
HRK German Rectors’ Conference
Virtual Conference
Monday 18 January, 2021

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Peter Maassen
Unique window of opportunity for strengthening African-European university research collaboration

- Negotiations about a new EU-AU strategic ‘equal partnership’ agreement (to be signed Spring 2021)
- Growing political interest in HE, science and innovation in Africa
- Acknowledgement of importance of universities for realizing Sustainable Development Goals and promoting Knowledge Society agendas in Africa
- Rapid growth of demand for and participation in higher education in Africa
- Growing focus on research function of African universities
- Establishment of first intra-African alliance of research universities (ARUA)
African Research Universities Alliance (ARUA):

- Brings together 16 leading universities in Africa.
- Collaboration to develop local research excellence to find solutions to the development problems of Africa.
- Set to become a pan-African network for bringing research and academic excellence to the fore throughout the region by developing strong and viable research universities.
The ARUA Approach

- Work with both African and Non-African Universities to achieve:
  - Enhancement of research to solve Africa’s development problems (SDGs), in terms of quantity and quality
  - Expansion of graduate training significantly in order to improve the quality of African universities
  - Improvements in the capacity for research management
  - Heightened use of research for advocacy purposes
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<thead>
<tr>
<th>Name of Centre</th>
<th>Location</th>
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<th>Location</th>
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<tbody>
<tr>
<td>Energy</td>
<td>Stellenbosch University</td>
<td>Poverty and Inequality</td>
<td>University of Cape Town</td>
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<td>Water</td>
<td>Rhodes University</td>
<td>Migration and Mobility</td>
<td>University of the Witwatersrand</td>
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<td>Materials Development and Nanotechnology</td>
<td>University of the Witwatersrand</td>
<td>Urbanisation and Habitable Cities</td>
<td>University of Lagos</td>
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<td>Food Security</td>
<td>University of Pretoria</td>
<td>Post-Conflict Societies</td>
<td>Addis Ababa University</td>
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<td>Climate Change</td>
<td>University of Cape Town</td>
<td>Unemployment and Skills Development</td>
<td>University of Lagos</td>
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<td>Non-Communicable Disease</td>
<td>University of Nairobi</td>
<td>Notions of Identity</td>
<td>Makerere University</td>
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<td>Good Governance</td>
<td>Addis Ababa University</td>
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An equal AU-EU partnership

• EU and AU aim at **more equal, strategic partnership**, instead of ‘relationship based on development aid’

• **Research and Innovation** will form an important component in the new AU-EU partnership.
Global rivalry and African higher education

• **USA**
  - New initiative of private foundations
  - Multi-year USA – Africa university program
  - Preliminary budget: US$ 1 billion

• **China**
  - New multi-year government program for China-Africa education cooperation
  - Preliminary budget: (equivalent of) US$ 15 billion
  - Major new program for investing in digital technology in African HE

• **Russia**
  - Russia – Africa Summit: Sochi 23-24 October 2019
  - Key topic ”Russia and Africa: Science, Education, and Innovation for Economic Development”
Key trends in African universities

• Remarkable growth in undergraduate capacity, enrolment and graduation
• At graduate level growth especially at Master level; doctoral education is lagging behind (exception: South Africa)
• Lack of adequate career opportunities in Africa for young scholars
• Research output in African research universities is increasing, but no fields (yet) where scholars employed by African universities are both strong (in relative world share) and highly productive.
• Large dependence on international funding for R&D; continuous low levels of national public investments in HE and R&D; lack of competitive research funding in Africa
• Female participation in universities carefully increasing, but women underrepresented in senior tenured academic staff positions and institutional leadership
• Most African universities still teaching dominated, amongst other things, in their HRM/personnel policies
• Universities largely ‘decoupled’ from innovation investments
Africa’s output of scientific papers: WoS 2000-2019

Source: CA Web of Science – all collections/ Beaudry & Mouton (2017) Young Scientists in Africa: Preliminary Results; Johann Mouton, CREST, 2020
Research output trends: top research universities in Africa

Source: CA Web of Science – all collections / Beaudry & Mouton (2017)
Young Scientists in Africa: Preliminary Results;
Johann Mouton, CREST, 2020
Relative share of selected universities to national research output: WoS publications 2000-2016

<table>
<thead>
<tr>
<th>Universities</th>
<th>Country</th>
<th>University publications</th>
<th>Total publications for the country</th>
<th>HERANA university %</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Botswana</td>
<td>Botswana</td>
<td>2,074</td>
<td>3,397</td>
<td>61%</td>
</tr>
<tr>
<td>University of Cape Town</td>
<td>South Africa</td>
<td>23,209</td>
<td>133,385</td>
<td>17%</td>
</tr>
<tr>
<td>University of Dar es Salaam</td>
<td>Tanzania</td>
<td>2,499</td>
<td>9,411</td>
<td>16%</td>
</tr>
<tr>
<td>Eduardo Mondlane University</td>
<td>Mozambique</td>
<td>768</td>
<td>1,956</td>
<td>39%</td>
</tr>
<tr>
<td>University of Ghana</td>
<td>Ghana</td>
<td>3,761</td>
<td>8,586</td>
<td>36%</td>
</tr>
<tr>
<td>Makerere University</td>
<td>Uganda</td>
<td>5,146</td>
<td>9,263</td>
<td>56%</td>
</tr>
<tr>
<td>University of Mauritius</td>
<td>Mauritius</td>
<td>858</td>
<td>1,311</td>
<td>65%</td>
</tr>
<tr>
<td>University of Nairobi</td>
<td>Kenya</td>
<td>3,191</td>
<td>17,893</td>
<td>18%</td>
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Academic impact of African research output

Africa mean normalised citation score

- Year: 2000-2018

Source: SciSTIP (Mouton and Blanckenberg, 2017; Johann Mouton, CREST, 2020)
Mean normalised citation scores (MNCS) versus Relative field strength (RFS) of African research output for selected fields (2000-2004)
Mean normalised citation scores (MNCS) versus Relative field strength (RFS) of African research output for selected fields (2015-2018)
Research collaboration:
African scientists WoS 2000-2019

Source: CA Web of Science – all collections/ Beaudry & Mouton (2017) Young Scientists in Africa: Preliminary Results; Johann Mouton, CREST, 2020
Research collaboration between Africa and four major science countries/regions

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<tr>
<td>US %</td>
<td>27.1</td>
<td>31.5 ↑</td>
<td>33.5 ↑</td>
</tr>
<tr>
<td>UK %</td>
<td>23.6</td>
<td>22.3 ↓</td>
<td>23.1 ↑</td>
</tr>
<tr>
<td>EU %</td>
<td>43.6</td>
<td>41.4 ↓</td>
<td>40.4 ↓</td>
</tr>
<tr>
<td>China %</td>
<td>1.3</td>
<td>3.2 ↑</td>
<td>6.7 ↑</td>
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CREST, Stellenbosch University, 2020
The Guild – ARUA Initiative

Starting-points:

1. Many national and supranational programmes in Europe aimed at African higher education
   • Valuable collaboration experience in many African and European higher education institutions
   • Programmes focus mainly on education and management/administration; research (and innovation) more marginal
   • Lack of coordination between programmes

2. Need to develop and promote new ideas and approaches for boosting research function of African universities

3. Two agendas:
   a) Short term: Influence strategic AU-EU agreement under negotiation (to be signed Spring 2021)
   b) Long-term: Contribute to enhanced coordination and collaboration among European countries in national programmes for supporting African universities and African-European university collaboration
Activities and developments 2019 – Spring 2020:

- Meeting (Oct. 2019) with representatives European Commission (from 3 DGs)
- Three publications (Feb. 2020) promoting major European investments in African research universities:
  1. The Guild Insight Paper
  2. Joint ARUA-the Guild call for investment in African research universities
  3. Joint ARUA – the Guild position paper
- Intended event (April 2020) in Brussels to promote ARUA – The Guild ideas cancelled
- Online meetings (April-May 2020) with European Commission and national organisations
- Interaction and feedback positive, with suggestion to develop ideas into concrete proposal
Strategic positioning ARUA – the Guild: Indication of impact

SFIC Africa Task Force Report (analysis and orientations for future European-African cooperation in science, innovation and higher education) published 08/05/2020:

The ARUA/Guild collaboration presented as one of the remarkable and successful initiatives of relevance for the new Africa-EU partnership
Second half 2020 – 2021

• July: Concept Note presenting ARUA-Guild Initiative
• July-September: Meetings with leadership representatives of various DGs and the Africa-Europe Innovation Partnership (AEIP)
• August – now: National promotion of Guild-ARUA Initiative by Guild and ARUA member universities
• Final negotiations AU-EU postponed to Spring 2021
July 2020: Launch of «Confronting our common challenges»

• To realise the ambitious objectives of the AU and EU major investments in African universities research capacity are needed.

• We call for investing in Centres of Excellence, built on sustainable alliances of African research universities, in key areas of common African – European interest.
How will this work?

By focusing on common African-European challenges and building long term partnerships.

**Five priority areas** for investment and university collaboration:

- Public Health
- The Green Deal, Blue (Marine) Economy and Energy Transitions
- Digital Transformations for a more sustainable economy and society
- Good Governance, peace and security
- Migration, Mobility, and overcoming discrimination
Long-term African-European university partnerships
(In the 5 priority areas)

Basic elements:

• Promoting intra-African research collaboration reflecting regional/linguistic diversity

• Building on European university collaboration experience (EUI!)  

• Aiming at strengthening academic excellence and socio-economic relevance of African research  

• Open to collaboration with civil society, and associated public and private partners
Key areas where capacity building is needed

• Joint research projects (Africa-African & African-European) in one of the five priority areas
• High-quality research Masters programmes
• Doctoral schools with sufficient capacity (at least 20 PhD students per year)
• Postdoctoral fellowships for young African scholars
• Appropriate administrative systems
• Research infrastructure and equipment
• Effective structures for knowledge transfer, social engagement and innovation
Costs

• The coming ten years (2021-2030) at least € 100 million per year new investments in university research capacity in Africa are needed for realising the Agenda 2063 knowledge society aims, incl. the development of up to 200 research-intensive universities in Africa
Next steps

Short-term Agenda:

1. Continue to inform and mobilize central actors at the national and Continental (Africa and Europe) level with the aim to influence EU-AU negotiations about new agreement

2. Various events for promoting the ARUA-Guild initiative will be organised Spring 2021

3. Provide input from European universities’ side into EU’s development of new research and innovation programmes aimed at capacity building in Africa
Next steps

Long-term agenda includes:

1. Build national coalitions in Europe of key organisations and actors, including national university associations/councils; development cooperation agencies; research councils; internationalization agencies; politicians.

2. Promote the coordination of national strategies and programmes with the aim to develop an intergovernmental European strategy for strengthening research capacity at African universities and African-European research (and innovation) collaboration

3. Build strategic European-African partnerships among national (and continental) university associations and councils

4. Promote the inclusion of African associated partners in European Universities Initiative (EUI) alliances