, and this has helped to supplement operational costs. The University has also adopted an "E-Senate" system where proceedings are paperless and this has ensured savings from printing volumes of paper. The University's resource mobilisation strategies further include consultancies, sale of health bread and other entrepreneurial initiatives. University of Sudan, which is funded through philanthropy in line with Islamic values, draws on corporate responsibility from the private sector and loans in cash or kind. Moi University Kenya, draws on endowment funds, student fees and some income generating units such as the recently acquired textile company and the University farm.

The student's voice in learning, harmonisation, entrepreneurship, innovation and engagement

Moderator Ms. Deirdre Lennan

122. The moderator asked representatives of the African students' body to make brief presentations and share experiences in learning, harmonisation, entrepreneurship, innovation and engagement. Important and useful presentations were made and the ensuing discussions were useful.

PARALLEL SESSION 1: Presentations on the Conference Subthemes

Sub-theme 1: Promoting science, technology and innovation through higher education

Chair: Professor Edward Oben Ako (Member, AAU Governing Board)

123. "Why is everyone talking Science, Technology and Innovation?", Professor Ako asked. The seriousness with which Africa has now taken this matter is reflected in the visible place STI occupies in the AUC Strategic Policy Agenda. The Centres of Excellence are also aimed at bridging the gap in STI in Africa. All this suggests that promoting STI is an issue that universities must take advantage of, and address. The presentations in this parallel session canvassed several dimensions of this matter.

Facilitating and expanding the research landscape in Africa through regional and international scientific collaboration: AGNES.

124. Dr. Heather G. Marco, University of Cape Town, South Africa, presented on the history and achievements of the African German Network of Excellence in Science (AGNES). AGNES was established in 2011 by 17 scholars from 11 sub-Saharan African countries and 4 German scholars. These are all alumni of the prestigious Alexander von Humboldt Foundation. Since establishment, AGNES has developed into a highly professional body that has created two sponsorship programmes: Junior Researcher Grant - awarded to 60 African postdoctoral fellows since 2012; and Intra-Africa Mobility Grant, since 2016 - has funded 17 Masters and Doctoral students to spend up to 2 months abroad in the region, linking up with experts for critical aspects of research and initiating new collaborations on the continent. The alumni are expected to form nodes of excellence in Africa as a critical mass of scientific capacity.

Managing institutions of higher education in the digital age: Integrating infrastructure, structure and culture.

125. Considering the funding challenges of Universities in Zimbabwe and, also, the threat to their long-term viability from several factors, Dr Stanislas Bigirimana argued in this paper that universities must adopt a technology-driven Viable System Model (VSM). The System comprises 'de-bureaucratization' and 'virtualization', and is regulated by the principles of 'requisite variety', 'recursion' and 'syntegrity'.
126. De-bureaucratization is necessitated in light of the variations in the student population, the failure of the bureaucratic model - based on rigid division of labour to handle the complexity of current market imperatives, and the drift from discipline-led to problem-led programmes. Institutions of higher education need adopt flat or network organisational models which shift from a command and control model (which puts the university administration above the student) to an information-based organization that foster interaction, partnership and horizontal relations between the students.
127. Virtualisation means that universities wanting to survive must leverage ICT to run multiple campuses, flexible learning, various modes of delivery, and interfaculty or inter-university collaboration in teaching and research. Their operations must aim for fast, real-time, online and interactive functions through various ICT platforms.

Agriculture in science engineering and technology: the missing key to graduate employability in Africa.

128. In light of the high unemployment rates on the African continent, the starting point in this paper for Dr Abdulkarim Oloyede (from University of Ilorin, Department of Telecommunication Science), was the kind of employability skills graduates are getting from universities. Multinationals such as Facebook and other telecommunication companies employ only a maximum of two per cent of their labour force from Africa because of lack of the skills for such jobs. In contrast, agriculture which employs as much as 40 per cent of Africans has remained unattractive to graduates. To get graduate of STI to look in the direction of agriculture, this field must be brought into the STI curricula.

129. To illustrate this point, Dr Oloyede shared how his Telecommunication Department has developed a successful communication tool that is agriculture-oriented, known as the 'Ilorin Model'. By building the employability skills for agriculture into the STI curricula, graduates from these disciplines can find gainful and/or entrepreneurial engagements within the agricultural sector.

Assessment of the robustness of biofil toilet technology for the treatment of blackwater.

130. Mr Lakachew Yihunie Alemneh, a Senior lecturer and Researcher with the Water Supply and Sanitary Engineering Department (Bahir Dar University, Ethiopia), presented on how effective the Biofil Toilet Technology (BTT) could be in solving the black water (septic tank systems) management problem in the densely populated urban poor communities. BTT works by enhancing the symbiotic work of both micro and macro-organisms (earthworms) to treat black water. However, extensive use of bactericidal household chemicals for cleaning of toilets (chloroxylenol - Dettol; sodium hypochlorite - parazone; and lactic acid - Mr. Muscle) may affect the effectiveness of this technology.

131. The toxicology tests conducted showed that these chemicals, used in small concentrations (e.g. parazone, about 0.6ml per liter of water) can ensure the survival of the microbes (earthworms); and that dettol was the safest to use in cleaning toilets without destroying the BBT system.

Advancing science, technology and innovation through postgraduate research supervision: challenges and prospects.

132. What can reinforce STI in African universities? Going beyond the approach of casting responses in general terms, Elizabeth Achieng Were - a lecturer in the School of Business Administration at Kenya Methodist University- Nairobi campus, took up the issue of postgraduate supervision. Using a focus group discussion methodology, which involved post graduate research supervisors, director of the Postgraduate Research Department, head of the Library Department, and the coordinator of the ICT Department of her University, she identified the following:
133. Challenges: supervisor absenteeism due to the heavy workload on supervisors and lecturers; rigidity in supervision: not allowing creativity among students; pro-rata remuneration which makes supervisors prefer to work with students who undertake less challenging, less innovative research topics (usually away from STI) and can finish quickly; and a general lack of 'political' goodwill which manifests itself in the lack of funding for STI.
134. Way forward: cultivate an attitudinal change among supervisors, student and school management; train supervisors through research seminars and workshops on the uses of technology (e.g. for detecting plagiarism and publishing); allocate more funding to STI research to reduce the pro-rata bias; and review post graduate programmes to enhance the STI.

Nigerian solid minerals processing for economic sustainability and development: how far thus far?

135. Alafara A. Baba, currently a Deputy Director of Central Research Laboratory and Associate Professor of Industrial and Materials Chemistry, University of Ilorin, Nigeria, presented this paper on behalf of seven other colleagues. They argued that the Nigerian minerals and metals sector is a key sector. It is crucial to the successful execution of the Government's economic diversification strategy and the attainment of growth, wealth creation and poverty reduction goals. However, at present, over 44 different types of minerals identified in more than 500 locations in Nigeria are yet to be adequately explored.
136. The processing, extraction and beneficiation of some of these minerals have been successfully enriched and examined at the Hydrometallurgy and Mineral Processing Research Unit of the University of Ilorin. The result came via the hydrometallurgical route, involving leaching, solvent extraction and precipitation methods, as against the conventional reduction-roasting route that has high

energy consumption and numerous environmental challenges. The researchers recorded a 'process efficiency', ranging from 90 to 98 per cent for producing different industrial metal products and purified minerals prototypes suitable for application in galvanized, automobile, paper, paints, textiles, cosmetics, rubber, plastics, refractory materials, chemical and agro-industries. They also found that this method is applicable to the treatment of some spent secondary materials such as zinc-carbon batteries, automobile tyre wastes, electronic waste and waste eggshell. That is to say, it support the recovery of valuable industrial metals and other useful products in the waste-to-wealth research initiatives that can drive economic sustainability and development. The researchers, therefore, called for researches in these areas to be encouraged at research centres and universities across the continent.

Building scientific capacity for higher quality biomedical research in sub-Saharan Africa.

137. The presenter, Professor Gordon Awandare, is an Associate Professor and Head of the Department of Biochemistry, Cell and Molecular Biology, University of Ghana. In his view, Africa needs to train one million new PhDs to keep pace with the World average of 800-1000 researchers per million population. This informed his drive to establish the West African Centre for Cell Biology of Infectious Pathogens (WACCBIP) in 2013. After initial funding from the World Bank's African Centres of Excellence project, WACCBIP won additional funding from the Wellcome Trust's DELTAS Africa initiative in 2015.
138. The Centre has built capacity for high quality training of African scientists locally, from masters and doctoral to postdoctoral levels. The training programmes have been endorsed by the American Society for Cell Biology, and have also received Advanced International Accreditation from the Royal Society of Biology, UK. Since the beginning of the programme, PhD enrolment has increased and postdoctoral applications have also increased with a 50/50 gender rate. WACCBIP has built an extensive network of collaborations locally, regionally, and internationally. This provides the intellectual and physical infrastructure for large-scale research investigations and implementation of new interventions across Africa.
139. It is critical to maintain momentum, especially in terms of building capacity and developing research collaborations between African institutions. This can be achieved through: sharing equipment with other research institutions on the continent; mobilising additional public funding for research; prioritising supplies for reagents; encouraging the private sector to be available for collaboration and

funding; and compelling industry to have research departments which they fund well.

140. At the conclusion of the Session, some key points crystallised, including: necessity for curriculum reform; training of lecturers in the area of STI research; South-South collaboration; continued support from donors that does not encourage over-reliance; and African Governments making it a priority to support the promotion of STI which is their responsibility in the first place.

Sub-theme 2: Curriculum reform as key to graduate employability and entrepreneurship

Chair: Professor Naana Jane Okpoku-Agyeman (former Hon. Minister of Education, Ghana)

Significance of curriculum review on job aspiration of undergraduates of agriculture in Kwara State, Nigeria

141. Dr. Olayinka, Kwara State University, Malete, Nigeria, showed great excitement about the potential of agriculture in Africa for employment and business. How is disappointed that the youth are not showing any interest in the venture. Students lack the willingness to want to pursue agriculture because they see it as manual labour, as against the jobs from courses like engineering and doctor.
142. His study was about whether the inclusion of Farm Practical Training (FPT) in undergraduate curriculum of agriculture had a significant influence on the job aspiration of the students. He examined the empirical evidence from the University of Ilorin and Kwara State University, both in Nigeria. The research specifically looked at the attitude of students towards FPT and job aspiration vis-à-vis their preferred courses of study. A total of 120 final year students with an average age of 23.5 years who completed the FPT program were selected from the two universities, using a multistate sampling technique. The results showed that FPT did not significantly impact on student's job aspirations. Allocation of more funds to acquire functional and requisite materials, may help to make FPT more meaningful and influential. His main position is for the students to be encouraged to also contribute funds and skills to jointly engage in agro-enterprises during the FPT. This will complement the institutional facilities, sustain their interest in agriculture, and enhance their employability in line with the government's advocacy for more people to return to farming.

Re-focusing the Moi University Bachelor of Education Curriculum on Employability: A Holistic Triad Model

143. In this paper, Dr Charles M. Nyandusi, School of Education, Moi University, Kenya, examined the B.Ed curriculum at Moi University. He observed that, since its inception, the curriculum has focused on producing teachers (about 1,500 annually) who will be employed primarily by Kenya's Teachers Service Commission (TSC). All curriculum review efforts in the history of the School of Education, which houses the Programme, have been largely informed by this desire to produce graduates who fit into the traditional TSC employee profile. However, new and emerging realities, both in Kenya's education sector and in other sectors - especially the global shift from employment to employability, have necessitated a review of the traditional focus of the B.Ed curriculum.
144. These realities include the fact that TSC and the education sector as a whole no longer has the capacity to immediately employ all the B.Ed graduates of Moi University. This means that thousands of B.Ed graduates either remain unemployed for indeterminate periods, or seek and secure employment in occupations other than the teaching for which they were prepared. The occupational competencies in these "other" jobs are often not in tandem with the traditional focus of the B.Ed curriculum. Moreover, TSC itself is progressively redefining its employee profile. There is a noticeable shift from employment to employability at TSC, which requires B.Ed graduates to be equipped with competencies beyond the narrow classroom-teacher profile.
145. From the next four-yearly review cycle in 2017, the School of Education will shift the focus of the B.Ed curriculum from offering a curriculum that moulds a TSC employee to the curriculum that enhances the employability of its graduates. To engender this employability, the paper put forward a Holistic Triad model for curriculum design and delivery which identifies three overlapping platforms: the intellectual platform, the training platform, and the development platform.
146. For the intellectual platform, the School of Education has identified seventeen generic skills to include in the curriculum to complement the traditional skills. These are: Personal grooming (cleanliness and neatness), Punctuality and time management skills, Respect for authority, Effective communication skills, Computer literacy/ICT skills, Honesty and integrity, Commitment to work, Ability to work in a team, Responsibility and accountability, Ability to work with minimum supervision, Adaptability, Willingness and ability to learn continuously, Leadership skills, Ability to think critically, Problem solving skills, Creativity and innovativeness, and Self- drive.

147. Regarding the training platform, the curriculum must develop productive knowledge, skills and attitudes in students to enhance their competence at the workplace. The development platform is to ensure that a concurrent approach is adopted, where the other two platforms are engaged concurrently, with a holistic philosophy encompassing and pervading the three platforms.

Academic Family and the Quality of Student Support and Welfare: A case study of Bugema University, Uganda

148. In November 2010, Bugema University initiated and launched a student support services programme - dubbed the Academic Family. It was designed to provide an effective and efficient high-quality career guidance services as a key to graduate employability and their innovativeness. Mr. Kibirango Mpiima Moses, currently the Dean, School of Business in the University, set out to assess whether the programme had affected the quality of student support and the level of graduates' employability or innovativeness.
149. Using a descriptive survey design with self-administered questionnaire and interview for 109 students and 10 university staff, he found that: through the Academic Family programme, 47.7 per cent of the student respondents did influence curricula matters; 79.9 per cent felt valued; and over 72 per cent recommended the system to be rolled throughout the University. From these results, the presenter outlined some hypotheses including that universities that enjoy students and staff togetherness (intimacy), and whose students benefit from timely, reliable and flexible support services, will show tangible rewards in terms of innovativeness and employability.

Enhancing Teaching Quality in Higher Education for Better Student Outcomes: A case Study of the University of Rwanda.

150. Dr. Nathan Taremwa, a Lecturer at the University of Rwanda and PhD Scholar at Kenyatta University, Kenya stated the view that quality teaching in higher education matters for student learning and that it is multi-dimensional, covering inputs, outputs and processes. University of Rwanda, the locus of his research, was established in 2013 through a merger of 7 public HEIs with about 30,000 students enrolled in 14 campuses. There were concerns about the quality of education and the ability for graduates to meet market demands, mainly in terms of a skills gap between graduates' competences and those required for national development.

151. Using what he termed the 'Mixed Method' approach and 'future thinking methodology', he researched the input, process and output attributes associated with the quality of teaching. He found that: the level of teaching quality was average; the input dimension was low; and the quality of teaching varied across campuses. He recommended that: the University leadership should facilitate adoption of student-centred teaching by lecturers who should be provided with in-service training on this teaching style; ICT should be deployed to improve teaching quality; peer in-class evaluations should become a part of the teaching culture; and that the differences between campuses be further explored and corrected.

Vocational Education and Training Curriculum Responsiveness in the Context of Economic Implosion: The case of Zimbabwe

152. The presenter, Mr. Chenjerai Muwaniki, is currently a Lecturer in Adult and Continuing Education at Great Zimbabwe University in Masvingo, Zimbabwe and a PhD student in Adult Education at the University of KwaZulu-Natal, Pietermaritzburg Campus, South Africa. He focused on how two rural vocational training centres (one - government, and one- NGO) in Zimbabwe are responding to the economic crisis in the country. He found that the vocational education and training (VET) system could not be responsive to labour market issues and graduate employability because of the decimation of industry. The shortage of funds meant lack of expertise, lack of equipment and inability to be responsive, and there are no opportunities for placements. Thus, contrary to the idea that VET should be responsive to the graduate employability, the Zimbabwean scenario has shown that economic problems actually generate educational problems.
153. Since it would be unrealistic to argue for more funding in a depressed economy, the more creative route would be for VET to be responsive to non-market issues such as community development and the informal economy, including the needs of new farmers following the Fast Track Land Reform Programme that has released land to several of such farmers. Mr Muwaniki recommended that reform to VET curriculum should focus on agriculture, entrepreneurship, community development, and flexibility of delivery to meet the needs of rural clients.

Curriculum Reform as Key to Graduate Employability and Entrepreneurship

154. The presenter, Professor Paul Ginies, is the Director of the Pole of Excellence of the Eranove Group, Director of the CIE Electricity Training Center in Ivory Coast, and President of the education/training Commission of the French Council of Investors in Africa (CIAN). Professor Ginnies showed the rate of decline in

employment and the increasing number of countries in Africa (including Democratic Republic of the Congo, Ethiopia, Ghana, Malawi, Mali, Rwanda, Senegal, and Uganda) where about 70 per cent of youth were self-employed. From this, he drew attention to the need for entrepreneurship in higher education curricula. He argued for the view that classical reading, secondary education, vocational education are outdated and are in need of serious reforms. Further, he submitted that training for employment at all levels must be a central objective, built around three complementary and inseparable pillars of Basic skills, Transferable skills, and Technical and Professional skills.

155. Professor Ginies proposed a new curriculum which is flexible, such as the one being implemented by the Electricity Training Center. The curriculum entails: mixing certifications and diplomas to ensure employability throughout the first cycle of technical higher education; mixing initial and continuous training; and refocusing training on skills required by the labour market as this will be a major challenge in the next 25 years. To meet this challenge, he proposed a threefold approach: increase efficiency by taking into consideration the reality of the economy; meet the needs of the greatest number (massification), taking into account the major trends in the evolution of skills; and use ICT to confront the challenges of massification and at the same time integrate entrepreneurship into curriculum at all levels. In all of this, governments must take account of the fact that the educational ecosystem is increasingly diversified, and that it requires increased collaboration between public and private universities, industry and government.

Sub-theme 3: The role of higher education in managing environment

Chair: Professor Crispus Kiamba (former Permanent Secretary, Ministry of Higher Education, Science and Technology, Kenya)

Higher Education and Environmental Management: The Nexus

156. Dr. Nsikak-Abasi A. Etim, a Senior Lecturer in the Department of Agricultural Economics and Extension, University of Uyo, Akwa Ibom State, Nigeria, investigated in 2016 the relationship between higher education and environmental management in a questionnaire-based study of 180 respondents. He subjected his data to univariate probit regression analysis and found that: tertiary education was positive and significant ($P < 0.01$), suggesting that people with higher education were more likely to adopt and apply environmental management practices and techniques than those with low educational levels; and the variable, no formal education, was negative and significant ($P < 0.05$) indicating that persons without formal education were less likely to imbibe environmental management measures.

157. Significantly, the people living in poverty, due to their low education, are particularly susceptible to environmental hazards like flood, drought, pest attack on crops and livestock and loss of biological resources. This translates into loss of economic potential and numerous environmentally-related conflict for them. This nexus points to one key policy implication: supportive policies and institutions which provide access to training and information (awareness and media sensitization) that will expand the opportunities of the poor to invest in environmental improvements, are required.
158. Even the non-poor, whose activities are the cause of change and damage to the environment, must be reached by higher education where they can learn to expand their livelihood opportunities in a sustainable way and thereby reduce vulnerability to environmental hazards. From his analysis, Dr Etim posited that higher education is a crucial tool in managing the environment, and must be a priority policy option for sustainable environmental management.

Climate Change: The Role of Universities in Addressing the Mitigation and Adaptation Challenges

159. Dr Simon Peter Ngalomba, a lecturer in the School of Education, University of Dar es Salaam, Tanzania, presented University of Dar es Salaam as an exemplar in higher education institutional support for climate change mitigation and adaptation.
160. Inspired by the 2015 Conference of the Parties of the UN Convention on Climate Change, which called for improvements in the role played by universities in implementing the Paris agreement, Dr Ngalomba used a qualitative case study approach to assess the University of Dar es Salaam. He found that the University: explicitly acknowledges the climate change as one of its research priorities; has organizational structures and personnel to coordinate climate change activities; has built these activities into its budget and in its academic programmes, both at undergraduate and postgraduate levels; and has created a coordinating unit for the activities.

Sub-theme 4: Higher education as a tool for promoting democratic governance

Chair: Professor Michael Faborade (Secretary General, Committee of Vice Chancellors, Nigeria)

Higher Education and Promotion of Democracy through the Breaking of Prison Bars

161. Mrs. Gilliet Chigunwe is a Regional Programme Coordinator and Senior Lecturer at the Zimbabwe Open University, Faculty of Applied Social Sciences, Department of Disability Studies and Special Needs Education, Mashonaland Central Regional Campus. In this unique study, she found that, whilst Zimbabwe has been observed to put effort in empowering prisoners in various practical areas, the country has not yet realized better processes of enabling prisoners to attain university degrees or qualifications as well as other vocational skills offered outside prison walls.
162. Measured against the UN Human Rights Charter (which regards education as a basic human right to be provided to all) and the international development goals relating to universal education, prisoners in Zimbabwe are denied the opportunity to study not only in conventional institutions during their time of serving but also behind bars. This is because conventional institutions do not have special education facilities to reach out to people in such locations. The implication is that the institutions come short in using higher education to promote democracy for such citizens.
163. The inmates in Zimbabwe's major prisons such as Chikurubi and Hwahwa receive primary and secondary education as well as vocational training whilst small prisons like Bindura 'Chawagonahapana' rehabilitate inmates through entrepreneurial skills development. The gap is in the opportunity for these inmates to pursue diploma and degree qualifications or vocational trainings that are outside what is offered by the Zimbabwe Prison Services. As part of rehabilitation and empowerment processes, it is recommended that Zimbabwe Prison Services (ZPS) and other prison services in Africa initiate collaborative approaches with Open and Distance Learning Institutions (ODLI) which can be the 'bolt cutter' that can break the prison bars and liberate inmates for democratic empowerment.

Higher Education as a Tool for Promoting Democratic Governance

164. Professor Sanni Oladimeji Lateef, Dean, College of Food Science and Human Ecology, Federal University of Agriculture, Abeokuta, Nigeria, modified the title during his presentation to "Diversity and Inclusiveness in the University

Governance". His key question was, "Is higher education a tool in promoting democratic governance?", to which he answered a 'capital YES'. The real test, though, lies in the extent to which university governance is inclusive. He argued that the indices of inclusiveness include:

- University Governing Councils that demonstrate academic freedom and autonomy, public accountability and social responsibility, transparency, probity and equity, sound ethical values and professionalism;
- Well Structured Collegiate System that is a tool for inclusive decision-making practices, that stimulates dynamic and productive academic critical solutions, creates conducive learning spaces for younger staff, relinquishes power to each other, and generates and sustains easy transition in leadership;
- Academic staff management that allows staff to develop their skills and knowledge to their full potential, and unleashes creativity and innovation of community members by vesting decision-making powers at the most appropriate levels in the university;
- Democratic Trade Unionism which serves as effective liaisons between management and the groups they represent, ensures that managers do not wield undue authoritarian influences on their employees, protects the welfare of workers, and is a major tool for dynamic and functional democratic governance;
- Students Politicking that gives greater feelings of self-direction to the students, prepares them for leadership roles and positive relationship, gives joint responsibility to both staff and students, and serves as leadership incubation and mentoring;
- Selection and/or election of front line managers and membership of Committees that balances the rights of the Vice Chancellor to appoint Heads of Departments and the participation of faculty in electing Deans.

165. The new concept of 'distributed leadership' has the strengths of participatory governance with the advantages of well developed, formal systems of delegation of authority and responsibility.

Higher Education as a Tool for Promoting Democratic Governance in Africa

166. Professor Goski Alabi is currently the Dean of the Centre for International Education and Collaboration at the University of Professional Studies, Accra and a Consulting Director at the Laweh Open University College, Accra. She presented the view that both higher education and democratic governance have a common goal, i.e. to improve the quality of life of the citizenry.

167. Apart from Mauritius and Botswana which came 18th and 27th positions in the 2016 Democratic Index, most of the African nations were shown to be practicing flawed democracy - mixed regimes and authoritarian regimes.
168. HEIs are grooming grounds for effective political participation and leadership, and for inculcating the virtues of democratic values, good governance, political, religious and cultural capital. Africa must seize the opportunity to develop a culture of good governance in students during their school days and use alumni activities as a social platform to monitor graduates' political engagements. These will involve but not limited to: dissemination and sensitization to Africa's *Agenda 2063* and the Continental Education Strategy for Africa (2016-2025); and aggressive marketing of Africa's own concept of democracy, rubrics for good governance and a celebration of the gains we make to encourage ourselves.

Sub-theme 5: Mobilising resources for higher education in Africa

Chair: Professor Frans Swanepoel, Centre for the Advancement of Scholarship, University of Pretoria, South Africa)

Developing and Promoting Open Scholarship for Researchers in Africa

169. Critical as the material resources (such as books and journals) are to the work of higher education, many African institutions are yet to leverage their power optimally. In this presentation, Dr KO Darko-Ampem, the Librarian at St Margaret College, Feyiase, Kumasi, Ghana, contends that access to scholarly resources and participation in the creation and use of the world's knowledge are among the challenges of African researchers and students. Whereas 'Open Access' (OA) has given researchers and students from around the world increased access to knowledge and publications, and greater visibility and readership, very few champions for this OA concept have shown up in African countries.
170. This paper promotes OA as an economically sound option to the traditional regime of paid-access to the world's knowledge output. Dr Darko-Akpem explored open scholarship in its various forms, including open access journals, institutional repositories, open educational resources, free and open source software, MOOCs, and open courseware, in order to facilitate an understanding of their 'resource value' for African scholars. He highlighted advocacy activities, like the celebration of Open Access Day and Open Access Week, and recommended that academic librarians and/or university research offices in Africa use them to promote open scholarship to faculty and students. The

Directory of Open Access Journals (DOAJ) is another good starting point which can be used to develop an institutional portal on open access resources.

Sustainable Survival Strategies in a Volatile Economic Environment: A Case of Zimbabwean Universities

171. From the vantage point as the Bursar (Financial Director) of the Great Zimbabwe University, Mr Andrias Chinyoka outlined how the economic and political environment in Zimbabwe from 2000 to date has not allowed for any reasonable budgeting activities at state universities. Hyperinflation has led to raised poverty levels, unemployment, financial crisis, inadequate learning infrastructures, delayed payment of salaries, strike actions and lack of commitment to work among staff members at universities.
172. In this difficult economic and political environment, what sustainable survival strategies have Zimbabwean universities been using to mobilise resources? Using a phenomenological case study design, Mr Chinyoka found that the universities, having realised the need to augment government economic efforts through innovations, started to engage in various income generating projects or activities. These include: internationalisation of the universities, recruitment of foreign students who pay tuition at levels higher than the government controlled levels that local students pay, and parallel and block release programmes that can attract mainly employed learners where the tuition levels are not controlled by government. Another route taken by the universities is agricultural entrepreneurship: commercial farming, poultry production, cattle ranching as well as market gardening. According to Mr Chinyoka, many universities have also gone into brick molding, printing services as well as water purification.
173. He concluded by stating that the best resource is the human mind; hence, African universities can only survive with imaginative, creative and innovative leadership since Government support continues to dwindle in the face of economies challenges.

Leveraging Research and Human Resources within Universities to Fund Higher Education in Africa: A case of Zimbabwe

174. Godfrey Mugari presented this joint paper with Dr Judith KATEERA, a Permanent Secretary in the Ministry of Finance, Zimbabwe responsible for Revenue, Capital and Financial Markets and International Cooperation. The researchers asked in their presentation: how can universities in Africa leverage their own internal

resources - specifically the research and human resources, as a reliable and sustainable source to fund their operations?

175. Using both qualitative and quantitative instruments such as questionnaires, interviews and desk-top analysis, the researcher found that the answer lies in what they called 'alternative financing'. Basically, it is about what these universities can do with their own research outputs and expenditure outlets. For example, the Universities in Zimbabwe have a potential minimum of 16,589 publications per year, i.e. one per each of the 12,733 postgraduate students and 3,856 academics.
176. Assuming these publications are placed in ICT-based research repositories for access by other researchers worldwide for a fee. Assuming, also, that there is an opportunity to turn pension contributions and medical aid fund for staff into an asset management portfolio. The researchers extrapolated and concluded that the selling of access to research material on ICT-based platforms and the creation of a Special Purpose Vehicle to trade with pension and medical aid funds would not only provide millions of dollars in profit, but will also serve individual universities large amounts of money for their operations. They recommended that universities come together to create such vehicles that can generate funds from internal resources that can only be accessed after subscribing or paying for the services.

Mobilizing Resources for Higher Education in Africa: Case Study of Success Story of University of Port Harcourt-Nigeria

177. Ogbonna F. Joel, a Professor of Petroleum Engineering and the Centre Leader for the World Bank Africa Centre of Excellence for Oilfield Chemical Research, University of Port Harcourt, Nigeria, examined the challenge of resource mobilization for public HEIs in resource-constrained economies of sub-Saharan countries and its negative impacts. He argued that, to overcome this challenge, university administrators must become creative and innovative to transform traditional universities into entrepreneurial universities. Then, these administrators can intensify research and develop innovation, commercialization and entrepreneurship ecosystems for sustainable development of universities and society.
178. Professor Joel outlined the strategies adopted by the University of Port Harcourt to transform into an entrepreneurial university as well as the lessons learnt. The University adopted the concept of Triple Helix Plus+. By that, the University formed a three-way partnership with Government and Industry as well as with professional societies and other stakeholders to mobilize human and material

resources. In operationalising the concept, the University built strategic collaborations and networking with foreign universities, industry partners and grant making agencies such as MacArthur Foundation. The University was thus able to establish various Institutes and Centres of Excellence such as the World Bank Africa Centre of Excellence for Oilfield Chemicals Research. The most famous of these endeavours is the Institute of Petroleum Studies (IPS), which runs industry-oriented graduate programmes and generates significant funding from fees.

179. To mobilize manpower resources for internationalization of higher education at home, the University adopted a policy of Brain Gain and attracted Nigerian experts from the diaspora and from industry, in addition to leveraging the experiences of retired captains of industry. Moreover, to close the infrastructural gap, the University adopted innovative strategies for public- private partnerships in the provision of vital services. There is also a University of Port Harcourt Foundation with an Office for University Advancement that mobilises support from Alumni.
180. Networks, corporate bodies and cultivated 'Friends of the University' have also helped to secure the resource-base of the University and improve the learning environment, quality and employability of its graduates. All this has contributed to strengthening the University's global competitiveness, research and innovation capabilities. The major lesson is that it takes deliberate efforts to build an entrepreneurial university and to establish a sustainable win-win relationship with partners.

Equitable and affordable higher education (Six Ways to Ensure Higher Education Leaves No One Behind)

181. Dr Taya Owens, a Researcher at the GEM Report, UN-ESCO, stated that achieving inclusive and equitable quality education and lifelong learning opportunities for all by 2030 (SDG4) is critical to the achievement of all other SDGs.
182. In the absence of policies and programmes to support qualified students from disadvantaged backgrounds, efforts to expand higher education systems risk widening the gaps between the rich and the poor, and between sexes. To make higher education a catalyst for the creation of sustainable, innovative and equitable societies, governments and universities have to develop policies to make colleges and universities both affordable and inclusive.

183. After reviewing recent trends in higher education expansion, disparities in student participation, policy tools and practices for fostering equity, Dr Owens outlined six policy tools for increasing affordability, namely: know your target audience (the groups that need help the most); put it in law (use regulatory frameworks to firm up the support); build steering and monitoring agencies with rights and responsibilities to encourage affordable access to higher education; level the playing field by creating different pathways for university admission, like affirmative action; use a combination of reasonable tuition and means-tested grants and loans - financial aid packages that are differentiated to match student need; and limit student loan repayments to less than 15 per cent a month, basing these repayments on student wages.

Mobilising Human and Economic Resources for Higher Education: The Story of ACEGID, Redeemer's University, Nigeria

184. Dr Onikepe Folarin, Deputy Director, ACEGID, Redeemer's University, Ede, Osun State, Nigeria, presented a case study of an investment in a higher education institution, namely the establishment of the African Center of Excellence for Genomics of Infectious Diseases (ACEGID). The Centre took off in September 2013 with funding from the World Bank, but has now raised funds from the US National Institute of Health (NIH), US Department of Defence, and other funding agencies. ACEGID has trained over 500 young African scientists in the field of genomics, some of whom were at the forefront of the diagnosis of Ebola virus disease (EVD) in Nigeria and Sierra Leone and specifically contributed in the early containment of the disease in Nigeria.

185. ACEGID had to overcome several challenges that are common to similar ventures in African universities to become a reality. These challenges included: lack of expertise and slow pace of adaptation to market demands; no brain mobility or circulation; poor enabling environment; misplaced priority in higher education investment by governments and the private sector; and poor governance in higher institutions.

186. ACEGID leveraged the long-standing research and training partnerships that Redeemer's University had cultivated over the years. Its proponents rode on the vision of creating a vibrant academic and research environment that is free of outside influences, and that transcends national boundaries and ensures the conduct of relevant, responsive, ethical and high quality translational genomics-based research on health in Africa. By setting up so many other innovative projects, ACEGID has been able to attract significant revenues from several sources: **grants** from NIH - H3Africa Genomics project, NIH - New Telephone

base device for diagnosis of malaria, and US Department of Defense - HIV Research Program/ Acute febrile illness surveillance); **royalties** from Lassa virus and Ebola Virus RDT kits and ELISA kits; **tuition fees** from short courses, masters and doctoral students; **bench fees** from Laboratory Training and Lab spaces for students' project; **program fees** from short term programs; and **sale** of reagents and consultancy services to individual researchers, companies, and institutions.

187. The presenter concluded by drawing out some lessons from the ACEGID experiences: institutions should entrench the culture of excellence by mobilizing human resources from Africans in diaspora and encouraging local talents/brain mobility or circulation; governments and companies should improve their investment in African higher education; governments and institutions should explore and encourage North-South or South-South collaborations; and African HEIs should be protected from political influences both within and without.

PLENARY SESSION V: Harmonisation in African Higher Education: The Contribution of the HAQAA Initiative

Chair: Ms Elizabeth Colucci, Project Coordinator, University of Barcelona

Quality assurance harmonisation in African higher education: the contribution of the HAQAA Initiative

Speakers: Mr. Felix Wagenfeld, German Academic Exchange Service (DAAD); Dr. Jeffy Mukora, CNAQ, Mozambique; and Dr. Rispa Odongo, Chair of the Technical Working Group for the African Standards and Guidelines for Quality Assurance

188. The HAQAA Initiative is part of the EU *Service Contract 2015-2018* and an element of the Africa-EU Strategic Partnership. Its objective is to “contribute to and support the harmonisation of higher education programmes and the creation of a revitalised, distinctive, attractive and globally competitive African higher education space, through enhanced intra-African collaboration”.
189. The presentation outlined two of the expected outputs. One, the development of a harmonised quality assurance and accreditation system at institutional, national, regional and Pan-African levels. And, two, boosting of the implementation of the Pan-African Quality Assurance and Accreditation Framework (PAQAF) - an official AU commitment. In relation to the latter, HAQAA's specific contributions include:
- Development of the African Standards and Guidelines for QA (ASG-QA): a major guiding document for the continent – to be politically endorsed;

- Capacity building for QA bodies: building a Common Language for QA in Africa through the HAQAA Training Course, QA Agency reviews or consultation visits for agency building and institutional quality culture, and helping with AQRM evaluations in 15 universities; and
 - Stakeholder buy-in for PAQAF and promotion for African QA platform and database (see: www.aau.org/haqaa) and serving on Advisory Board of key regional organisations.
190. Dr Odongo spoke on the ASG-QA, which are a set of standards and guidelines for internal and external quality assurance in higher education in Africa. They are not prescriptive, but they provide a roadmap for quality attainment in HEIs and the Quality Assurance Agencies (QAAs). The standards are stated as *common minimum* standards or requirements, and the guidelines are stated in more specific terms to allow for gathering of evidence in support of the status of quality at HEIs and QAAs. HEIs or QAAs can add more standards to reflect their own traditions or contexts.
191. On the whole, the ASG are generally based on common principles; they build on existing national, regional and continental QA bodies; and are broad enough to allow for diversity, yet safeguarding comparability. The drafting process for the working document involves many stakeholders; online consultation in four languages; continental consultation workshop in October 2017; presentation at the Africa-EU Summit in November 2018; and the AU endorsement in the Spring 2018. African university leadership input critical in this process.

PLENARY SESSION VI: International Contributions to Higher Education in Africa

Chair: Professor Olugbemi Jegede (former Secretary General, AAU)

ACBF Capacity building efforts in Africa

192. Africa is rising and ‘moving at multiple speeds’. However, the continent is beset by several challenges, among which are the volatility and declining performance in economic growth. More significantly, these challenges reveal the underbellies of high dependency on exports of commodity goods; lack of economic diversification; low level of industrialization; huge infrastructure deficits; and youth unemployment or unemployability.
193. ACBF submitted that the missing link is capacity building: Africa’s structural transformation will not occur without addressing the capacity conundrum. This is where it comes in. Established in 1991 by African countries and their international development partners, ACBF is to build capacities needed for policy analysis and

economic management; develop and coordinate processes that lead to building human and institutional capacity; invest in activities and institutions to deliver such capacity; network with existing institutions and governments to achieve results on capacity; and manage projects and programs in critical areas for the development of Africa. It is to deliver on these functions through financial investment, knowledge generation, and technical assistance.

194. ACBF outlined, with concrete examples, the six broad competency areas it has intervened over the past 25 years in Africa's development landscape:
- Capacity for effective policy formulation and management.
 - Macroeconomic, financial, and debt management.
 - Performance of economics and public sector managers/officials.
 - Inclusiveness and effective participation of non-state actors in sustainable development.
 - Accountability and Parliamentary oversight at national and regional levels.
 - Policy research capabilities of regional economic communities
195. Having identified four main capacity deficits in Africa - operational, change and transformative, composite (strategic thinking/planning, etc) and technical/sector specific capacities, ACBF has rolled out its *Strategy Plan 2017-2021*, which focuses on human and institutional capacity building at the national, regional and continental levels; training programs on critical technical skills to support *Agenda 2063*; and mobilization of all actors involved (state and non-state actors) in Africa's development.

SPHEIR/DfID

196. Dr Joseph Hoffman presented this contribution on behalf of Ms Davelyn Thompson (DfID's Strategic Partnerships , Higher Education Innovation and Reform Programme).
197. SPHEIR is a competitive grant scheme to help address the performance, governance and influence of higher education systems and institutions. It was established by the UK Department for International Development (DFID) and managed by a consortium comprising of the British Council, PricewaterhouseCoopers and Universities UK International.
198. Operationally, the scheme is based on partnerships - a formal collaboration among a group of organisations, that addresses higher education in ways, and at a scale, that a single organisation cannot. Philosophically, it seeks *systemic change* through either higher education delivery (the design and delivery of degree

programmes) or enabling systems (enhancing systems and institutions by changing the culture and practices) that affect the performance of universities. Subject to some other considerations, the scheme may address quality, relevance, access and affordability of higher education in countries targeted by DfID.

199. Since 2016, SPHEIR has rolled out about four initiatives:

- Technology Enhanced Learning (TEL) that demonstrates relevance to labour market needs and employability of graduates - explicitly targeted higher education for beneficiaries affected by the Syrian crisis and a project involving innovation in TEL in one or more of 17 countries in Sub-Saharan Africa.
- Partnership for Digital Learning and Increased Access (PADILEIA) - to increase Syrian refugees' access to higher education and acquisition of transferable skills by developing and encouraging the systemic use of digital education resources for refugee and host populations.
- Prepared for Practice (PfP) - advancing Health Education in Somaliland.
- Partnership for Enhanced and Blended Learning (PEBL) - to address the critical academic staff shortages faced in many East African universities.

200. SPHEIR normally gets participants through calls for proposals which generally fall into five 'categories':

- a. *System level* - focuses on an entire national higher education (HE) system
- b. *Financing* - focuses on new models for private financing of HE
- c. *Degree delivery* - focuses on a specific degree programme or discipline
- d. *Refugee* - focuses on HE for refugees in Africa
- e. *Pedagogical reform* - focuses on delivery and teaching practices often covering multiple degree programmes or broad disciplinary area

201. In selecting from the proposals, SPHEIR considers: confidence in achievability of outcomes and impact during life of the project; transformative potential, especially at the system level; and sustainability of *effect* which may or may not require sustainability of the partnership. Ultimately, successful proposals should facilitate a community of practice among SPHEIR supported partnerships; entail programme and project level monitoring, evaluation and *learning*; and provide opportunities to contribute lessons to the broader discourse on higher education reform experience in Africa and globally.

PLENARY SESSION VII: (Round Table Discussions): Management of Higher Education in Africa

Session I: Improving management of higher education institutions for quality, relevance and sustainability

Moderator: Professor Goolam Mohamedbhai (former Secretary General, AAU)

202. The need to have good communication to teach or communicate research results in non-technical terms was brought out during the round table discussion. Effective communication was necessary given the ever changing environment impossible we operate in. It is needful to have communities of practice to bring in new knowledge; given challenges of setting up quality assurance systems.
203. Data collection was noted as a big issue; there was demand for reporting at national levels. African government institutions already have in place data collection systems to meet this demand.
204. The lack of manual of procedures/standards/guidelines in francophone institutions was also noted, while the drive to develop the African Standards and Guidelines (ASG) for quality assurance was in progress and would be ready for use by all quality assurance stakeholders in Africa.
205. There was the complaint that African graduates do not have soft skills that should equip them for the world of work, and the need to integrate them in institutional curricula. It was posited that the academia should work closely with policy makers and industry players in order to design and develop curricula that address the need of the labour market and national priorities.
206. In order to tackle the increasing rate of graduate unemployment and make Africa graduates more marketable, soft skills, work ethics, team work, use of ICT, etc. should be mainstreamed in the institutional curricula. It was opined that throughout the course of study, students should be trained to be independent thinkers, as well as how to locate and use appropriate resources.
207. Tracer studies should regularly be conducted to find out from employed graduates and industry players what is lacking from student tuition or what they found to be very useful; while career centres of counselors should be established to help students choose appropriate courses and also help in placement of graduates in work.
208. Because of dwindling support from governments across Africa, higher education institutions need to define trajectories for promising researchers and disengage

them from teaching so that they can focus on getting funds from projects. Institutions should further set up research chairs and use research capacity in focusing on patenting research, and applied research based on industry needs.

209. Higher education institutions should also leverage public-private partnerships for putting up infrastructure and setting up intellectual property offices. But care should be taken not to compromise the core functions of the universities since exclusive focus on revenue generation can grind other functions to a halt.

Session II: Relevance of TVET for sustainable development in Africa

Moderator: Professor N.N.N. Nsowah-Nuamah (President, Regent University College of Science and Technology, Ghana)

210. The session addressed the issue of TVET scope and its access highlighting that polytechnics and industrial training centres have limited enrollments and infrastructure; generally expensive and lack qualified faculty leading to low demand. Additionally, the TVET graduates are easily employed and are seen to be of low status than their counterparts from public universities. Indeed, HND is valued less than Bachelors degree and TVET is seen as the second option instead of the first. Gender stereotypes make female enrollment in TVET very low as the field is considered as male-dominated with limited career options. Also, TVET is not widespread as there are few TVET institutions; teacher training institutions are not well resourced.

211. Panelist further argued that the issue of technical universities should be looked at from a different perspective. In ensuring quality of educational delivery, the usefulness and contributions of technical universities should be recognized and appreciated. In some countries, two separate entities manage traditional universities and technical universities, resulting in duplication of efforts, while an ideal situation would be to have them under one umbrella body which will promote synergy and avoid duplication of efforts.

Launching of Higher Education Cluster

212. During the CESA planning meeting held in Addis Ababa at the premises of the African Union Commission in June 2016, it was agreed that a Higher Education Cluster be created in support of the realization of the Continental Education Strategy for Africa. Officers of the AUC outlined key elements of this Strategy that pertain to higher education and, with agreement of the participants, launched the Cluster.

213. The key elements include:

Guiding Principles:

- Knowledge societies called for by Agenda 2063 are driven by skilled human capital.
- Holistic, inclusive and equitable education with good conditions for lifelong learning is sine qua non for sustainable development
- Good governance, leadership and accountability in education management are paramount.
- Harmonized education and training systems are essential for the realization of intra-Africa mobility and academic integration through regional cooperation
- Quality and relevant education, training and research are core for scientific and technological innovation, creativity and entrepreneurship.
- A healthy mind in a healthy body -physically and socio- psychologically- fit and well fed learners.

Pillars:

- Strong political will to reform and boost the education and training sector.
- Peaceful and secure environment
- Gender equity, equality and sensitivity throughout the education and training systems
- Resource mobilization with emphasis on domestic resources
- Strengthen institutional capacity building through
- Good governance, transparency and accountability
- A coalition of actors to enable a credible participatory and solid partnership between government, civil society and the private sector.
- Orientation and support at different levels and types of training
- The creation and continuous development of a conducive learning environment

Generic Strategic Objectives:

- Revitalize the teaching profession to ensure quality and relevance at all levels of education
- Build, rehabilitate, preserve education infrastructure and develop policies that ensure a permanent, healthy and conducive learning environment in all sub-sectors and for all, so as to expand access to quality education
- Harness the capacity of ICT to improve access, quality and management of education and training systems

- Ensure acquisition of requisite knowledge and skills as well as improved completion rates at all levels and groups through harmonization processes across all levels for national and regional integration
- Accelerate processes leading to gender parity and equity
- Launch comprehensive and effective literacy programmes across the continent to eradicate the scourge of illiteracy
- Strengthen the science and math curricula in youth training and disseminate scientific knowledge and culture in society
- Expand TVET opportunities at both secondary and tertiary levels and strengthen linkages between the world of work and education and training systems
- Revitalize and expand tertiary education, research and innovation to address continental challenges and promote global competitiveness
- Promote peace education and conflict prevention and resolution at all levels of education and for all age groups
- Improve management of education system as well build and enhance capacity for data collection, management, analysis, communication, and use
- Set up a coalition of stakeholders to facilitate and support activities resulting from the implementation of CESA 16-25.

Specific Higher Education Cluster Objectives

- Mobilize member organizations' expertise and technical support in implementing agreed work plan and other joint activities in higher education.
- Facilitate and support information sharing, communication and interaction within the cluster and beyond.
- Agree on key indicators for measuring progress
- Contribute to the development, implementation, monitoring and reporting of agreed annual or biennial work plans- anchored against established baselines
- Establish Sub-Clusters as need arises and also when a group of stakeholders wishes to coordinate and implement a higher education initiative within the objectives of the Strategy.
- Provide a continental platform for dialogue and communication through regular meetings to create awareness and ownership of Continental Education Strategy for Africa (CESA 16-25), particularly on higher education related objectives.
- Develop programmes to support national, regional and continental higher education activities with keen focus on quality assurance; harmonisation and mutual recognition of qualifications; excellence in research, innovation and entrepreneurship; teaching and learning; and institutional leadership.
- Promote policy dialogue at relevant regional, continental, and global conventions interested in and committed to higher education.

Proposed Organisational Structure

- Chair – AUC: Overall leadership, policy guidance, supervision and administrative coordination
- Co-chairs – ADEA, UNESCO: Technical and logistical support
- Coordinator – AAU: Technical leadership and programmatic coordination
- Facilitator: International Network for Higher Education in Africa (INHEA), represented by Prof. Damtew Teferra, its founding director

Proposed Cluster Membership

- AU Member States' Ministries responsible for of Higher Education and research
- National and Regional Quality Assurance Agencies
- Representatives from departments in charge of education of RECs
- National, regional and other institutions of higher learning and research
- Regional and continental university associations: IUCEA, SARUA, CAMES, RUFORUM, AWAU, ACDE, AVU, and Pan African University
- International organizations: UN organizations and others
- Knowledge networks and think tanks
- Development actors: EU, GIZ, among others
- Private sector, civil society
- Other stakeholders that can contribute to the achievement of CESA's strategic objectives related to higher education

PLENARY SESSION VIII: Reports

Internationalised Domain Names and the Role Academia

214. Mr Yaovi Atohoun (Stakeholder Engagement & Operations Manager – Africa Internet Corporation for Assigned Names and Numbers {ICANN}) introduced ICANN. The focus was on the Internationalised Domain Names (IDN) and what the academia can do to advance the project.
215. ICANN is a volunteer-based global organisation which, among other functions, supports the stability of the Domain Name System (DNS) through its work (including contracts and accreditations). The DNS provides addresses for the Internet so people can find websites, send email, and do other online tasks. ICANN manages the DNS' top-level domains. ICANN helps to promote healthy competition and choice in the Generic Top-Level Domains (gTLD) marketplace.
216. Linguistic diversity (more than 3000 languages) in Africa poses some challenges to the Label Generation Rulesets project, which is critical to access to the world

wide web. So far, Africa has contributed work on the Arabic Script LGR Proposal, Ethiopic Script LGR Proposal, and some progress on Latin Script LGR Proposal by Latin Panel. Several other works need the relevant communities in Africa to come forth. People in the academia are urged to “Get Involved! Speak up for your language”. They can do this through: volunteering for the academic’s script Generation Panel (GP) where they contribute expertise for their script; reviewing work through public comments work being done at ICANN; and attending regular IDN Program Update sessions at ICANN meetings.

217. Africa is the only region having unused IP addresses. Institutions were encouraged to get blocks of IP addresses. There is now version 6, although version 4 is still there; but version 6 is not compatible with most equipment. Yet, institutions were still encouraged to get it.

Presentation of the online discussions on the Conference Theme and Sub-Themes

Professor Paul Omaji (Rapporteur General)

218. AAU made history in 2011 when it convened an e-(online) discussion on the theme and sub-themes of the 2011 Conference, as a precursor to the face-to-face meeting. The reason given for that initiative, being that higher education in Africa was at a very critical stage and called for open debates by the general public who might not have the opportunity to attend the Conference, is as valid today (if not more) as it was then. Thus, it was expected that the history would play out more robustly for the 14th General Conference and Golden Jubilee Celebrations. However, the arrangement fell flat on this occasion.
219. Professor Omaji observed that from the total of about 455 participants that subscribed to the 2011 e-discussion with about 112 postings, the participation went down to only one posting this year. The security of the AAU blog platform which was used for the discussion may be a factor, as Omaji’s attempt to test the system was met with several spam attacks. He recommended that AAU investigate the situation and revitalise the outlet, because it is the way of the future.
220. In the place of reporting on the non-existent online discussions, Professor Omaji drew attention to a video on a positive turnaround for a “homeless man with a golden voice”, which had some resonance with the AAU Golden Jubilee Celebrations. It was a thing of great joy that by the Celebrations date, AAU had moved into its own permanent home, courtesy of the magnanimity of the Government of the Republic of Ghana. Professor Omaji challenged the participants to help AAU score greater achievements as the ‘golden’ voice of higher education in Africa.

Reports from various Conference themes parallel sessions

221. The Rapporteurs presented their reports, and all the reports have now been incorporated into this General Report.

SIDE EVENT: African Open Science Platform – Research Data Alliance Workshop, 7-8 June

222. A workshop on Open Science was organized as a side event to the AAU General Conference. This [African Open Science Platform \(AOSP\) Project](#) workshop in partnership with the AAU was co-sponsored by the AAU, AOSP and the Research Data Alliance (RDA). Day 1 of the workshop focused on open data, open science, and FAIR principles for sharing data, and was attended by 45 participants. Case studies on open data/open science were shared and covered activities in 13 African countries, incl. Kenya, Botswana, Madagascar, Mauritius, Cameroon, Nigeria, Ethiopia, Uganda, Tanzania, Namibia, Mozambique, and Burkina Faso.

223. On Day 2, Dr Simon Hodson – Director of [CODATA](#) – presented a workshop on formulating an open science policy on national as well as institutional level, and how to go about to address the challenges, involving various key stakeholders. Key elements to include as part of an open science/open data policy were identified by participants. The workshop paved the way for continuous discussions on open science/open data policy, infrastructure, incentives and capacity building with African countries, and it managed to strengthen regional, national and institutional collaborations. It assisted in establishing networks of what is happening in terms of open science and open data on the African continent, and in making progress towards the development of an open science and innovation platform (incl. protocols, policies and procedures) that provide the structure and support to ensure that science objectives are achieved. The presentations from this workshop can be accessed from <http://africanopenscience.org.za/?p=232>

224. The workshop was followed by the first meeting of the AOSP Technical Advisory Board, chaired by Professor Joseph Muliaro Wafula of Jomo Kenyatta University of Agriculture and Technology.

PLENARY SESSION IX: AAU Business Session II

Chair: Professor Olusola Oyewole

Constitutional amendments and Bye-laws reviews for ratification

225. Professor Ehile presented all the amendments and reviews:

AMENDMENTS TO THE AAU CONSTITUTION

- 1.1 Article III - The official medium of communication of the Association shall be English, French, Arabic and Portuguese.
- 1.2 Article VI - Membership of the Association is contingent upon payment of first annual subscription by the institution.
- 1.3 Article V - Proposals to modify or review this Constitution shall be submitted in writing to the Secretary-General at least four months before the opening of the General Conference at which they are to be considered. Copies of these proposals shall be sent by registered or electronic mail to member institutions by the Secretary-General, at least one month - before the opening of the General Conference;

AMENDMENTS TO AAU BYE LAWS

- 1.4 Bye Law 1: An institution whose application is approved by the Governing Board, is duly recognised as a member upon the payment of the first annual Membership Subscription fee.
- 1.5 Bye Law 1: A new AAU member will be issued with a Certificate of Membership under the seal of the AAU effective from the date of receipt for the year of first annual subscription.
- 1.6 Bye Law 2: A subsidiary of a parent university which is already a member of AAU has to satisfy the basic admission criteria before becoming a member of AAU.
- 1.7 Bye Law 12: In exceptional circumstances, where a quorum of two-thirds of the members cannot be physically present, a member willing to join Board meetings through other forms such as ICT-mediated technologies, shall be considered and counted as a participant.

226. **Article III:** Addition of Portuguese language as one of the AAU official languages was moved by Crawford University, seconded by Great Zimbabwe University, and the amendment was approved.

227. **Article VI:** That membership of the Association is contingent upon payment of the first subscription. Delta State University moved, seconded by at least 3 institutions and the amendment was also approved.

228. To be in good standing was a matter of practice, but the delegates wanted it enshrined in the constitution and this was approved.
229. A proposal to send documents one month instead of 6 months before the relevant review meetings was moved by Afe Babalola University, seconded by University of Barua and it was approved.
230. Edwardo Mondlane University supported the new certification of Regent University of Science and Technology.
231. A proposal to issue a certificate of membership annually was rejected; rather, it was agreed that a certificate to be a member of the Association of African Universities would be issued once.
232. **By-Law 12:** A proposal to regard virtual attendance at Board meetings as valid for members who cannot come in person, for the purpose of forming a quorum for the meetings, was moved by Crawford University and approved.

Ratification of New Admissions

233. From Kigali to date (2015-2017), there were 22 new full members and 5 associate members. Correction was made to one of the names of the new member: Educacion, not Educado. The following 2017 new admissions were ratified.
234. New Admissions in 2017
1. Ho Technical University, Ghana
 2. Umaru Musa Yar'adua University, Nigeria
 3. Jazeera University, Somalia
 4. Marodijeh University, Somalia
 5. Lukenya University, Kenya
 6. Accra Technical University
 7. Adeleke University, Ede, Osun State, Nigeria
 8. Kesmonds (KIU America), Bamenda, Cameroon
 9. Koforidua Technical University, Ghana
 10. Edo University Iyamho, Edo State, Nigeria
 11. Instituto Superior de Ciências de Educação à Distância (ISCED), Mozambique

Elections of the new Governing Board

235. The Elections Committee met presented the names of the Board. Crawford University moved, and the names were approved.
236. The outgoing president thanked his colleagues on the outgoing Board for working with him to implement the AAU programmes of work. He also thanked the following for their contributions: Professor Goolam Mahommedbhai, Professor Ishaq Oloyele, Professor George Magoha, Professor Oluguemiro Jegede, Professor Etienne Ehile, and all the AAU Secretariat staff.

Acceptance speech by the new Governing Board President

237. Professor Orlando Quilambo (the new AAU Governing Board President) thanked the participants for the confidence reposed on him by electing him to the office. He promised to discharge his responsibilities faithfully to AAU, as he asked the new Board to work with him to move AAU to the next level in its mandate. He also thanked the AAU Secretariat for the completion of the Strategic plan, and the Government of Ghana for the completion of the construction of the Secretariat.

PLENARY SESSION X: Closing Ceremony

Chair: Professor Orlando Quilambo (new Governing Board President)

Presentation of the Conference Communiqué

238. Professor Paul Omaji (Rapporteur General) presented the draft communiqué; and it was resolved that it be redrafted to: reduce it to 2-3 pages as most of the details can go into the general report; make the language more diplomatic (less flowery); and remove specifics or data whose validity could not be verified at the session.
239. The contributions were quite invaluable, as they intended to make the final version a better voice from the Conference as well as provide an opportunity for all of us to learn. It was suggested for AAU to consider restructuring subsequent proceedings so that agreements or resolutions can be clearly captured after every session of discussions (arguments and debates) on the presentations.
240. The refined Communiqué is presented below:

The Association of African Universities (AAU) held its **14th General Conference** and marked its **Golden Jubilee Celebrations** on 4-8 June, 2017 in Accra, Ghana, under the theme: *“AAU@50: Achievements, Challenges and Prospects for Sustainable Development in Africa”*.

His Excellency Nana Dankwa Akufo-Addo, President of the Republic of Ghana, honoured the Celebrations by his presence and declared the Conference open. In his address, he:

- a. challenged the AAU to work on a central repository for its collective achievements, as a higher education community in Africa, from which it can showcase its contributions to the development of Africa;
- b. pleaded with the AAU and its members to engage more with the private sector, governments and development agencies at all levels, including appointment of the representatives of these external bodies on university advisory boards; and
- c. encouraged Africa’s higher education institutions to continue to place emphasis on youth development, inclusive and equitable education, good governance and accountability in education management.

We, participants at the Conference and Celebrations,

241. **Appreciate** that the people and Government of Ghana have consistently nurtured and promoted AAU from its inception till today, the latest evidence being the provision of the new AAU secretariat building and the residence for the AAU Secretary-General, making Ghana meritorious of the title, *“The Champion of Champions of the AAU”*.
242. **Affirm** that AAU has been effective in the last 50 years in providing a platform for relevant research, reflection, consultation, debates, collaborations and capacity building in Africa’s higher education, and also serves as a key agency for implementing the higher education initiatives in the African Union’s *Agenda 2063*, and other development frameworks on the Continent.
243. **Note with appreciation** that African Governments, AAU members, sponsors and development partners, including the European Union (EU), the African Development Bank (AfDB) and the African Capacity Building Foundation (ACBF), have contributed significantly to the achievements of the AAU to date.
244. **Commend** the timely launching at the Conference of a Higher Education Cluster to help realise the strategic objectives of the Continental Education Strategy for Africa (CESA 2016-25), thus adding impetus to AAU’s work, and urge all relevant stakeholders to actively participate in the promotion of both the Cluster and the Strategy.

245. **Welcome** the draft African Standards and Guidelines (ASG) for Quality Assurance in Higher Education developed within the framework of the Harmonization of African Quality Assurance and Accreditation (HAQAA) initiative and encourage higher education institutions leaders and other stakeholders to provide constructive feedback.

Promoting Science, Technology, and Innovation Through Higher Education

246. **Commit** to AAU aligning its activities with the African Union's *Agenda 2063*, particularly its decadal implementation strategies - namely, the Continental Education Strategy for Africa (CESA-2025) and the Science, Technology and Innovation Strategy for Africa (STISA-2024), which give prominence to science, technology and innovation (STI).
247. **Urge** African Governments to improve on their investments in STI to achieve the African Union's vision of an "*integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena.*", and to consider adopting leapfrogging strategies, for example through the setting up of science villages to rapidly nurture STI.

Curriculum Reform as Key to Graduate Employability and Entrepreneurship

248. **Urge** all higher education institutions in Africa to involve students and other sectors, through reforms in curricula, pedagogy and research, to engender more innovations that change lives in community for the better, including incorporating relevant skills such as critical thinking, effective communication and adaptability, to enhance graduate employability and promote entrepreneurship.
249. **Further urge** the AfDB to continue to implement, with involvement of the AAU, the 'Jobs for Youth in Africa' Strategy that it launched in May 2016.

The Role of Higher Education in Managing the Environment

250. **Affirm** that Africa's higher education must play multiple roles in advancing the preservation, management and improvement of the continent's environment, for example by ensuring that their infrastructures are (re)built in an environmentally sustainable way and by applying the agricultural extension services model to engage the wider population in environmental sensitivity in the language they can understand.

Higher Education as a Tool for Promoting Democratic Governance

251. **Encourage** African higher education institutions to model and nurture transformational leadership, good governance, inclusive stakeholders management, conflict resolution and respect for human rights, so as to enhance their relevance to the wider community.
252. **Urge** university administrators in Africa to create an enabling environment for students to learn and participate in democratic governance, and to deal firmly with campus-based factional attacks and vicious or intolerant partisanship which are a threat to socio-economic development.

Mobilising Resources for Higher Education in Africa

253. **Note** with concern that resources are not provided to African higher education institutions in sufficient amounts in a regular and expected manner, and that many of them are unable to operate at an acceptable level of academic competence, fitting for the competitive global knowledge economy.
254. **Encourage** higher education administrators to leverage the enormous expertise and entrepreneurial spirit within their institutions to generate significant finances for their operations.
255. **Further encourage** the AAU to take up the matter of Governments not allowing universities to use their own internally-generated funds to implement their projects.
256. **Strongly urge** Governments, businesses, development partners, parents and students to meet their financial obligations to higher education institutions in a timely manner to enable them to run their operations effectively.
257. **Particularly welcome** the AfDB's plan to establish an *Africa Education Fund* and urge the Bank to deploy much of the Fund at the earliest possible time, beyond the level of their 2005-2016 period disbursements, given the increasing needs of higher education.
258. **Urge** those AAU members that are yet to pay up their membership dues to do so promptly, as well encourage AAU to more vigorously pursue the resource commitments of the African Union Commission and other relevant benefactors.

Official Closing

259. Some participants offered closing remarks.

260. Hon. Dr Joof, representing the Government of Gambia, encouraged AAU to move forward and lead the better future for Africa's higher education. In particular, it should champion issues to do with youth and graduate employability, poverty eradication, and gender parity. With commitment, "Yes, we can do it before 2063". Professor Salifu of the National Council for Tertiary Education, Ghana expressed gratitude to AAU for choosing Ghana for its 14th General Conference and the Golden Jubilee Celebrations. He encouraged AAU to continue to play a transformative role. What we have learnt from this Conference should enable us to collaborate more as a continent.
261. Dr Njenga of the AUC reminded participants that HE enrolment in Africa is below 15 per cent and the continent needs to move to 50 per cent for it to experience sustainable development. Some of the random niggling questions are: What is your contribution? Who is developing the teachers? Who is complaining about graduate quality? How are we doing in STI? Who is doing what in African HE? We all need to be on it together. There should be coalition of stakeholders in HE. We need multi-sectoral partnerships because issues by nature are cross-cutting. We need championship from heads of States who can made resources flow to HE. Domestic resource mobilization should be intensified, and data collection and management should be improved. Let us recognize ourselves in Africa and not wait to have recognition from other countries.
262. The new AAU President of AAU said that he was aware of the opportunities and challenges ahead and called upon the delegates to have a team spirit, work hard and meet their obligations. He urged all to expand networks to other regions. He thanked all who voted him in.
263. He then declared the 14th General Conference and Golden Jubilee Celebrations officially close at 6:30 pm on Thursday, 8 June 2017.

Professor Paul Omaji
Rapporteur General