

***Strengthening Higher Agricultural Education for Agri-Food Systems Transformation in Africa (SHAEA) Project***

***Cameroon, Cote d'Ivoire, Ghana, Kenya, Malawi and Mozambique***

***Preliminary Project Description***

*This note provides background information for the SHAEA Call for Proposals for Regional Anchor Universities. The Call for Proposals refers to Component 1 and Subcomponent 2.2 of the Project. The maximum estimated funding envelope for Components 1 and Subcomponent 2.2 is up to US\$27 million. That amount is indicative and subject to change depending on resource availability of participating countries and the number of participating institutions as Regional Anchor Universities (generally one per country) together with its consortia involving Associated Tertiary Agricultural Education Institutions and key partners. The preliminary project description in this document is for the purposes of facilitating the proposal preparation and is subject to change throughout project preparation, including in response to continuing national level consultations and the internal World Bank review process.*

## **Strategic Context**

1. **The opportunities for Sub-Saharan Africa's food system to generate jobs, create sustainable economic growth, and promote food security are immense.** Agriculture accounts for one-third of GDP and over 65 percent of employment throughout Africa. By 2025, more than half of the job growth in Ethiopia, Uganda, Tanzania, Mozambique, Malawi, and Zambia will still be in the agri-food sector (Figures 1,2).<sup>1</sup> Production is increasing but not as fast as population growth, and productivity is stagnating. More than three-quarters of the poor live in rural areas, so improving farmers' incomes will significantly reduce poverty and increase equity. Agricultural growth provides opportunities for rural entrepreneurs to establish small businesses that grow value chains and take advantage of modern communications to link town and country markets. Evidence from the agricultural transformation in Asia suggests that a 1% acceleration in agrarian growth can generate up to 1.5% in non-agricultural growth.<sup>2</sup> The agricultural sector is vital for creating robust, equitable, and diversified economic growth.

2. **Yet, Africa's food system is failing to keep pace with food demand.** Cereal yields have accelerated in Sub-Saharan Africa since the 1990s (doubling the cereal yield growth rate), but they are not rising fast enough to meet growing food demand. If projected food demand to 2030 in Sub-Saharan Africa is to be met by productivity gains alone, cereal yields will need to increase at 3 percent a year, about a third higher than the 2.2 percent rate achieved during 2000-14, notwithstanding climate change's negative impacts and potential development tradeoffs, i.e., with

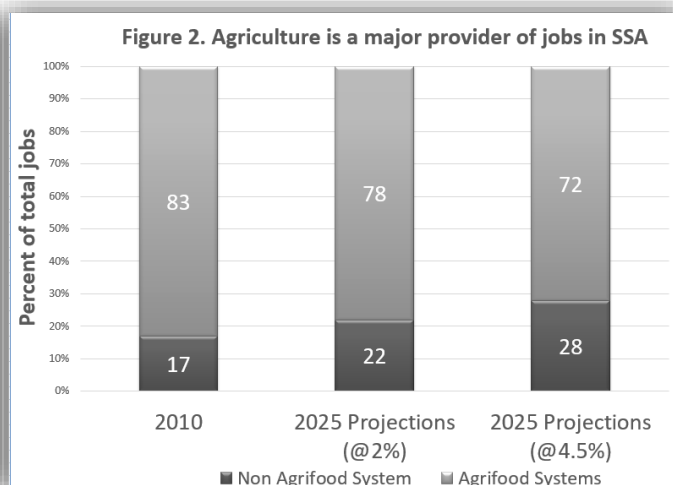
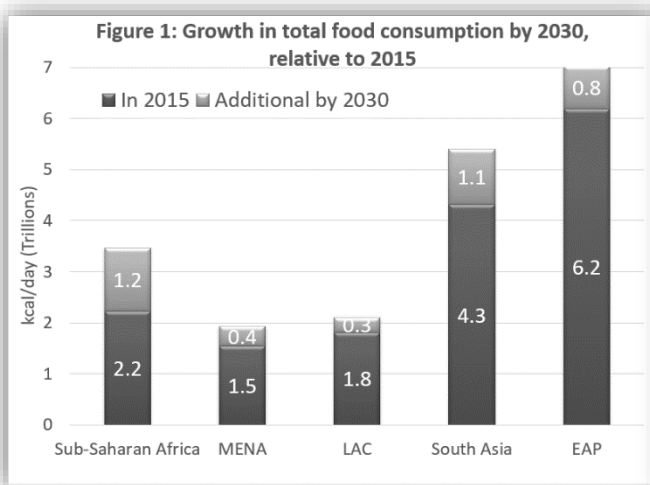
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<sup>1</sup> Tschirley et al (2015). Africa's Unfolding Diet Transformation: Implications for Agri-food System Employment. Journal of Agribusiness in Developing and Emerging Economies, 5(1). Baseline derived from LSMS surveys.

<sup>2</sup> Agriculture for Impact. 2010. The Montpellier Panel Report: Africa and Europe: Partnerships for Agricultural Development.

the environment.<sup>3</sup> The situation in the livestock sector in Sub-Saharan Africa is similar. Overall food import bills on the continent are rising, reflecting a growing demand for higher-value processed foods that are not being met domestically. The enabling policy and business environment are not adequately responding to the mega-trends that are reshaping the food system and the broader economies on the continent. The skills needed to catalyze agricultural transformation in today’s context are in short supply. They span a different set of skills across the agriculture and the broader food system value chains and include (besides the traditional agricultural sectors) food processing, manufacturing, and distribution.

3. **Structural shifts in the food system mean different skill needs for the increasingly youthful workforce.** Investment in skills and education enabled structural transformation in Asia - it is even more urgent in SSA. Farmers with stronger foundational skills are much more successful at adopting high-productivity technologies (e.g., rice in Ghana, tobacco in Malawi and maize in Kenya).<sup>4,5</sup> There is an urgent need to invest in the transformation of higher agricultural education to produce the quantity and quality of graduates and knowledge needed to achieve the African Union’s Agenda 2063. The Agenda 2063 envisions human capital on the continent developed to its full potential, and agriculture that “...will be modern and productive, using science, technology, innovation and indigenous knowledge. The hand hoe will be banished by 2025 and the sector will be modern, profitable and attractive to the continent’s youths and women.”<sup>6</sup>



Sources: Alexandratos and Bruinsma (2012) and Tschirley *et al* (2015).

Note: Jobs in agriculture projected at low/high overall economy growth rate scenarios (2% and 4.5%). Based on the averages for six countries of Easter and Southern Africa Region: Ethiopia, Uganda, Tanzania, Mozambique, Malawi, and Zambia from the analysis of Living Standards Measurement Surveys data by Tschirley *et al* (2015).

<sup>3</sup> Meyfroidt P. (2017). Trade-offs between environment and livelihoods: Bridging the global land use and food security discussions. *Global Food Security*, in press, <https://doi.org/10.1016/j.gfs.2017.08.001>.

<sup>4</sup> World Bank. 2017. *Africa’s Pulse. An Analysis of Issues Shaping Africa’s Economic Future*. Washington, DC: 53.

<sup>5</sup> Valerio et. Al. (2016). Cited after *Africa’s Pulse*, *ibid*.

<sup>6</sup> Africa Union Commission (2015). *Agenda 2063. The Africa we Want: 3*.

4. **A different set of skills is needed in support of an African food system** that is (i) climate-smart—more productive and resilient in the face of climate change while reducing emissions, both for crops and livestock; (ii) improves livelihoods and creates more and better jobs, including for women and youth; (iii) boosts agribusiness by building inclusive and efficient value chains; and (iv) improves food security and produces enough safe, nutritious food for everyone.

5. **The recent increase in investment in agricultural innovation holds the promise of making agricultural education and employment attractive for youth.** Cellular subscription and internet use in Africa are sky-rocketing. Farmers can now monitor irrigation, soil quality, pests and other factors on the field precisely using sensors and digital technologies which also enhances quality control. Precision farming and farming resource management is increasingly enabling growers to record all field applications and then track these resources from the field to multiple storage locations. Further, blockchain can transform the supply chains by catering to food safety, traceability, sustainability and fair-trade demands. Entrepreneurship around digital solutions has significant growth potential (e.g., Jack Ma’s investment in a new African entrepreneurs funding program “Netpreneur” supporting competition for digital solutions to drive Africa’s economies). Private sector-led innovation is at a cusp, enabling leap-frogging in agricultural transformation on the continent.

#### ***Getting the education system to respond to agriculture sector needs***

6. **Africa’s higher education institutions fall short of meeting the needs of the modern food system.** A high degree of misalignment of investment in higher agricultural education programs with labor market demands is evident from large cross-country differences in returns to higher agricultural education and Technical and Vocational Education and Training (TVET).<sup>7</sup> These challenges include (a) *skills mismatch* between the needs of the private sector, industry, NGO, CSO and government sectors and current university programs; (b) inadequate focus on approaches geared to sustainable, inclusive growth –need for more inter-disciplinary programs incorporating business and economics training to complement the overly theoretical training in agricultural programs; (c) inadequate opportunities for exposure to field research relevant to smallholder farmers; (d) limited mobility of staff and students across Africa, limiting intercultural exchanges and integration; (e) agricultural education tends to be too theoretical without practical or specialized focus and curricula need to be updated to the digital age. Few of the estimated 1500 public and private universities offer graduate programs<sup>8,9,10</sup> and research output remains low (less than two percent of global output). Graduate tracer studies also reveal the need to refocus the training on a different set of issues and competencies.

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<sup>7</sup> Africa Pulse (2017).

<sup>8</sup> PhD level staff in most universities range between 20-40% of academic staffing

<sup>9</sup> In 2007 only 0.17% of students in Southern Africa (excluding South Africa) enrolled in PhD, Hayward and Ncayiyana, 2014

<sup>10</sup> Hayward, F.M. and D.J. Ncayiyana, 2014 “Confronting the Challenges of Graduate Education in Sub-Saharan Africa” *International Journal of African Higher Education*

### **Results from Graduate Tracer Studies – Case of Makerere University**

To understand the gaps in agricultural training ecosystem, Makerere University in collaboration with Universities of Pretoria and Michigan State conducted a tracer study involving graduates of agriculture education training institutions.

When asked which are the key technical skills relevant for agricultural sector manpower training in the next two decades, 30.2% of the graduates mentioned value addition, followed by agricultural research and development (21.1%). This was followed by agricultural marketing/market linkage creation, entrepreneurship, and agriculture extension.

When asked what is to be done to make agricultural training more relevant to current employment opportunities - a majority of graduates (44.2%) revealed that for agricultural training to be relevant to current jobs, emphasis should be placed on research that is action-oriented, innovative and adaptive to the end users (agricultural chain actors). This can only be achieved if agricultural training institutions embrace collaborative research with other universities and employing organizations for appropriate feedbacks, incorporation of research finding in curriculum review and/or design as well as strict supervision of undergraduate student research projects. Further, graduates (16.7%) reported field attachment (internships) should be compulsory and should take a reasonable period of months. This will create greater opportunities for students to gain more hands-on practical experience that is needed in the labor market.

Source: By Johnny Mugisha and Anthony Nkwasiwe, Feb 2014, *Tracer Study of Agricultural Graduates in Uganda, Capacity Development for Modernizing African Food Systems (MAFS) Working Paper*

7. **Given the myriad of challenges, a paradigm shift needs to occur among Africa's academia leaders to set agricultural education on a different path.** Agricultural education, research and extension systems tend to be disconnected and coordination across these spaces in most countries is weak. Without those linkages, curricula, teaching methods, and outreach programs at universities are not appropriately contextualized; possibilities for producing adaptable graduates are not identified; and the effectiveness of agricultural education and research to promote innovation and scale up of modern technologies throughout agriculture's value chains remains limited.<sup>11</sup> Ongoing analysis of key human capacity constraints in Africa's agriculture, which accompanies the preparation of this project, also highlights limited attention and severe skills shortage in critical leverage areas to spur agricultural development in the region.

8. **Agriculture training institutes such as universities and agricultural colleges can effectively contribute to meeting the need for high-skilled workers in the food and agriculture sector.** Only two percent of Africa's students specialize in agriculture.<sup>12</sup> A comparison of 55 African states with India (with a similar population), shows that to reach the same research capacity at present, approximately 75,000 researchers are required in Africa.<sup>13</sup> The clear gap in demand for skills juxtaposed with the enrolment and completion indicators signals the potential for skill

<sup>11</sup> Alemneh, Teshome (2014). "Agricultural Higher Education in Sub-Saharan Africa: Partnerships and the Land-Grant Model." In: F. Swanepoel, Z. Ofir and A. Stroebel, eds. *Towards Impact and Resilience*. Cambridge University Scholars Publishing.

<sup>12</sup> Alliance for A Green Revolution in Africa, 2013

<sup>13</sup> Ibid

development by the universities. In the last two decades, enrollments in agriculture as a share of total enrollments have fallen from 5.7 percent to 3.3 percent at the pre-degree (technician) level, from 5.8 to 4.6 percent at degree level, and from 7.6 to 3.8 percent at postgraduate level.<sup>14</sup> Even with a large female agricultural labor force, women are underrepresented in tertiary agricultural education. Overall, women account for one out of every five students in the agricultural sciences in Africa; for instance - at the agricultural tertiary level in Cameroon 22 percent of students were female. The proportions are similar amongst teaching staff.<sup>15</sup>

	<b>Total population</b>	<b>Research Capacity</b>	<b># of researchers</b>
<b>India</b>	1.31B	120 per million	157,325
<b>Africa</b>	1.21B	67 per million	81,637

*The conditions are ripe for achieving impact at scale in Africa’s agricultural higher education*

9. **Recognizing the importance of upgrading skills for the agriculture sector, African governments have called for a coordinated regional initiative to strengthen staff capacity in African tertiary education institutions especially in the agricultural faculties.**<sup>16</sup> There is strong support for investment in higher agricultural education from the African Union through a Committee of Ten Heads of State Championing Education, Science, and Technology in Africa. Similarly, recently the inaugural AU African Economic Platform stressed the importance of developing human capacity to trigger growth and development in support of African agricultural value chain development.<sup>17</sup> The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) was tasked with spearheading that agenda in higher education institutions with a strong focus on agriculture.

10. **Consensus was reached on the need to promote the establishment of anchor universities to play catalytic role in helping drive a shift in agricultural higher education.** The Agriculture Principals & Deans Committee meeting in Khartoum in 2015 in the context of the Africa Union-led process identified key thematic areas that needed immediate attention for strategic investment to revamp agricultural education. In a follow-up meeting in 2015 in Windhoek, Namibia, August 2015 agriculture principals & deans agreed to establish Anchor Universities to work with satellite universities to provide regional training, support capacity development and research beyond anchor countries, work to increase the pool of women scientists, and promote regional integration, cooperation and learning. A series of RUFORUM annual meetings, convening hundreds of academia participants and other stakeholders, including the private sector, CSOs and students of agriculture faculties, have confirmed the validity of this approach.

11. **Consultations with key stakeholders in the African region concluded by identifying six Key Gap Areas (KGA) in agricultural higher education,** which can be filled through a model of anchor universities as networked knowledge hubs connected with satellite college and

<sup>14</sup> Cultivating knowledge and skills to grow African Agriculture. The World Bank, Agriculture and Rural Development Department

<sup>15</sup> Ibid

<sup>16</sup> See the link <http://repository.ruforum.org/documents/ministerial-communique-higher-education-science-technology-and-innovation-africa-20-21st>

<sup>17</sup> Inaugural African Economic Platform meeting hosted by AUC and Government of Mauritius, March 2017 bringing together Heads of State with high profile business and academic leaders.

universities or Associated Agricultural Tertiary Education Institutions (AATEIs), including those offering technical and vocational education and training (TVET). This is not an exhaustive list of priorities but reflects the changing nature of agri-food systems and the corresponding transdisciplinary agricultural skills needs in Africa:

- i. *Agribusiness and Entrepreneurship*, training experts in engineering for food processing, to design and build the food processing plants, food packaging, supply chain logistics to create supply chains that can be sustainable while moving food long distances to market. The technical skills need to be complemented with soft skills with integrative thinking to solve real production, processing, distribution or other problems. Enhancing the entrepreneurship spirit and mindset of graduates to create employment opportunities.
- ii. *Agri-food Systems and Nutrition*, training food science, technology, nutrition, and public health professionals who can contribute to product development to generate tasty, inexpensive nutrient-dense products by building on local palates.
- iii. *Rural Innovations and Agricultural Extension*, training professionals focused on increasing the productivity gains by supporting provision of agricultural advisory services to smallholder farmers and leveraging extension networks and technology tailored for smallholder farmers. Experts devising disruptive technology catered to primarily rural crop and livestock value chains.
- iv. *Agricultural Risk Management and Climate Change Proofing*, training professionals across disciplines adept and addressing climate change risk and promoting climate smart technologies and farming practices,
- v. *Agricultural Policy Analysis*, training experts who can provide evidence-based policy recommendation to drive agricultural strategy/policy formulation and implementation such as expenditure reviews, strategy development and prioritization for the future,
- vi. *Statistical Analysis, Foresight and Data Management*, training experts in spatial analysis and econometrics who can understand and forecast consumption patterns, conduct policy analysis and meet the private sector needs.

**12. Regional specialization in Key Gaps Areas at anchor universities is expected to result in significant economies of scale** at generating high-level agricultural skills and the efficient flow of knowledge through the existing continent-wide RUFORUM network of agricultural universities and colleges—connecting 85 universities and colleges with strong agricultural focus in 26 countries—and other partner knowledge networks such as that supported by the Africa Centers of Excellence program. This proposed Project will support the concept of the establishment of Regional Anchor Universities (RAUs) by promoting transformation of selected universities with strong comparative advantage in becoming regional agricultural knowledge hubs. It will promote the creation of world-class agricultural faculties with transdisciplinary focus and leadership in KGAs in which participating universities will have a comparative advantage and have potential to attract faculty, students and partnerships from the respective regions and sub-regions. The project intends to promote innovative partnerships and stimulate close linkages between the agriculture sector and universities.

**13. SHAEA will work closely with Regional economic communities (RECs) in each of the participating sub-regions of Africa.** In particular, the Economic Community for West African

States (ECOWAS), the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) will be used to identify key priorities for the regional anchors to pursue their regional agenda and to support the development of regional products that will contribute to the transformation of the regional agri-food sector. The priorities will ensure alignment of the RAUs to meeting regional objectives of CAADP, the Malabo Declaration and the Science, Technology and Innovation Strategy for Africa (STISA) 2024. The Regional anchors will also link to the research agenda of the sub-regional organizations such as West and Central African Council for Agricultural Research and Development (CORAF/WECARD),<sup>18</sup> Association for strengthening Agricultural Research in Eastern and Central Africa (ASARECA), Center for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA) both directly in each country through the national agricultural research systems, sub-regionally and through the umbrella Forum on Agricultural Research in Africa (FARA).

### **Project Development Objective**

14. The SHAEA Project Development Objective is “to strengthen linkages between selected African universities and regional agricultural sector needs for developing required human resources to accelerate agri-food systems transformation in Africa.”

15. Its attainment will be measured through the following key PDO-level indicators, as well as an additional set of indicators reflecting progress in the implementation of each of the project’s components, as reported in the Results Framework for the project:

- (a) % increase of sector actors acknowledging RAU’s leadership and management capabilities for Agri-food system transformation
- (b) % of agri-food sector actors satisfied with knowledge, competence, and skills of RAU graduates
- (c) Number of academic programs accredited and meeting international standards

### **Project Components**

16. **The proposed project will support the development of relevant human resources (especially the highly-skilled) required to accelerate agri-food systems transformation in Africa** through strengthening agri-food related education and training enhanced with transdisciplinary approaches and applied research at selected African regional anchor universities; promoting university linkages to the regional agricultural sector – its priorities, needs and stakeholders; and supporting university partnerships with public and private entities related to agri-food both within and outside the region.

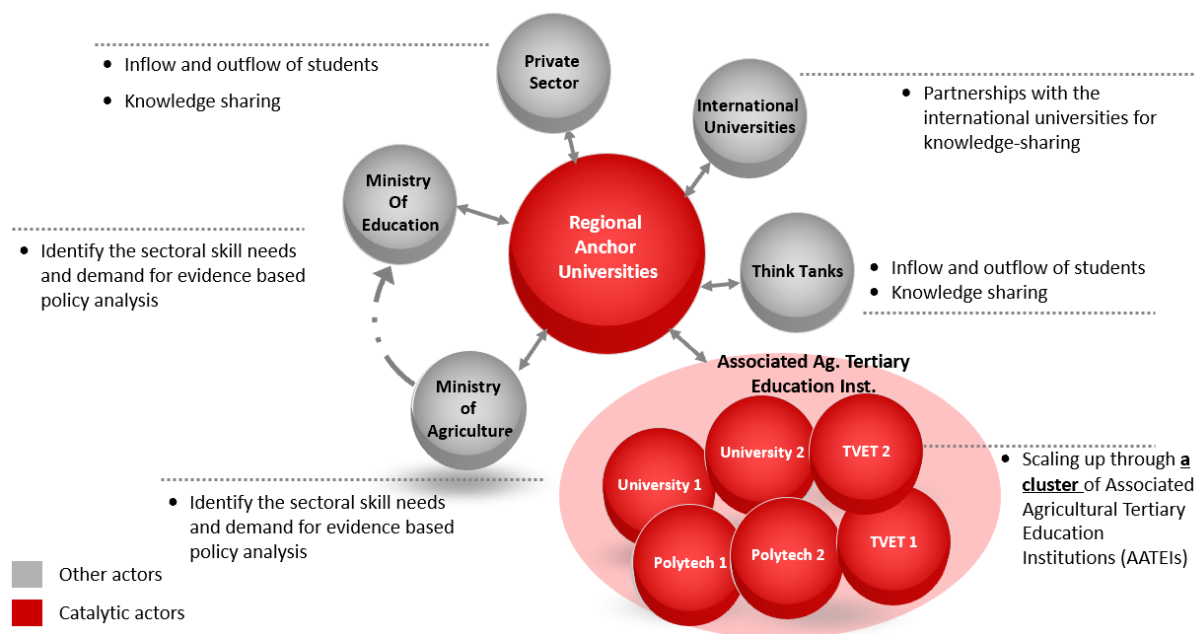
17. **The following linkages will be promoted through the project:** Regional Anchor Universities as catalysts at the center of the network, with linkages to the private sector at regional scale, small-scale farmers (through the Community Action Research Programs-CARPs), regional and national agricultural policy think-tanks, and Ministries of Agriculture to promote strong agri-food sector participation in RAUs’ programs design. The RAUs are expected to play a catalytic

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<sup>18</sup> As Africa's largest sub-regional research organization, CORAF works with 23 national agricultural research systems in 23 West and Central Africa countries to enhance prosperity and ensure a food security.

role in spearheading innovation in Key Gaps Areas (KGAs) and promoting the adoption of best practices through linkages and support to Associated Agricultural Tertiary Education Institutions (AATEIs). Chart below depicts these linkages for an illustrative RAU.

### SHAEA Project Actors and Linkages



18. **To sustain the effort, the proposed project focuses on system change rather than on individual institutions.** SHAEA therefore has three closely related components: (1) Strengthening RAUs for Agri-Food Systems Transformation; (2) Scaling up Impact; and (3) Project Facilitation, Coordination and Management. To ensure a focus on results, the project will employ a results-based financing (RBF) modality to support the implementation of key reforms and interventions carried out by each selected RAU under Component 1 and Component 2.2 (see table below) with approximately US\$27million investment. Each selected RAU will sign a Performance and Funding Agreement (PFA) with its government which includes the following elements:

- (i) At least 15 percent of the funding must be invested in partnerships and at least 10 percent must be invested in partnerships outside the RAU hosting country. A partnership agreement between the RAU and its respective partners needs to specify the work plan, budget and outcome arrangements;
- (ii) Approximately US\$5million should be spent on supporting Associated Agricultural Tertiary Education Institutions (AATEIs) through RAU-led partnerships;
- (iii) If civil works are needed, the spending should not exceed 25 percent of the funding; and,
- (iv) The Government’s existing commitments for continued funding of the institutional staff need to be part of the funding and performance agreement.

The implementation of activities under other components of the project will use the traditional expenditure-based financing modality and will be financed through the World Bank’s International Development Association (IDA) and support from development partners



<b>Component 1: Strengthening Regional Anchor Universities (RAUs) for Agri-Food Systems Transformation</b>	<b>Component 2: Scaling up Impact</b>	<b>Component 3: Project Facilitation, Coordination and Management</b>
<i>Strengthening RAUs in Regional Key Gaps Areas through Transdisciplinary Programs</i>	<i>Strengthening Knowledge Exchange and Partnerships at National and Regional Level</i>	<i>Enhancing Regional Project Facilitation, M&amp;E and Management</i>
<b>Subcomponent 1.1:</b> Developing Sustainable Institutional Leadership and Management Capacity	<b>Subcomponent 2.1:</b> Strengthening Knowledge Exchange and Faculty/Student Mobility Platforms	<b>Component 3:</b> Regional level project coordination and technical assistance to RAUs
<b>Subcomponent 1.2:</b> Delivering Research-based Relevant Training to Produce a New Generation of Transdisciplinary Problem Solvers	<b>Subcomponent 2.2:</b> Supporting associated tertiary agricultural education institutions through RAU-led partnerships	
<b>Subcomponent 1.3:</b> Fostering University’s Practical and Field-based Research and Outreach to Agriculture Sector Stakeholders	<b>Subcomponent 2.3:</b> Supporting capacity of the Agriculture Sector to formulate demand for skills and policy research	

### **Component 1: Strengthening Regional Anchor Universities (RAUs) in Regional KGAs**

19. This component will strengthen the selected candidates to become RAUs and their linkage with the agriculture sector to produce a new generation of transdisciplinary problem solvers for agricultural development and help address specific KGAs to catalyze agri-food systems transformation in Africa. This will be achieved through a set of activities grouped in three areas which form the three subcomponents: (i) developing sustainable institutional leadership and management; (ii) delivering research-based training to produce a new generation of transdisciplinary problem solvers for agri-food development; and (iii) fostering university’s practical and field-based research and outreach to agriculture sector stakeholders. The component will use the Results-Based Financing (RBF) modality with Disbursement-Linked Indicators (DLIs) and will be implemented by selected RAUs.

20. **The selected potential RAUs are expected to take a transdisciplinary approach and integrate the KGAs into their training curricula and research activities.** Each selected potential RAU is expected to lead at the continental level with developed post-graduate-level expertise in two to three of the regional KGAs. To achieve this, partnerships with the public (e.g., universities, think-tanks, research institutes), private (e.g., agribusiness firms), and non-

governmental (e.g., farmers organizations) entities within and outside the region in the agri-food space will be the key for RAUs' implementation.

21. Interested universities from the participating countries will need to meet the following eligibility criteria for submitting their proposals for consideration:

- a) Be from one of the participating countries which have IDA funding availability;
- a) Have had at least 5 cohorts of graduates with Masters degrees in areas relevant to the key gap areas
- b) Offer postgraduate programs at the Masters level (preferably also at the PhD level) in agri-food systems related topics and preferably one within the identified regional key knowledge gap areas
- c) Have at least one existing active and functional regional partnership in the area of agriculture;
- d) Demonstrate on-going effort in reform/change for institutional improvement;
- e) No land acquisition needed if civil works are expected to be financed under the project;
- f) If a university has an existing agricultural Africa Center of Excellence (ACE), it can apply as long as the proposed focus area for being a RAU is not the same as what is already supported by the agricultural ACE; and
- g) Only one proposal per university may be submitted

22. **The RAUs financed under SHAEA will be selected through an objective, transparent, strategic and merit-based competitive process.** The call for Proposals will be followed by an eligibility compliance check performed by the Regional Facilitation Unit (RFU), followed by a two-step evaluation process conducted by the Independent Evaluation Committee (IEC): a technical evaluation plus an onsite and leadership evaluation. The project Regional Steering Committee (RSC) will make the selection based on the following criteria: (a) Potential impact on agri-food systems; (b) Capacity and willingness to respond to Agri-food sector actors' needs; (c) Ability to find and engage strategic partners; (d) Ability to carry through institutional changes that enhance the universities performance, effectivity and efficiency; (e) Ability to design and execute high quality transdisciplinary postgraduate programs within at least one of the six regional key gap areas; (f) Ability to obtain international accreditation of transdisciplinary postgraduate programs; (g) Integration of the Community Action Research Program (CARP) experiential learning model; and (h) Overall quality of proposal. The selected RAUs will also have to conduct financial, procurement and safeguards reviews, including both environmental and social assessments.

23. The selected RAUs are expected to implement all the activities outlined under Subcomponent 1.1 – 1.3, and subcomponent 2.2 for helping strengthen the capacity of AATEIs. A total of US\$27million will be available for each proposal led by an RAU for subcomponents 1.1-1.3 and 2.2). RUFORUM will facilitate knowledge exchange between the RAUs and with other networks and institutions. RUFORUM will also provide technical assistance at country level to RAUs throughout project implementation, helping the RAUs play a catalyzing role in knowledge exchange on KGAs among the six participating countries and throughout the broader RUFORUM and other partner networks.

### **Subcomponent 1.1: Developing Sustainable Institutional Leadership and Management Capacity**

24. This subcomponent focuses on developing leadership and management capacity for agri-food systems transformation at selected candidate RAUs. Producing new generations of problem-solvers with transdisciplinary skills for and transforming systems of agri-food in Africa requires institutional change with a strong and forward-looking leadership at RAUs. In addition to training, study-visit and mentoring programs with partner institutions within and outside the region, SHAEA will apply the proven Adaptive Leadership Framework for RAU leadership capacity-building and design an innovative immersion program for making concrete institutional changes in RAUs and enable them to address the identified regional KGAs.

25. In parallel to the other subcomponents, each RAU will be asked to identify at least five critical challenges facing the university's governance and management capacity in addressing the KGAs that could be tackled by the university itself, e.g., curriculum, quality assurance, faculty development, cross-disciplinary collaboration, financial management, student recruitment and mobility, community outreach, etc., and then apply what was learned from the leadership training, with the support of experienced coaches from partner institutions, to find solutions for each of the identified challenges and implement them and measure the results. The aim is to help RAUs to establish an effective and sustainable mechanism capable of handling institutional change processes in the future. Such adaptive leadership framework and institutional change models have been successfully tested by many organizations across the world. The USAID-supported iAGRI change model experiment at Sokoine University of Agriculture in Tanzania is one such example. Disbursement for this subcomponent will be linked to the achievement of DLIs.

### **Subcomponent 1.2: Delivering Research-based Relevant Training to Produce a New Generation of Transdisciplinary Problem Solvers**

26. This subcomponent focuses on training and cultivating future generations of workers with transdisciplinary knowledge and skills that are required to transform Africa's agriculture sector. Given the growing needs in food security, climate change, nutrition and other parts of the agri-food systems, the traditional, single-subject and crop- and technology-focused narrow approach for training people to work in agriculture is outdated. Today's and future agricultural development depend on science and technology, innovation and entrepreneurship which requires transdisciplinary skills. In this regard, SHAEA will support the selected RAUs to deliver high quality and relevant research-based training to new generations of postgraduate students and equip them with transdisciplinary skills to address the KGAs. The following activities and their results are expected from each RAU:

- **Curriculum development** – reviewing and improving the content relevance of existing programs and developing transdisciplinary programs and courses, including online offerings, to address skill shortage in the KGAs. For quality and relevance, Curriculum Review Committees should have the participation of users of graduates e.g. agricultural advisory service providers, the private sector, and international experts. Selected RAUs will be encouraged strongly to forge partnerships with leading academic/research institutions within and outside the region to develop own capacities in this area through tools like twinning programs, etc.
- **Program benchmarking/accreditation** – as the selected RAUs are expected to play a leadership role in the region to help address the KGAs, their academic standards are

- expected to set an example of best practice for other agricultural tertiary institutions. Postgraduate programs at RAUs will be expected to meet international standards, demonstrated from the results of international benchmarking or accreditation, upon the attainment of which a potential RAU would be considered as a full RAU. A key lesson from ACE project series is that partnering with global leading agricultural universities to solicit their support is highly impactful and is strongly encouraged under SHAEA.
- **Faculty development** – For a transdisciplinary program to be successful faculty development through programs like visiting scholar for exchange are critical. The professional qualifications including modern pedagogies and transdisciplinary approaches of the faculty at the selected RAUs can be enhanced through a Visiting Scholar Program (VSP) for faculty exchange among RAUs and with leading global agricultural universities. The share of female faculty members in these programs will be monitored with the intent of promoting women’s participation and leadership in the field of higher agricultural education.
  - **Entrepreneurship training** – entrepreneurship is a critical competency expected from a new generation of problem solvers for agri-food transformation in Africa. The selected RAUs are expected to embed the development of entrepreneurship and other agri-food job market-relevant skills in their curricula and training, institutionalizing them in transdisciplinary programs. They are expected to develop internship and apprenticeship programs with agribusiness firms, agricultural advisory services, and agri-food related organizations for their students and measure the results and impact for improvement. Opportunities to increase female student participation in those programs will be particularly valued.
  - The Project will support activities that will **enhance the government’s effort to attract new graduates working in the sector**. In addition to internship placements during the student training, a Sector-wide Attachment Scheme (SAS) that will attach new graduates to prospective employers can be used to facilitate the employment of new graduates from the transdisciplinary programs developed under the project, encouraging them to stay in the agriculture sector and help in advancing agri-food transformation in the region. The financial support under SAS is for one-year to employers other than the Ministry of Agriculture who work in agri-food business or applied research. The attachments must focus on specific challenge in one of the six regional KGAs that the employer is currently trying or plans (within a year or two) to address.
  - **Increased access for regional, female and rural students**– to cultivate a new generation of critical mass of agri-food scientists/technicians and to build regional leadership, the selected RAUs are expected to develop a more inclusive admission policy for degree students and short-term trainees both from within and outside the country/region. To incentivize RAUs to increase enrollment of regional, female and rural students in transdisciplinary programs a differentiated reward/incentive system through the DLI approach by types of students will be applied (e.g., with students outside the region, female students or residents of rural areas might receive higher than average DLI linked to their enrollment).
  - **Improved quality and relevance through partnerships** – expected partnership with international and regional institutions for improvement of program quality with private sector. Need to make this clear as different from 2.2.

- **Investment in infrastructure/labs** – investment in critical infrastructure and laboratories necessary for the attainment of RAU program outcomes will be encouraged through the DLI framework. The total investment costs may not exceed a quarter (25%) the total maximum funding amount available through the DLI framework. Any new construction would be subject to an Environmental and Social Management Framework to be prepared by each participating country, and no land acquisition may take place for such purposes. This process will be further defined during project preparation.

27. Disbursement for this subcomponent will be linked to the achievement of DLIs.

### **Subcomponent 1.3: Promoting Practical Research and Outreach to meet Agriculture Sector needs**

28. This subcomponent focuses on the integration of the selected RAUs with the agriculture sector at both regional, national and local levels through a set of specifically designed outreach activities:

- **Strengthening research collaborations** with agri-food relevant public and private entities such as research institutes, think-tanks, agribusiness firms, advisory services, farmers. A competitive grant scheme will be developed to support Community Action Research Projects (CARPs)<sup>19</sup> with engagement of these entities on specific topics along the food value chains. These topics should be defined by relevant agri-food development priorities at the national and regional level. CARPs should also target staff and students from AATEI including TVET institutions as part of experiential learning engagements that lead to transformation of university programs to respond to real problems. . The CARP model has been tried out in many countries including in Benin, Ethiopia, Malawi, Kenya, Tanzania and Uganda is proven to be effective in terms of promoting adoption of advanced agricultural technologies<sup>20</sup>.
- **Upgrading knowledge and skills of agricultural advisory service personnel** with the latest research findings and technologies relevant to their services. Contractual or twinning arrangements with agricultural advisory service organizations and private sector will be supported to provide targeted training with short-term courses for extension service personnel.
- **Contributing to or leading national and regional agricultural policy dialogue and debate.** SHAEA will support the strengthening or establishing an agri-food policy center at each selected RAU with a focus on strategic planning and policy analysis for the agricultural sector, under the framework of the Sustainability Development Goals, AU Agenda 2063 and national visions. During the SHAEA implementation, the selected RAUs

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<sup>19</sup> These grants have been designed to encourage universities to develop and invest in more comprehensive and sustained action research focusing on particular geographical areas, in a selected commodity along the full value chain or to respond by providing research-based knowledge to support identified gaps in economic and agricultural sector policy. The idea is similar to that of universities playing a role in the provision of agricultural extension services.

<sup>20</sup> The CARP program in these countries were supported by the Bill and Melinda Gates Foundation and the Mastercard Foundation.

are expected to lead the formulation of a 10-year strategic plan to transform a regional KGA (*chosen based on a RAU's specialization*) with key stakeholders, both regional and national, contributing to the Comprehensive Africa Agriculture Development Program (CAADP)<sup>21</sup> and national agricultural strategy and investment plans.

- **Disseminating agri-food related general knowledge/information to agricultural sector stakeholders.** Creating an effective media platform (*e.g., online, TV or radio*) for agri-food knowledge dissemination accessible by those who work in agri-food including staff of ministries of agriculture, advisory service providers, and farmers.

29. Disbursement for this subcomponent will be linked to the achievement of DLIs.

## **Component 2: Scaling up Impact**

30. Agri-food system transformation in Africa faces many challenges and hinges upon strengthening skills at different levels to address them. Taking a regional approach of peer-learning with leveraging economies of scope and scale, the component will build RAUs' capacity in challenging areas that they commonly face in their institutional development Subcomponent 2.1 focused on knowledge sharing will be implemented by RUFORUM in collaboration with the project implementation entities in each participating country and benefit RAU's capacity building. The subcomponent will support the scaling of best practices from RAUs through networks and other means to improve the impact of the project. Systemic change that needs to take place across tertiary education institutions focused on agriculture requires partnerships across AATEIs. This component will support the development of a network of AATEIs in agriculture to meet the enormous demand and sustain the provision of quality and relevant labor force for the agriculture and food sector in the region. Subcomponent 2.2 will provide capacity building (upgrading) of other AATEIs<sup>22</sup> through partnerships with the selected RAU in areas that are critical to meeting agri-food transformation needs in the region. The project will benefit from RUFORUM's wider network to share lessons and best practices with the wider tertiary education network on the continent. This will involve linkages with the ACE programs and other world bank projects, and partnerships with regional economic communities (ECOWAS, COMESA, SADC etc) and sub-regional organisations.

31. Subcomponent 2.1 and 2.3 will use a traditional financing modality. Subcomponent 2.2 will be implemented by all RAUs with the support from RUFORUM, using an RBF financing modality with DLIs.

### **Subcomponent 2.1: Strengthening Knowledge Exchange and Faculty/Student Mobility Platforms**

32. This subcomponent focuses on support needed for building RAUs' capacity in challenging areas that they commonly face in their institutional development effort through the following activities:

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<sup>21</sup> Africa's policy framework for agricultural transformation, wealth creation, food security and nutrition, economic growth and prosperity for all

<sup>22</sup> AATEIs are tertiary-level education institutions which have an agriculture focus but weaker capacity than RAUs. SHAEA intends to strengthen RAUs and rely on them to help strengthen the agricultural tertiary education system in the region to support and sustain agri-food development in Africa.

- **Addressing common inadequacies of institutional capacity facing RAUs.** The areas chosen will be based on the capacity-building demand of RAUs, which could include areas like institutional leadership, experiential learning, cross-disciplinary collaboration, entrepreneurship and private-sector partnership development, community engagement/outreach, support to agricultural advisory services and farmers, M&E, grant management/revenue mobilization, internationalization, etc. Activities such as training workshops, conferences, study visits, partnership fairs, etc. will be organized by RUFORUM on the topics identified by and agreed with RAUs.
- **Establishing and institutionalizing a regular exchange mechanism** – University Vice-Chancellors and Principal/deans Round Table on Agri-Food Transformation in Africa – between RAUs and global leading agricultural universities, at which specific challenge topics presented by RAUs will be discussed, and advice and good practices from global leading agricultural universities will be sought.
- **Promoting faculty and post-/graduate student exchange** and global relevant agricultural universities to learn how to address the regional KGAs with applicable good practices. An online “matching” platform to facilitate such exchanges will be developed and maintained by RUFORUM and available to RAUs first and eventually open to AATEIs.
- **Supporting partnership development** between RAUs and relevant regional agri-food organizations and networks both public and private in quality assurance, research, agribusiness, and agricultural policy.
- **Scaling impact of the project** by improving the sharing of best practices and lessons learnt from participating RAUs with key networks, regional economic communities and other actors.

33. This subcomponent will be implemented by RUFORUM in collaboration with the project implementation entities in each participating country and benefit RAUs capacity building, using the traditional SoE-based financing modality.

### **Subcomponent 2.2: Supporting Associated Agricultural Tertiary Education Institutions (AATEIs) through Partnership with RAUs**

34. This subcomponent encourages the formation of consortia of RAU and AATEIs to expand the impact of SHAEA on skills development to the agricultural sector. The RAUs will share their vision for strengthening the national tertiary education sector in line with the identified key gap area (s). Institutions to be supported under this subcomponent will include other universities at the national level, polytechnics, vocational institutions etc at the post-secondary level. The AATEIs will be supported to enhance their offering including through partnership of the AATEI with the private sector, research and other actors. The objective of the sub-component will be to expand the potential for impact of the proposal by strengthening key agriculture education sector actors. The subcomponent will support the following activities:

- **Offering leadership and management capacity-building support to AATEIs in the in the country and the region.** From their own experience in developing institutional leadership and managerial capacity and managing institutional change, the selected RAUs are expected to provide training modules (*including online ones*), internships, mentoring programs with AATEIs in the country and in the region.
- **Developing/strengthening a Visiting Scholar Program** at each selected RAU for

developing promising young faculty from AATEIs to upgrade their professional qualifications, including modern pedagogies and research skills and collaboration capability across disciplines and to address the “faculty-inbreeding” issue facing AATEIs in the country.

- **Supporting Improvement effort of AATEIs in upgrading their academic programs and standards.** The selected RAUs could participate in AATEI’s curriculum review committees, encourage their faculty to become adjunct faculty of AATEIs, provide joint research opportunities, have demonstration lectures, etc. through twinning arrangements. The selected RAUs could also provide support including training to the curriculum improvement of TVET institutions in key gap areas.
- **Providing high-quality online courses and materials** in the identified regional KGAs to AATEIs.

35. This subcomponent will be implemented by each of the selected RAUs with the support from RUFORUM, using an RBF financing modality with DLIs. Depending on the key areas of capacity strengthening needs agreed between AATEIs and a RAUs, a service provision model could be used for implementation with a possibility of resource transfer between the entities which will be, subject to fiduciary assessment during the Project appraisal.

### **Subcomponent 2.3: Supporting the Agriculture Sector to formulate demand for skills and policy research**

36. This component will focus on strengthening the linkages between the RAUs/AATEIs and the agriculture sector, especially helping strengthen the demand side for high quality, relevant and evidence-based training and research and supporting strategic planning to enhance agri-food systems transformation. The ministries of agriculture can play a role in helping sector actors to work together to enhance priority value chains and improve the impact of the project.

- As entities representing the sector, ministries of agriculture will be supported by the project through technical assistance. SHAEA will help shape the **demand for agri-food sector skills and policy research** in the following such activity areas as: i) Providing policy support services; ii) training for ministry staff on issues in the key gaps areas ; and, iii) promoting the exchange of good practices at the regional level.
- The project will deliver **technical assistance through the RAU or other institutions, to strengthen the ministries leadership role in strategic assessments** such as diagnosis of skills and policy gaps in the agricultural sector with the engagement of key stakeholders like the education sector (agricultural tertiary education institutions, including ATVETs), to shape the vision and strategy for the Sector and for the training policy and guidelines of agricultural education.
- The Project will also **support the government’s effort in attracting youth to be interested and work in agriculture.** This could include the design and launch of public campaigns and promotion programs with focused messages to youth at different levels of educational attainment. This can be done through collaboration with education institutions, NGOs, and other public and private entities (i.e. publishing firms etc).

37. The implementation mechanism for this sub-component will be defined during project preparation. It could be implemented, by country level Project Implementation Units (PIUs), of other existing agriculture projects which are under the ministries of agriculture or their equivalent



agencies. The disbursement of this sub-component will use the traditional financing modality and the fund flow will be based on the national arrangements agreed with the ministries. The fund availability will be a maximum of US\$3million.

### **Component 3: Project Facilitation, Coordination and Management**

38. This component will support project coordination, monitoring and management at the regional level and will be financed in the form of a Regional IDA Grant to the RFU. The sheer number of countries and institutions participating in SHAEA makes the project implementation complex and requires an RFU that has a designated team for helping manage the project. The RFU will explore networks of regional institutions and industries within and outside of the region and manage TA firm(s) as needed to ensure effective project preparation and implementation, and oversee, administer, and coordinate M&E activities across the RAUs to ensure their achievement of the agreed DLI results with timely verification coordination for disbursement. The RFU will also coordinate an external advisory team which will provide technical assistance to the RFUs as needed.

39. In addition to results assurance, the RFU is expected to work closely with the RSC, and agriculture and education sector ministries of each participating country and ensure that the requirements of fiduciary, safeguards and reporting of SHAEA implementation are met and that best practices and knowledge of SHAEA implementation are shared and effectively communicated with the RAUs on a regular basis. Furthermore, the RFU will directly deliver capacity development activities and help attain project impacts at scale under Component 2.1.

40. RUFORUM, as a regional body with the mandate from the Africa Union Commission (AUC), was selected by the RSC as the RFU for the SHAEA project and confirmed as such during the first RSC meeting in Nairobi, Kenya on July 12-14, 2018. To fulfill the responsibility as the RFU, RUFORUM is forming a team which comprises a project coordinator, a financial specialist, a communication officer and others. RUFORUM will receive an IDA Grant of US\$1.5 million as part of the Project Preparation Advance (PPA) to finance project preparation activities.

41. This component will be implemented by RUFORUM in collaboration with SHAEA implementation entities in each participating country. Its disbursement will use the traditional Statement of Expenses (SoE)-based financing modality.

### **Project Results Framework**

42. **SHAEA will deliver improved performance of the agri-food system in Africa through two pathways:** (i) developing the relevant skills, and (ii) strengthening regional linkages and partnerships with actors within the system. The strategic interventions embedded in these pathways rely heavily on RAUs, and other agri-food system actors to deliver the transdisciplinary programs and partnerships. This will result in enhanced RAU institutional leadership and management capability for sustainably producing graduates ready to face challenges of the demand side. Simultaneously, SHAEA will support the sector by developing a selected associated AATEIs for knowledge-sharing and service delivery. The project's ability to reach impact at scale hinges upon RUFORUM facilitation which will provide project, management and monitoring and evaluation and will use its network to promote the adoption of best practices at scale, while also connecting

with other networks (such as the ACEs, and regional agricultural research networks such as CORAF) and include non-member universities as relevant. Figure 3 below illustrates the theory of change for SHAEA (see annex for more a more detailed presentation of the chain of results, and the results framework format).

### **Promoting Sustainability through Partnerships**

43. **Strategic partnerships under the program are essential for promoting sustainability of the results beyond the project time horizon.** Key African and international partners to promote the sharing of best practices with the participating African universities who have indicated an interest in supporting the initiative include, but are not limited to: the Bill and Melinda Gates Foundation; National Research Foundation of South Africa; the Dutch Government<sup>23</sup>; the Association of Public and U.S. Land-Grant Universities; the Andrew J. Young Foundation and the Association of Historically Black Colleges and Universities (HBCUs). Strategic partnerships in the framework of the program are also envisioned with other agencies (e.g., French development agencies and other European institutions) and with universities with strong multi-disciplinary higher agricultural education programs and strong sectoral linkages (e.g., universities in the Netherlands, US, Morocco and South Africa). Korea-World Bank Group Partnership Facility has already provided financial support that has been essential for project preparation and Korean experience in the field of agricultural skills development and E-agriculture will be leveraged by the project. In the process of proposal preparation and during implementation, the candidate RAUs may identify additional strategic partners of their choice to help them develop world-class programs in agriculture, with specialization in KGAs, and create strong linkages between the academic programs and the agriculture sector.

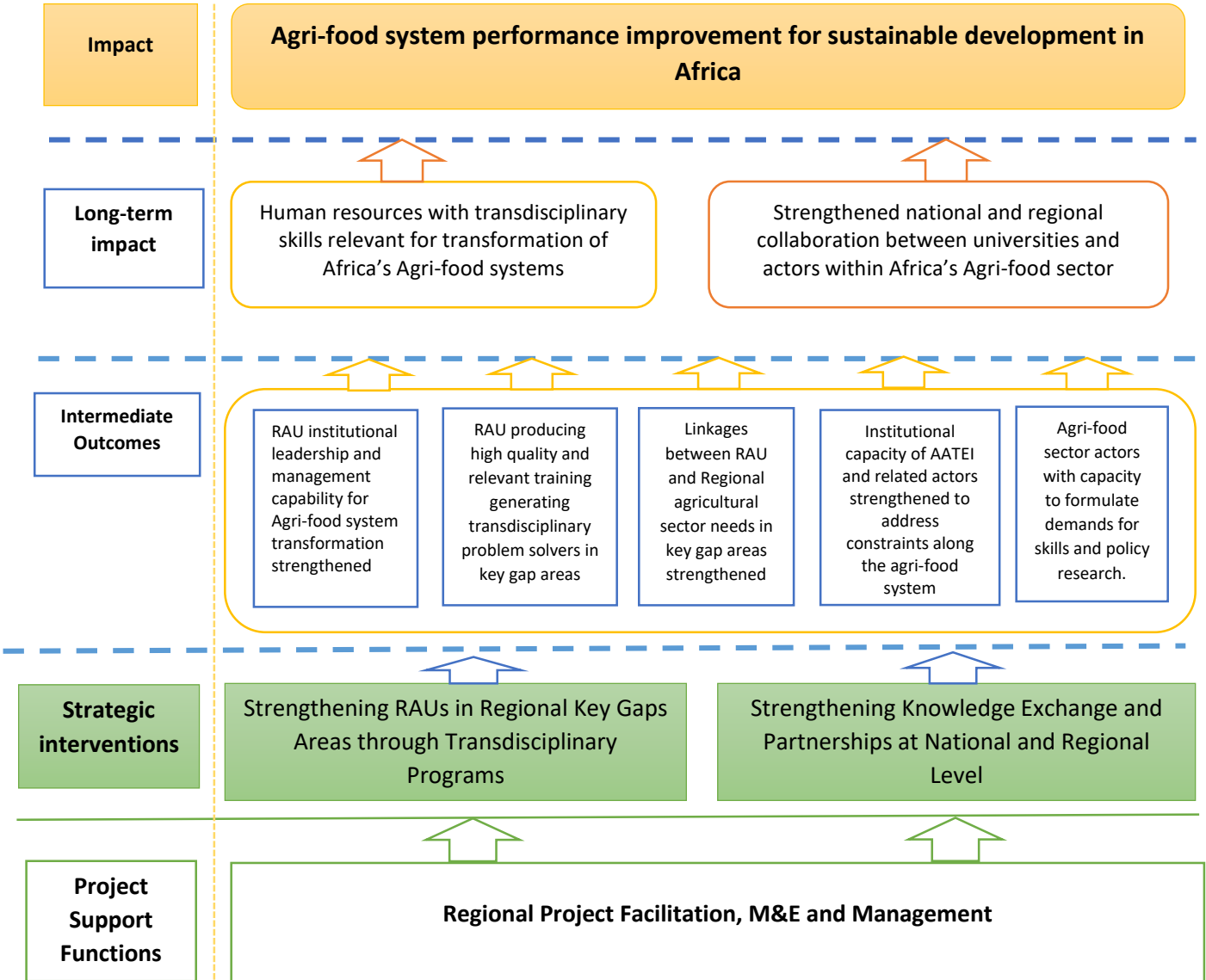
44. **Partnerships with the private sector will be actively promoted,** and dialogue to gauge the interest in collaboration has begun and is not limited to such companies as the OCP Group of Morocco, Bayer, Syngenta Foundation, Nestle, local African agri-business networks and others. The project intends to support partnership arrangements with international universities and other institutions best placed to help develop internationally recognized high-quality agricultural programs. Successful implementation of these partnerships is one of the main pathways to achieving the sustainability of the program. Working through RUFORUM as the focal point for coordination of those partnerships is another critical pathway to promote strong coordination.

45. **The project intends to leverage significant additional resources through the above strategic partnerships.** Alliances with the private sector will also be supported (e.g. to identify financial support through private companies' foundation branches to support internship programs at major agribusiness companies) and will be rated highly in the course of proposal evaluation by candidate RAUs. RAUs are also expected to engage in significant fund-raising effort to promote sustainability of project outcomes and the programs that will be established beyond the project time horizon.

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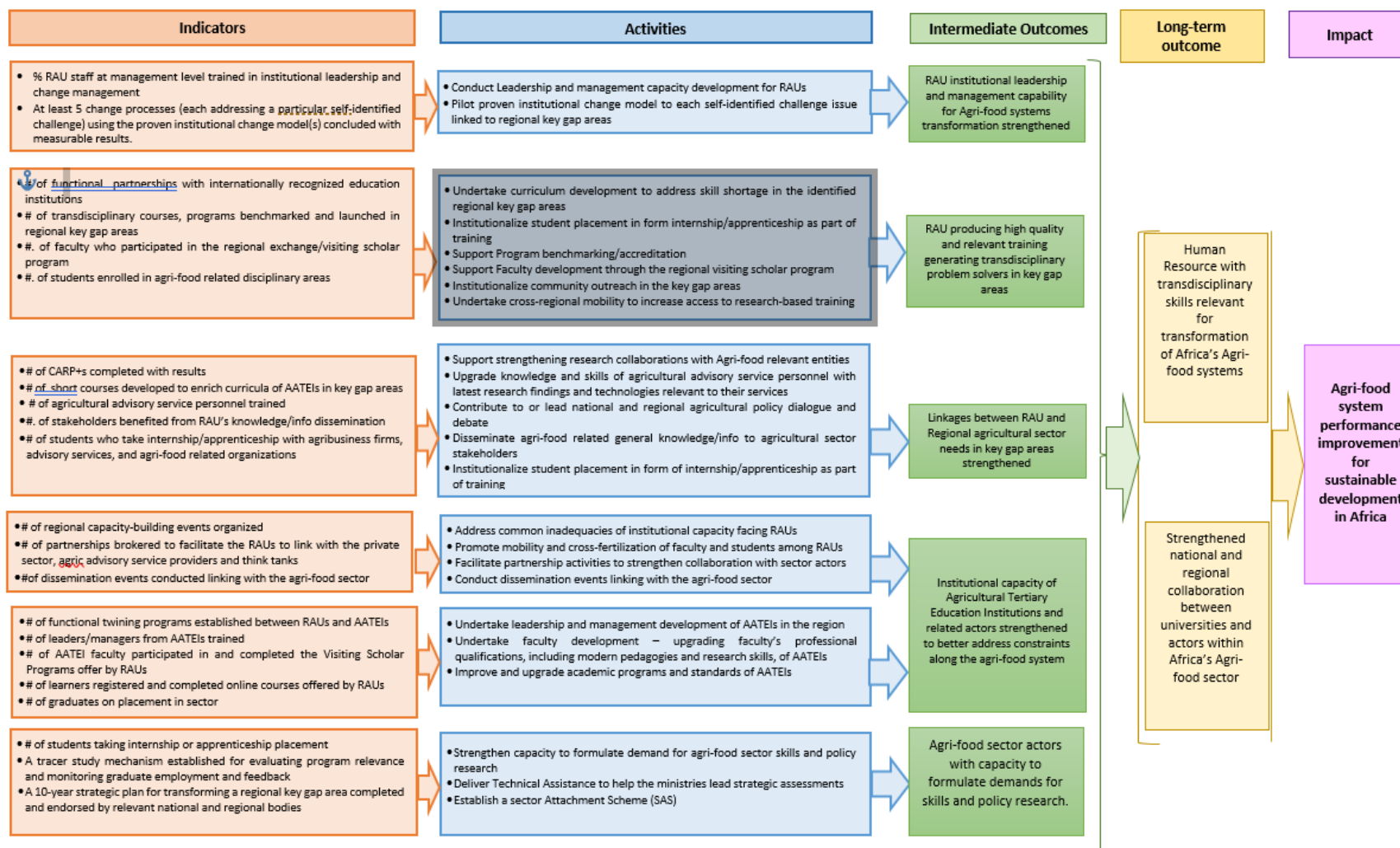
<sup>23</sup> Such as through NUFFIC, the Dutch organization for internationalization in education

**Figure 3: SHAEA Results Framework: Theory of Change**



**Annex Figure 1:**

**Draft Results Framework for Strengthening Agricultural Higher Education for Agri-Food System Transformation in Africa**



**Annex Table: Draft Results Framework Template  
Strengthening Agricultural Higher Education for Agri-Food System Transformation in Africa (SHAEA) Project**

Project Development Objective (PDO): To strengthen linkages between selected African universities and regional agricultural sector needs for developing required human resources to accelerate agri-food system transformation in Africa											
PDO Level Results Indicators*	Core	Unit of Measure	Baseline	Cumulative target values					Frequency	Data source/ methodology	
				Year 1	Year 2	Year 3	Year 4	Year 5			
% increase of sector actors <sup>24</sup> acknowledging RAU's leadership and management capabilities for Agri-food system transformation	□	%	%	Baseline						(Yr3, Yr4 & Yr. 5)	Longitudinal Survey
% of agri-food sector actors satisfied with knowledge, competence and skills of RAU graduates	□	%	%	Baseline						Yr. 4 and Yr5	-Human resource needs assessment within the Agri-food sector, - Employer satisfaction survey -Tracer studies

<sup>24</sup> The sectors actors will be both individuals and institutions outside the university ecosystem of which 50% are private sector

Number of academic programs <sup>25</sup> accredited and meeting international standards	<input type="checkbox"/>	count	0							Report of accreditation process - Accreditation certificate
<b>Intermediate results</b>										
<b>Component 1: Strengthening Regional Anchor Universities (RAUs) for Agri-Food Systems Transformation</b>										
<b>1.1 Developing Institutional Leadership and Management Capacity</b>										
% RAU staff at management level trained in institutional leadership and change management	<input type="checkbox"/>	Count	0						Yr. 1-Yr 5	Training reports -unit - # of leaders trained over the total managerial workforce
At least 5 change processes (each addressing a particular self-identified challenge) using the proven institutional change model(s) concluded with measurable results	<input type="checkbox"/>	Count	0						Yr. 1- Yr. 3	Report on Self-assessment of institutional change required ; Change process

<sup>25</sup> At least one program in each of the key gap areas (maximum 6)

										action plan and its implementation	
<b>1.2 Delivering Research-Based Relevant Training to Produce a New Generation of Transdisciplinary Problem Solvers</b>											
Number of functional <sup>26</sup> partnerships with internationally recognized education institutions	<input type="checkbox"/>	Count	0							Yr. 1-Yr 2	MoU's with relevant high-quality international partners is signed including a LoA specifying the workplan, clear deliverables and budget for the first year of partnership
Number of transdisciplinary courses <sup>27</sup> and programs launched and benchmarked against	<input type="checkbox"/>	Count	0							Yr 1	Curriculum reform / develop

<sup>26</sup> Functionality will be evaluated based on partnership agreements, joint work plan developed and implemented

<sup>27</sup> A minimum of 6 courses/programs in key gap areas to be developed by the RAU

international standards in regional key gap areas										ment reports
Number of students <sup>28</sup> enrolled in the newly launched trans-disciplinary courses and programs ( <i>segregated by gender, regionality, and degree level</i> )	<input type="checkbox"/>	Count	0	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	Yr 1-Yr5	University nominal admission list
Number of faculty <sup>29</sup> participating in the regional exchange/visiting scholar programs ( <i>Segregated by gender and Degree level</i> )	<input type="checkbox"/>	Count	0	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	Yr 2- Yr 5	Departmental reports
Number of students taking internship <sup>30</sup> or apprenticeship placement ( <i>segregated by gender, placement, and degree level</i> )	<input checked="" type="checkbox"/>	Count	0	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	Yr 2-Yr 5	Departmental reports Student internship reports
Number of graduates placed under the Sector-wide Attachment Scheme (SAS)	<input checked="" type="checkbox"/>	Count	0	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	Yr 4-Yr 5	Departmental reports
A tracer study mechanism established for evaluating program relevance through monitoring graduate's employment and feedback	<input type="checkbox"/>	Proof of tracer study platform (digital or analogue)	baseline						Yr 2 –Yr 3	University annual report
<b>1.3 Fostering University's Practical and Field-based Research and Outreach to Agriculture Sector Stakeholders</b>										
Number of CARPs <sup>31</sup> completed with results (including measurable impact	<input type="checkbox"/>	Count	0						Yr 3- Yr 5	Faculty /Colleg

<sup>28</sup> To be set by each RAU based on the carrying capacity of existing facilities

<sup>29</sup> Targets to be set by the RAU based on their faculty strength and gaps

<sup>30</sup> To be set by each RAU based on enrolment numbers

<sup>31</sup> Community Action Research Project



on the participating agricultural TVET institutions)										e reports PI project closure reports
Number of agricultural advisory service personnel trained ( <i>segregated male and female</i> )	<input type="checkbox"/>	Count	0	0	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	Yr 2–Yr 5	Training reports
A 10-year strategic plan for transforming a regional key gap area completed and endorsed by relevant national and regional bodies	<input checked="" type="checkbox"/>	Documentation Strategic plan document	0						Yr 5	Consultative event reports Strategic plan document
Number of stakeholders benefiting <sup>32</sup> from RAU’s knowledge/info dissemination	<input type="checkbox"/>	Count	0						Yr 2 –Yr 5	Reach estimates of the communication channels used by the RAU
<b>Component 2: Scaling Up Impact</b>										
<b>2.1 Strengthening Knowledge Exchange and Faculty/Student Mobility Platforms</b>										
Number <sup>33</sup> of regional capacity-building events organized	<input type="checkbox"/>	Count	0						Yr 1- Yr 5	Event reports on type, venue, and participant

<sup>32</sup> These will include direct and indirect beneficiaries.

<sup>33</sup> This will also include annual VCs leadership dialogues

										categories	
Number of partnerships brokered to facilitate the RAUs to link with the private sector, agricultural advisory service providers and think tanks	<input type="checkbox"/>	Count	0							Yr2-yr5	MoU and LoA between RAU and sector institutions
Number of dissemination events <sup>34</sup> conducted linking with the agri-food sector	<input checked="" type="checkbox"/>	Count	0							Yr1-yr5	Reports, #policy briefs
Number of successful exchanges of faculty and post-/graduate students facilitated through the online matching platform	<input checked="" type="checkbox"/>	Count	0							Yr1-yr5	Reports,
<b>2.2: Supporting Associated Tertiary Agricultural Education Institutions through RAU-led Partnerships</b>											
Number of functional twining programs established between RAUs and AATEIs	<input type="checkbox"/>	Count	0	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	To be set by each RAU	Yr1 –Yr5	Reports Curricula documents
Number of leaders/managers from AATEIs trained	<input type="checkbox"/>	Count									Training reports
Number of AATEI faculty participated in and completed	<input type="checkbox"/>	Count	0	0	0	To be set by each RAU	To be set by each RAU	To be set by each RAU		Yr3-yr 5	Reports

<sup>34</sup> Two events in year 1 in each of the participating countries. Thereafter, at least three per year in each country

visiting scholar programs offered by RAUs ( <i>segregated by male and female</i> )											
Number of short courses developed to help curriculum improvement of TVET institutions in key gap areas	<input type="checkbox"/>	Count	0							Yr 2–Yr 5	Project reports, Short courses documentation
Number of learners from AATEIs registered and completed online courses offered by RAUs	<input type="checkbox"/>	Count	0							Yr3-yr 5	Curricula documents Online platform -active learners Count of students enrolled (segregated by gender, institution)
<b>2.3: Supporting capacity of the Agriculture Sector to formulate demand for skills and policy research</b>											
Number of ministry staff trained in policy analysis, policy-making, and monitoring and evaluation	<input type="checkbox"/>	Count	TBD	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	Yr1 –Yr5	Ministry reports
Assessment reports of skill needs for agri-food system transformation in the country	<input type="checkbox"/>	Count	TBD	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	Yr1-Yr5	Assessment report

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Percentage of students who perceive that a degree in agriculture offers promising career opportunities	<input type="checkbox"/>	Percentage	TBD	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	To be set by the ministry	Yr1 –Yr5	Perception survey
<b>Component 3: Project Facilitation, Coordination and Management</b> <i>(To be provided by RUFORUM)</i>										