

Building Africa's agricultural science, technology and innovation capacity for accelerated, sustainable and inclusive development

Draft meeting Concept Note of 14 March 2019

Venue: Marrakesh, Morocco

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Background

The African Union Agenda 2063 aspires for Africa to become a major knowledge and innovation force in the global economy. The Agenda's action plan provides a more integrated and inclusive Africa that uses its natural resources, human capital and institutions to drive technological, social and business innovation for development. It proposes to leapfrog the conventional approaches in ways that ensure rapid, sustainable growth, reduce out-migration and improve quality of life. Highly-skilled human resources are essential to develop and deploy new technologies to meet the Agenda's goals and aspirations¹. This is also envisioned in the United Nations 2030 Agenda on sustainable development, particularly notably Goals 4 on "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" and Goal 10 on "Reduce inequality within and among countries". Africa is lagging in high-level skills, technologies and innovations, and more needs to be done, in a different way, to ensure that its young population and institutions are empowered to develop new knowledge and innovations for societal and economic transformation. This is most important in agriculture and other primary sectors which are providing food, employing larger proportion of the population and providing the largest export and foreign exchange earnings for the continent.

Technical Vocational Education Training (TVET), Higher Education Science and Technology (HEST), and Research and Development (R&D) institutions therefore play a critical role in developing the right quality of human resources, new knowledge, technologies and innovations required to transform the continent's economy and improve service delivery. However, the tertiary education sector in Africa faces critical challenges. It has rapidly expanded yet there are limited infrastructure and Information Communication Technology (ICTs) facilities to deliver quality teaching and learning, research and outreach for community transformation. Staff capacity is limited in terms of staff to students' ratio, qualification in terms of PhD training, shortage of technicians, ageing senior academics, capacity to conduct research for development that directly impacts communities and economies. Most of the continent's tertiary education institutions are isolated and yet could share and leverage existing human resources and infrastructure within the continent to build their own capacity. It is imperative to increase investment in tertiary education to strengthen the production of the required human resources at all levels (from vocational education graduates to PhDs) and

¹ Knowledge has been identified as the single-most important engine of growth and the driving force of economic performance in OECD countries.

through technological innovation. Higher education partnerships are also important enabling mechanisms for African tertiary education institutions to share resources and experiences to fulfil their mandate. In the past university partnerships were focused predominantly with the Advanced Economies in Europe, Japan, and North America, with less within Africa and other regions, including Latin America and the Middle East.

Africa's agricultural productivity has not kept pace with the growing food demand and needs to rise faster. If projected food demand to 2030 in Sub-Saharan Africa is to be met by productivity gains, then a faster rise in key food security crops including cereal yields is urgently required. However, realising this requires that much greater investment in the technologies, processing capacity, logistics and skills is needed. Importantly, structural shifts in the food system within a rapidly urbanising Africa implies that different skill needs and greater capacity to implement policies for agricultural growth and diversification are required. Consequently, investment in skills and education is critical to facilitate the necessary transformation as was the case in Asia. This need is significantly urgent on the continent as many of Africa's youth lag behind in terms of sufficient foundational and technical skills and capacity needed to promote innovation and catalyse agriculture as a key growth sector in many regions of the continent. As the continent experiences dramatic transitions in its food system as well as growth in private sector and particularly agribusiness, investment in building foundational skills, enhancing Technical and Vocational Education and Training (TVET), and developing entrepreneurship and related requisite skillsets, is critical.

Recognising the untapped potential returns to investment in education and challenges that Africa's tertiary education sector faces, the Regional Universities Forum for Capacity Development in Agriculture (RUFORUM), a network of 105 African universities in 37 African countries², developed the African Universities' Agenda for Agricultural Higher Education, Science, Technology and Innovation (AHESTI). The 12 year strategy (2018-2030) was developed to strengthen the capacity of African universities and other tertiary institutions to contribute to economic transformation through development of skilled, entrepreneurial and innovative human resources, technologies and innovations for community and economic transformation. AHESTI was developed after a yearlong continental consultation process involving Africa's higher education and agricultural science, technology and innovation sector actors. It also integrated feedback provided by partners including policy makers, university leaders, development partners, private sector leaders, farmers, academics and students who participated in RUFORUM's annual and biennial convening since 2004 when it was initiated. AHESTI was also developed based on lessons learnt from the 15 years of RUFORUM's work in the continent, which RUFORUM believes should be deepened in collaboration with other partners within and outside of Africa who have been interested in nurturing the continent's growth.

Implementation of AHESTI will enhance the impact of RUFORUM's work and that of other African institutions by nurturing and sustaining partnerships brokerage across the continent especially between universities and non-university actors for increased relevance to local

² Burundi, DR. Congo, Ethiopia, Kenya, Rwanda, South Sudan, Uganda, Sudan, Tanzania, Botswana, Zimbabwe, Malawi, Mozambique, Namibia, Angola, Zambia, South Africa, Lesotho, Swaziland, Madagascar, Mauritius, Egypt, Benin, Morocco, Tunisia, Chad, Cameroon, Congo Brazzaville, Gabon, Nigeria, Senegal, Burkina Faso, Cote D'Ivoire, Mali, Ghana, Liberia and Sierra Leone.

communities and national economic development. It will strengthen the leaders of Africa's higher education and agricultural research institutions for inclusive and sustainable rural development. Data and foresight capacity for decision making will be strengthened for impactful investment in higher education, science, technology and innovation for development³ through initiatives such as [African Higher Agricultural Education Capacities](#) and the action plan from the African Union Committee of Ten Heads of State and Government (C10) Championing Education, Science and Technology which RUFORUM is an implementing partner.

The Consultative Forum

Co-convened by the OCP Group⁴, African Development Bank, World Bank and the Bill and Melinda Gates Foundation, the consultative forum is organised to provide a platform for dialogue between the African tertiary education sector (TVET, HEST, R&D) and the global and African development partners to chart a way forward for transforming African agricultural higher agricultural education, science, technology and innovation (AHESTI). It is proposed to engage global and African partners with passion for Africa's transformation through skilled human capital, science, technology and innovation with inclusive agricultural growth. Inclusive agricultural growth relates to mitigating the effects of commercialization of agriculture and related large corporate takeovers of farming and value chains and the food system as a whole, from production to retail, by ensuring smallholder farmers and poor rural residents are included in the benefit streams. As such, inclusion requires that agricultural growth helps existing farmers, traders, and others in the value chain to mitigate risk, to become more profitable and to scale up what they are doing. Thus, inclusion cannot be only at the level of primary production rather it includes family farmers being able to access markets, by aggregating their outputs, and selling into value chains that are able to efficiently get produce to the growing numbers of urban consumers. Inclusive growth provides for reducing inequalities in ownership and income, and offers the opportunity for incomes from agriculture to be reinvested to stimulate further growth in farming, in the rural non-farm economy and, through rural-urban linkages, into the urban food economy, to feed Africa's growing and urbanizing population⁵.

The Consultative Forum is organised to discuss areas of synergy to support the implementation of African Universities' Agenda for Agricultural Higher Education, Science, Technology and Innovation (AHESTI), the [Action Plan](#) of AU-C10 approved in November 2018, Building Africa's Science, Technology and Innovation Capacity (BASTIC) programme, African Development Bank's High Five Agenda, and Strategy of OCP Group for Africa's higher agricultural education science, technology for development. A special focus will be given to

³ RUFORUM facilitated the establishment and agenda for the Committee of Ten Presidents Championing Education, Science and Technology (see RUFORUM [Engagement with Policy Makers](#)).

⁴ The OCP Group (formerly the Office chérifien des phosphates) was founded in 1920 in Morocco and transformed into a limited company (OCP SA) in 2008. It is one of the leading exporters of phosphate rock, phosphoric acid and phosphate fertilizers in the world. The OCP Group has nearly 21,000 employees located mainly in 4 mining sites and two chemical complexes in Morocco, as well as in other international locations. Further details can be obtained from: <http://www.ocpgroup.ma/en/who-we-are>

⁵ Hall, H. 2014. What is inclusive agricultural growth?: Agricultural investment, productivity and land rights in the context of large-scale investments. Available from: <http://www.plaas.org.za/blog/what-inclusive-agricultural-growth-agricultural-investment-productivity-and-land-rights-context>

laying a framework for strengthening use of Digital Technology for learning and sharing information. This Consultative Forum will consider existing initiatives within the partner organizations, including the Strengthening Higher Agricultural Education in Africa (SHAEA) and agree on areas of synergy for successful implementation of aspirations and goals set out in these strategies and ultimately the higher agricultural education, science, technology and innovation sub-sector.

Objectives

The overall objective of the Consultative Forum is to initiate dialogue amongst development partners who are closely involved or have interest in supporting African higher agricultural education, science and technology for Africa's rural and economic transformation. The specific objectives of the forum are;

1. To provide a platform for open sharing of experiences, lessons and ideas on the emerging landscape related to human capital development in agriculture, science and technology in Africa;
2. Prioritize actions from the selected strategies which will accelerate rural and economic development;
3. Propose areas of synergy, implementation and coordination mechanism for delivery of the AHESTI and associated programme, BASTIC (Building Africa's Science, Technology and Innovation Capacity);
4. Hold specific discussion on strengthening the use of Digital Technology for learning and lesson sharing across African Universities, as well as share innovations in the Agro-Digital space; and
5. Address the "what next" to underscore the need for practical actions in revitalizing Africa's AHESTI.

Approach

The consultative forum will be held in Marrakesh, Morocco on 20th - 22nd March 2019. It will be hosted by the OCP Group and co-organised with the African Development Bank and the Bill and Melinda Gates Foundation with participation from partners with interest in high level skills development, science, technology and innovation in Africa. The meeting will be informed by key presentations on the status of African agriculture, science, technology and innovation capacity and its implications for future actions. Opportunity will be provided for partners to share their current and previous activities relevant to the meeting and also to highlight key perspectives for moving the discussion forward. A facilitated discussion will be held by partners to identify areas of synergy and how future actions could be better coordinated to achieve aspirations set out in strategies under discussion.

Expected outcomes

1. Partners successfully utilise the convening forum as a strategic and collaborative platform for sharing of experiences, lessons and ideas on human capital development in agriculture, science and technology in Africa;
2. Partners and stakeholders prioritize actions for accelerating rural and economic development;

3. A joint understanding and prioritization of synergies relevant for the successful implementation and delivery of AHESTI as well as the BASTIC initiative;
4. Develop strategies for the use of Digital Technology for learning and lesson sharing across Africa and share ideas on what's working in the Agro-Digital space;
5. Jointly advance strategies for undertaking practical actions in support of Africa's AHESTI amongst and with the partners engaged.

Meeting venue: To be confirmed by OCP Group

Proposed agenda

DAY ONE: Wednesday 20 March, 2019

Venue: TBC by OCP Group

Time	Session	Lead
08:30 - 09:00	Registration	RUFORUM and OCP
09:00 - 09:15	Introduction of participants	Facilitator
Session 1: Setting the scene		
<i>Chair: UM6P/OCP Group</i>		
09:15 – 09:35	Welcome remarks by: <ol style="list-style-type: none"> 1. OCP Morocco (<i>Chief Executive Officer</i>) 2. Context of the meeting (<i>RUFORUM Executive Secretary</i>) 3. World Bank representative 	Facilitator
09:35– 09:50	Status of African agriculture, science, technology and innovation capacity in Africa and its implications for future actions	Representative from African Development Bank
09:50-10:05	Efforts, lessons and issues on strengthening higher education in Africa	Andrea Johnson (Carnegie Corporation of New York)
10:05-11:00	Statements from partners & plenary discussion	<ul style="list-style-type: none"> ▪ Arab Bank for Economic Development in Africa ▪ Arab Organisation for Agricultural Development ▪ Bill and Melinda Gates Foundation ▪ Green Climate Fund ▪ Islamic Development Bank ▪ Mastercard Foundation ▪ OCP Group
11:00 - 11:30	<i>Morning Coffee/Tea Break/health break and Group photo</i>	OCP Group
Session 2: Operationalising the African Universities' Agenda for Agricultural Higher Education, Science, Technology and Innovation (AHESTI)		
<i>Chair: Dr. Simeon Ehui (World Bank)</i>		
11:30 – 12:00	The African Universities' Agenda for Agricultural Higher Education, Science,	Dr. Florence Nakayiwa, (RUFORUM)

Time	Session	Lead
	Technology and Innovation (AHESTI) and the link with AU-C10 Action Plan <i>(Plenary presentation and discussion)</i>	
12:00 – 13:00	Group discussions on mechanisms for resourcing AHESTI flagship programmes <ol style="list-style-type: none"> 1. Transforming African agricultural universities to meaningfully contribute to Africa’s development (TAGDev) 2. Regional anchor universities for agricultural higher education in Africa (RANCH) 3. Cultivating teaching and research excellence (CREATE) 4. Knowledge hub for university networking, partnerships and advocacy (K-Hub) 	Group leaders and facilitator
13:00 – 14:00	<i>Lunch break</i>	OCP Group
14:00 – 15:00	Presentations on the group work	Facilitator and group leaders
15:00 – 16:30	Plenary discussion on AHESTI	Facilitator
16:30 - 17:00	Pulling it all together — Summary of main ideas from Day One	Joint secretariat of OCP/UM6P/RUFORUM
17:00 – 18:00	Afternoon Coffee/Tea Break	OCP Group
18:00	End of Day One	
19:00 – 21:00	<i>Evening dinner and informal interactions</i>	OCP Group

DAY TWO: Thursday 21 March, 2019

Venue: TBC by OCP Group

Time	Session	Lead
08:30 – 08:45	Registration for day two	RUFORUM and OCP
08:45 - 09:00	Recap of day one and emerging issues for consideration	One of the participants to be identified
Session 3: Levers for scaling out		
<i>Chair: UM6P/OCP</i>		
09:00 – 09:20	Solutions for youth employment challenge and poverty reduction: Young Africa Works Strategy	Dr. Codou Diaw (Mastercard Foundation)
09:20 – 09:40	Accelerating Youth Innovativeness, Entrepreneurship and Financial Inclusion for Africa’s Development (AYIF-Africa)	Dr. Anthony Egeru (RUFORUM)
09:40 – 10:00	Discussion	Facilitator
10:00 – 10:20	Strengthening use of digital technology for learning and sharing in African universities and ideas in the agro-digital space	Presenter: Rafiq El Alami (UM6P/OCP)

Time	Session	Lead
		Discussants: Prof. Jude Lubega (RUFORUM) & David Olivier Trequer (World Bank)
10:20 – 10:40	Discussion	Facilitator
10:40 – 11: 10	<i>Morning Coffee/Tea Break/health break</i>	OCP Group
11:10 – 11:30	Presentation and discussion of the project – Building Africa’s Science, Technology and Innovation Capacity Project (BASTIC)	Mr. Emmanuel Okalany (RUFORUM)
11: 30 – 13.00	Discussion	Facilitator
13:00 – 14:00	<i>Lunch break</i>	OCP Group
14:00 – 14:30	Pulling it all together - Summary of main ideas during the second day	Joint secretariat of OCP/UM6P/RUFORUM
14:30 – 15:30	Group discussions: 1. Development partners 2. Universities and other actors	Facilitator and group leaders
15:30 – 16:30	Plenary report back	Facilitator
16:30 - 17:00	<i>Afternoon Coffee/Tea Break</i>	OCP Group
17:00 – 18:00	Closing remarks from: 1. African Development Bank 2. Arab Bank for Economic Development 3. Arab Organisation for Agricultural Development 4. Bill and Melinda Gates Foundation 5. Carnegie Corporation of New York 6. Islamic Development Bank 7. Mastercard Foundation 8. World Bank 9. RUFORUM 10. OCP	Facilitator
19:00 – 22:00	<i>Evening dinner and informal interactions</i>	

DAY THREE: Friday 22 March, 2019

Venue: UM6P

Time	Session	Lead
08:00	Departure to UM6P	UM6P/OCP
Session 4: Side events		
<i>Chair: UM6P/OCP</i>		
9:00 – 13:30	Side Event 1: African Digital Agriculture Programme (AfriDAP)	RUFORUM & UM6P/OCP Digitalisation Team
	Side Event 2: Accelerating youth innovativeness, entrepreneurship and financial inclusion for Africa’s development (AYIF-Africa)	RUFORUM & UM6P/OCP Entrepreneurship Team

Time	Session	Lead
	Side Event 3: Plant Nutrition and Soil Fertility Challenges & Opportunities in Africa	APNI & CESFRA
	Side Event 4: Policy and Policy processes in Delivering Africa's Agricultural Transformation	OCP & ICABR
	OCP/RUFORUM/ Development Partners consultative meetings	
13:30 – 14:30	<i>Lunch break</i>	UM6P/OCP
Session 5: Circular/bioeconomy, value chains and technology policy related to Africa <i>Moderator: Karim El Aynaoui (OCP) or Rachid Doukkali (UM6P)</i>		
Time	Session	Lead
14:30 – 16:30	Introduction	Karim El Aynaoui or Rachid Doukkali
	Circular economy	Rachid Doukkali (UM6P)
	Bioeconomy and regulatory policy	Justus Wesseler (Wageningen University)
	Value chain and technology analysis: <ul style="list-style-type: none"> ▪ Theory and practice ▪ Enhancing innovation in the Ugandan agri-food sector 	David Zilberman (University of California, Berkeley) Travis Lybbert (University of California, Davis)
	Technology policy related to Africa: Policies for innovation in African agriculture	Carl Pray (Rutgers University)
16:30 -17:00	<i>Afternoon Coffee/Tea Break</i>	UM6P/OCP
17:00-18:00	Tour of UM6P	UM6P/OCP
18:00	Departure from UM6P	UM6P/OCP

DAY FOUR: Saturday 23 March

Venue: UM6P

Time	Session	Lead
08:00	Departure to UM6P	UM6P/OCP
09:00 – 11:00	Open meeting for UM6P scholars, graduate students and RUFORUM	UM6P/OCP
11:00 – 11:30	<i>Morning Coffee/Tea Break/health break</i>	UM6P/OCP
11:30 – 13:30	Wrap-up meeting between RUFORUM and UM6P/OCP	
13:30 – 14:30	<i>Lunch break</i>	UM6P/OCP
14:30 – 16:30	UM6P/OCP & ICABR core team meeting	UM6P/OCP & ICABR
16:30 – 17:00	<i>Afternoon Coffee/Tea Break</i>	UM6P/OCP
17:00	Departure from UM6P	UM6P/OCP