Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 18-May-2022 | Report No: PIDISDSA32964

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Eastern and Southern Africa	P176744	Additional Financing for the ACE II Project	P151847
Parent Project Name	**Region**	**Estimated Appraisal Date**	**Estimated Board Date**
Eastern and Southern Africa Higher Education Centers of Excellence	Eastern and Southern Africa	25-Apr-2022	17-Jun-2022
Practice Area (Lead)	**Financing Instrument**	**Borrower(s)**	**Implementing Agency**
Education	Investment Project Financing	Ministry Of Finance and Economic Planning, Republic of Rwanda, Ministry of Finance and Planning, United Republic of Tanzania, Ministry of Finance, Planning and Economic Development, Republic of Uganda, National Treasury, Republic of Kenya, Ministry of Finance, Ministry of Economy and Finance, Republic of Mozambique, Ministry of Finance, Republic of Zambia, Federal Democratic Republic of Ethiopia	Ministry of Education, Federal Democratic Republic of Ethiopia, Ministry of Education and Sports, Ministry of Education, Science and Technology, Republic of Malawi, Ministry of Education and Vocational Training, United Republic of Tanzania, Ministry of Education (MoE), Ministry of Science & Technology, Higher, Technical & Professional Education, Republic of Mozambique, Ministry of Education, Ministry of Education, Republic of Rwanda, Inter-University Council for East Africa

Proposed Development Objective(s) Parent

To strengthen selected Eastern and Southern African higher education institutions to deliver quality post-graduate education and build collaborative research capacity in the regional priority areas.

Components

Component 1: Strengthening Africa Centers of Excellence (ACEs) in Regional Priority Areas
Component 2: Capacity Building Support to ACEs through Regional Interventions
Component 3: Facilitation, Coordination and Administration of Project Implementation

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	70.00
Total Financing	70.00
of which IBRD/IDA	70.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	70.00
IDA Credit	20.00
IDA Grant	50.00

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Regional Context

Sub-Saharan Africa's (SSA) deteriorating food security due to rapid population growth and urbanization, increased effects of climate change and low productivity, has been further ravaged by the Coronavirus Disease 2019 (COVID-19) pandemic. According to the World Health Organization, currently 73 million people in Africa are acutely food insecure.[1] Recent estimates suggest that one in four people are chronically undernourished and approximately 59 million children - approximately 30 percent - have stunted growth. Africa imports much of its food, and the region spent up to an average

[1] https://www.afro.who.int/news/covid-19-could-deepen-food-insecurity-malnutrition-africa

of US$74.1 billion annually between 2010 and 2019.[2] COVID-19 will continue to aggravate food shortages due to impact of travel restrictions and lockdowns on import and agricultural activities.

Sectoral and Institutional Context

Agriculture is one of the most important sectors in many countries in SSA, accounting for up to 14 percent[3] of the total Gross Development Product (GDP) of the continent. Nearly 50 percent of the population of SSA is employed through the agriculture sector. The sector is also important for food security, improved nutrition and health, inclusive growth, and improved stewardship of the environment. Yet, the growth of Africa's agriculture sector is suboptimal with an overall declining trend in the relative size of the sector compared to the economy over the past few decades. Similarly, the percentage of the population employed by the sector has gone down from 62 percent in 1995 to 52 percent in 2020.[4] Even with rapid economic diversification and non-farm employment expansion, recent analysis reconfirms the foundational role of agri-food systems in enabling and driving economic diversification and transformation.[5] Because the economies of SSA strongly depend on agriculture and allied agri-food systems, African governments may contribute to achieving their economic growth objectives by strengthening their higher education capacity related to agri-food systems.

Africa's agri-food systems have the potential for transformation that will eventually boost the economic growth of the continent. Between 2010 and 2016, the gross agricultural production value increased by 11 percent due to use of high output agriculture products such as fertilizers, high yielding seeds etc.[6] This number is projected to increase by another 21 percent between 2020 and 2029.[7] There is also an abundance of cultivable land which remains unused. The diversity of landscape provides an opportunity for cultivating wide variety of crops and commodities. However, there are various bottlenecks that limit the potential of tapping into these resources, and one of them is the shortage of skilled farmers, agriculture labor force, and professionals.

Severe skills shortage in areas related to food security in the region presents a significant challenge to take the urgent action needed to transform agri-food systems in Africa. Currently, only two percent of Africa's students specialize in agriculture. 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.[8] Even with a large female agricultural labor force, only about 25 percent of undergraduate and 16 percent graduate students in agriculture are female in Africa. Many agricultural higher education institutions in Africa are disconnected to the agriculture sector. According to a recent survey, agribusiness firms in Africa are seeking a broader variety of skills from prospective employees. While they view skills offered by agricultural technical and Technical and Vocational Education and Training (TVET) schools as particularly important because of their practical relevance, many of them seek strong training in business management, economics, food processing and agricultural sciences from tertiary education institutions.

The economic growth of the region depends on growth in the agriculture and agri-food systems, necessitating the strengthening of higher education capacity related to agri-food systems. The various actors involved could be

[2] As per the United Nations Conference on Trade & Development (UNCTAD) estimates, between 2016 and 2018, Africa imported almost 85 percent of its food. https://unctad.org/news/covid-19-threat-food-security-africa
[3] https://oxfordbusinessgroup.com/sites/default/files/blog/specialreports/960469/OCP_Agriculture_Africa_Report_2021.pdf
[4] World Bank Open Data
[5] Christiaensen and Martin, 2018; Jayne et al., 2018
[6] https://agra.org/wp-content/uploads/2020/09/AASR-2020-Feeding-African-Cities.pdf
[7] As per FAO and OECD estimates
[8] World Bank (2007). Cultivating Knowledge and Skills to Grow African Agriculture. https://openknowledge.worldbank.org/handle/10986/36122

universities, technical and vocational education and training (TVET) institutions, training colleges etc. These tertiary education institutions influence the various actors working in sector, for example in policy analysis institutions, research-based organizations, government bodies, private sector etc. The quality of education imparted influences the effectiveness of workers and the quality of research impacts the direction of activities undertaken. Being at the center of 'education value chains', the tertiary education institutions are in a position profoundly catalyze transformation in agri-food systems through developing synergies between multiple actors as part of an ecosystem.

Climate change and variability is causing major challenges for maintaining agricultural productivity. These challenges create an urgent need for Africa to develop and implement agricultural, water and land management practices that promote sustainable productivity and resilience. Effective responses to climate-related threats will require significant investment in growing capacities of individuals and institutions within African systems. So far, almost all strategies for addressing climate change, sustainability and resilience issues are led by organizations outside of Africa. Since 1990, fewer than 4 percent of total global climate change research funding has focused on Africa; and 78 percent of that funding has gone to researchers in the United States and Europe, with African scientists receiving less than 15 percent of the funds.[9] There's an opportunity to attract more of that financing to African institutions of higher education/research African-led initiatives and networks are needed to build the local ownership and commitment to developing effective strategies. African universities will be central sectors in producing the necessary research for climate change response and in attracting and training professionals and workers in livestock and crop science and agronomy, food science and technology, agricultural economics, and management who will have the incentives to generate sustainable and resilient responses to the region's challenges associated with climate change.

Inclusion of women in agri-food sector decision making is more than an equity issue; it also has the potential to raise productivity. The International Food Policy Research Institute (IFPRI) "Gender in Agriculture. Closing the Knowledge Gap" Report 2014 quantifies the potential of greater gender inclusion in agriculture and concludes that "Closing the gender gap in agriculture would generate significant gains for the agricultural sector and for society. If women had the same access to productive resources as men, they could increase yields on their farms by 20 to 30 percent. This could raise total agricultural output in developing countries by 2.5 to 4 percent, which could, in turn, reduce the number of hungry people in the world by 12 to 17 percent". There are good reasons to expect that inclusion of women higher up agri-food value chains would reap benefits. A study of research and development teams at more than 4,000 companies found that gender diversity "generates dynamics that lend themselves to radical innovation." Yet women's enrollment in university in Africa in general is low.

The existing higher education system in Africa is not meeting the emerging priority needs in skills development in agri-food related areas in terms of both coverage and scale. The growth in the number of agricultural higher education units has been considerably lower than the growth in the region's overall higher education institutions. In 2016, the number of agricultural higher education units was about twice the number that were in existence in 1990. In comparison, the number of higher education institutions grew tenfold during that period; excluding the private institutions, growth was still four times higher than the increase in agricultural higher education units.

The Eastern and Southern Africa Centers of Excellence (ACE II) project provides an effective platform for expanding agriculture higher education. ACE II supports eight agricultural ACEs hosted by eight universities in five Eastern African countries (Ethiopia, Kenya, Malawi, Tanzania and Uganda). ACE II supports eight agricultural ACEs hosted by eight universities in five Eastern African countries (Ethiopia, Kenya, Malawi, Tanzania and Uganda). These ACEs specialize in

[9] Foreign Policy critique of the IPCC report: https://foreignpolicy.com/2022/03/09/africa-climate-crisis-funding-shortfall-ipcc-report/

areas such as climate smart agriculture, biodiversity, agribusiness management, insects as food, fisheries, rodent pest management, crop improvement, agro-ecology, and sustainable agriculture. While each ACE helps to address a specific development challenge facing the region, it does not fully address the emerging needs of having transdisciplinary skilled people who can solve increased complex challenges of agri-food systems transformation. The urgency of addressing food security deterioration through transforming agri-food systems in Africa demands a large-scale critical mass with transdisciplinary skills at different levels. This requires mobilizing and bringing up other agricultural tertiary education institutions for their contributions to this sector. The ACE II project provides a ready model to meet these goals in a cost-effective manner since the project has already invested in setting up systems to effectively expand access to quality tertiary education and research. It also provides the opportunity to leverage the academic networks established under the project.

The pandemic has increased the urgency to strengthen skills and capacity in higher agricultural education, which are necessary as part of a green, resilient, and inclusive recovery. Strengthening higher agricultural education in Africa and increasing its links with the farming and agri-business sector is viewed by the Africa Union (AU) (as mentioned in its Science, Technology, and Innovation Strategy, STISA) as a critical pathway to scaling up the uptake of innovations in Africa's agri-food system. The Africa Food Security Leadership Dialogue (AFSLD) launched by the World Bank in Rwanda in August 2019 to mobilize urgent action on food security under climate change in Africa also calls for uptake of scientific innovations in agriculture and foster a new generation of farmers, entrepreneurs, and policy makers with the skills commensurate with the scale of the challenge. A regional approach to strengthening higher education systems is also in line with the East African Community's (EAC) strategy which specifically states that to facilitate the Regional Integration process and the free movement of human resources, the EAC Partner States have identified the harmonization of the education curricula, standards, assessment and evaluation of education programs as a priority. In the context of the worsening food security and increasing climate vulnerability in Africa during the COVID-19 pandemic, the AF would build on the regional approach to build long-term capacity to address key bottlenecks to broader uptake of agri-food innovation in Africa, contributing to the green and inclusive economic recovery after the pandemic.

Enhancing technical capacity and applied research in agriculture is a priority of the region and SSA governments. The Governments of Malawi and Mozambique, specifically, have prioritized agriculture higher education in their respective strategies and called for urgent investments in building their technical capacity to find solutions to Africa's agri-food system constraints. Requests from both countries were received by the World Bank to expand investment in agriculture higher education in their countries. The proposed AF is fully aligned with the national priorities and the Country Partnership Frameworks (CPFs) supporting Malawi and Mozambique to achieve their national goals.

C. Proposed Development Objective(s)

Original PDO

To strengthen selected Eastern and Southern African higher education institutions to deliver quality post-graduate education and build collaborative research capacity in the regional priority areas.

Current PDO

The PDO for the Additional Financing (AF) is unchanged, however, the AF will focus on agriculture as a priority sector.

Key Results

The key performance indicators of the project remain unchanged, however, targets have been enhanced to reflect the scale up through this AF.

D. Project Description

The proposed AF will finance Agriculture ACEs in Malawi and Mozambique to strengthen agriculture higher education and research in the region. It will build on lessons learned from the implementation experience of ACE II and other similar initiatives across the continent including the first ACE Project in West and Central Africa (P126974), and ACE Impact (P164546 and P169064). The AF will focus on the agriculture sector given high demand from participating countries for further need for building technical capacity in key thematic areas within the agriculture sector which could in the long term contribute to increased agriculture productivity and food security across the continent. The AF will expand the existing three components in the parent project to strengthen a larger number of Agriculture ACEs in Malawi and Mozambique and provide technical support at the regional level.

Component 1: Strengthening Africa Centers of Excellence in Regional Priority Areas (US$200 million)

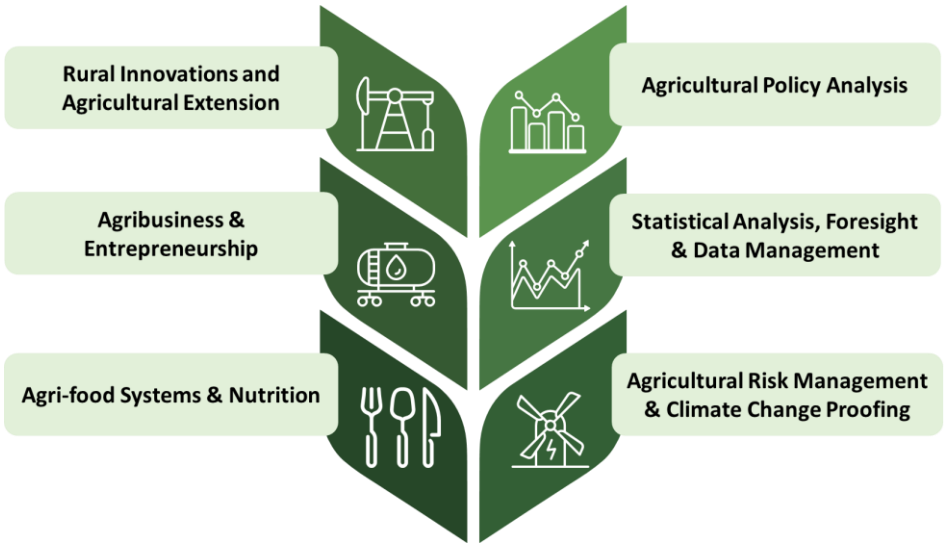
Subcomponent 1.1: Strengthening Africa Centers of Excellence in Agriculture (US$60 million)

The subcomponent (1.1) will finance additional ACEs that focus on strengthening agriculture higher education and research. It will continue to follow a results-based approach to achieve the following:

- Build institutional capacity to provide quality post-graduate education in key themes within the agriculture sector;
- Build institutional capacity to conduct high quality applied research, relevant to addressing challenges facing the region within the agriculture sector;
- Build institutional capacity to increase demand for and expand enrollments in high demand agriculture fields;
- Develop and enhance partnerships with other academic institutions (national, regional, and international) to pursue academic excellence;
- Develop and enhance partnerships with industry and the private sector to generate greater impact and employment opportunities for graduates;
- Serve as a role model for other higher education institutions to improve their agriculture programs;
- Deliver research that can inform policymaking in the agriculture sector and influence regional strategies; and
- Expand outreach to, and create an impact on, society by delivering excellent teaching and producing high quality applied research.

The AF will support strengthening capacity in key themes within the agriculture sector. Building on the frameworks established during an earlier (2015-2018) exploration of major issues related to advanced skills and knowledge in agriculture higher education, extensive consultations with stakeholders (including policymakers, academicians, civil society, and private sector representatives) in both regional and country-based engagements were held between September 2021 and February 2022. Country-level consultations were held in both Malawi and Mozambique with the respective Ministries of Agriculture, Ministries of Education, Universities, TVETs, Development Partners and farmers' associations such as the National Farmers Federation in Malawi. As a result of this consensus-building exercise, six (6) key themes and focus areas have become the framework thematic focus areas for the project (Figure 1). These framework themes also respond to the climate and disaster risk of Malawi and Mozambique.

Figure 1. Key Gap Areas (KGAs)



a) **Agri-food systems and nutrition**: This thematic area aims to contribute to enhanced productivity and efficiency of the food system; food systems function including how food production is driven in terms of crop and animal selection; process impacts including how the mechanisms of food transport and processing lead to distribution and allocation of food to different socio-economic groups; and the behavioral patterns that influence these processes. It also provides support to the development of innovative solutions to issues of malnutrition, environment management and pathogen management in order to generate sustainable food systems today and for the future generations. Possible programs in this area include crop sciences and genomics; agriculture mechanization and soil health; food technology and nutrition-processing and industry; livestock, animal health and public health interfaces; blue economy including aquaculture; and supply chains and logistics development. Technologies to be used will also enable climate smart agriculture, which will make agriculture more climate resilient. Climate smart agriculture is priority for both Malawi and Mozambique as a climate mitigation measure to cope with natural disasters such as floods, droughts, and cyclones.

b) **Agribusiness and entrepreneurship:** This thematic area targets training experts who are better poised to advance national and regional level agribusiness development and competitiveness and better guide industry/agro-industrialization evolution from theory and practice. The experts will have technical skills that need to be complemented with soft skills with integrative thinking to solve real problems related to production, processing, distribution or other problems. Potential programs include capacity building of agri-food related small and mid-size enterprises (SMEs); agribusiness & entrepreneurship ecosystem; finance & risk reduction; agribusiness decision support systems (e.g., for agro-led industrialization); innovations & intellectual property commercialization; and business incubation, acceleration & innovation competitiveness. Through these capacity building activities, more climate resilient agri-business is expected to be generated in Malawi and Mozambique.

c) **Agriculture risk management and climate change proofing:** This thematic area will aim to train a cadre that is critical in the delivery of effective agricultural risk management strategies that increase the resilience of smallholder farmers to climate variability and change, vital in fostering productive and sustainable investment & finance across the food and agricultural value chain. Further, it will also invest in programs that are vital in increasing food and nutrition security, eliminating hunger and reducing poverty, and achieving sustained

agricultural and economic growth in Africa. Potential programs include risk assessments, early warning systems-climate prediction & dissemination; climate change adaptation, mitigation & risk transfer---climate smart technologies, tools & processes; future climate change diagnostics; and innovations in monitoring and evidence relay. These training programs will increase the capacity of universities in the areas of research, teaching and innovation to respond to demands for effective climate related data collection, analysis, and prediction. This is particularly relevant for the early warning systems and policy development to mitigate the effects of floods, draughts and cyclones in Malawi and Mozambique.

d) **Rural innovations and agriculture extension**: This thematic area will focus on training professionals and on research 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. It will also focus on devising disruptive technology catered to primarily rural crop and livestock value chains. Potential programs include agricultural advisory services & innovations; standards for improved production; value chain development; evaluation and development programs; and livelihood assessments. This area of training will benefit smallholder farmers in increasing their capacity to mitigate and adapt to climate risks in Malawi and Mozambique.

e) **Statistical analysis, foresight, and data management**: This thematic area will aim to build, sustain and strengthen regional capacity for impact-oriented research for development through training programs which provide a solid foundation in research methods and statistics and promote collaborative networking to exploit regional research potential and inform policy.

f) **Agriculture policy analysis**: This thematic area will serve the policy concerns relating to improving agricultural output and productivity, nurturing linkages between agriculture and economic sectors, increasing national food security, combating poverty, expanding employment, promoting environmental sustainability, and enhancing sustainable livelihoods, including gender equality. Potential programs will include capacity for agricultural policy analysis and research; economic modelling, geo-spatial systems and tools, & access to data sources; and capacity and skills to communicate research results. The areas of policy analysis will include the impact of climate and disaster risks and how these risks can be mitigated and adapted through effective policy architecture. There will be a strong collaboration between the universities and the government to develop evidence-based policy on climate-resilient agriculture.

The Agriculture ACEs financed by the AF have been selected through an open, objective, transparent and merit-based competitive process. An open call for proposals was sent out to invite interested institutions to submit proposals on strengthening their higher education programs on the themes described above. Proposals from the potential beneficiary institutions were evaluated following the process that was established for the initial ACE project which has proven to be successful in selecting high quality proposals through a competitive process that is supported by all stakeholders. The two-step evaluation process was conducted by an Independent Evaluation Committee (IEC) comprised of African and international experts who specialize in the selected themes for the AF. The first step comprised of a technical evaluation followed by an onsite review and evaluation of shortlisted proposals in the second step.[10] The Agriculture ACEs selected for support under the AF are included in Table 1 below along with a brief overview of their proposals.

[10] Existing ACEs under the parent project were also eligible to apply for Additional Financing

Table 1: Agriculture ACEs selected for support from ACE II AF

Country	Themes	ACE	Amount (US$ millions)
Mozambique	• Agri-food systems and nutrition • Agri. risk management and climate proofing • Agri. policy analysis	**Center of Excellence for Food Agricultural Policy and Programs at Eduardo Mondlane University** The goal of this ACE is to contribute to agri-food systems transformation in Africa and Mozambique through establishing a Centre of Excellence in agri-food systems that is a reference center at national, regional and international levels in training of highly qualified human resources at postgraduate level (Master and PhD) and in delivering high-quality research outputs in agri-food systems and nutrition, agricultural policy analysis and agricultural risk management and climate change. To achieve this goal, the Eduardo Mondlhane University has formed a consortium composed of all its units working on agri-food systems and national institutions as well as a national university, two higher polytechnic institutes, three TVETs of medium level, the national Agricultural Research Institute and three private companies. The consortium also includes regional and international universities and research institutions. At regional levels, the consortium includes three African universities; two in Malawi, one in South Africa; two Centers of Excellence in Agri-food systems, the Centre of Excellence of Egerton University in Kenya and Centre of Excellence of the University of Makerere in Uganda; and two networks of regional research and policy institutions (ReNAPRI and FANRPAN). At the international level the consortium includes three European and three North American Universities and one international research institute (IFPRI). The approach for project implementation will be through conducting joint training, supervision, research, publication, curricula development and mobility of staff and students to and from Mozambique, mentorship of students, conducting training of personnel from government and non-government institutions including private sector, partnership with private sector to develop technologies, practices, models and strategies to address the needs of the agri-food sector.	30
Malawi	• Agrifood systems and nutrition • Statistical analysis, foresight and	**Agricultural Policy Regional Centre of Excellence (APRCE) at Lilongwe University of Agriculture and Natural Resources (LUANAR)** The proposed ACE intends to enhance agri-food systems related education and training using transdisciplinary approaches and applied research; to create and strengthen university linkages to the regional agricultural sector; and to establish or strengthen	6

	data management • Agri. policy analysis	university partnership with private and public entities related to agri-food systems both within and outside the region. The ACE aims to become a leading agri-food systems policy training transformation center for research, innovation, formulation and advocacy and a hub for transdisciplinary problem-solver Big Data scientists and policy analytic graduates. Capacity and linkages among national and regional institutions of higher education in agri-food systems policy transformation shall be enhanced in response to local and regional development in agri-food systems policy agenda and strategies.	
Malawi	• Agribusiness and entrepreneurship • Rural innovations and agricultural extension	**Center of Excellence in Transformative Agriculture Commercialization and Entrepreneurship (TACE) at LUANAR** The selected ACE aims to solve the development challenge of low commercialization and lack of agri-entrepreneurship capacity to transform and industrialize the agriculture sector in Malawi. In addressing this challenge, the key enabler will be leveraging the expertise and experience of key partners locally, regionally and internationally through establishment and strengthening of networks and linkages with all actors in the entrepreneurial ecosystem, and the hence the food system; and by enhanced engineering and entrepreneurial human capital skills, agricultural productivity and commercialization of innovations. In the proposed TACE, the focus will be on agro-processing and value addition of agricultural products which are among the prioritized areas to commercialize the agriculture sector as outlined in Malawi Agenda 2063 and the Malawi Export Strategy (MES) 2021-2026. Specifically, the proposed center will address the stated development challenge through delivering on four key outcome areas that includes (1) developing national and regional experts at postgraduate level in engineering for food processing, agribusiness management and entrepreneurship; (2) enhancing creative, integrative, and critical thinking skills in entrepreneurship and commercialization among students, academic staff and entrepreneurs (3) building and strengthening partnership and linkages among higher education institutions and with private sector at national, regional, and international levels; and (4) improving productivity and quality of agricultural produce and value-added products that meet domestic and export market standards. The value chains of focus for TACE include legumes, dairy and horticulture. All other value chains will also be supported depending on technology and innovations identified, to contribute to addressing the development challenge.	6
Malawi	• Agri-food systems and	**Centre for Resilient Agri-food Systems (CRAFS) at University of Malawi**	**6**

	nutrition • Agri. risk mgmt. and climate proofing • Statistical analysis, foresight and data management	The proposed ACE will develop and implement a comprehensive and flexible program of activities aimed at strengthening research capacity while addressing the challenges in agri-food systems. It will aim strengthen capacity to understand the complex interactions between smallholder farmer food production and resilience, high yield gaps, the larger scale influences and policies on food production and access, and sustainable methods to improve responses to natural (weather and hydrological) and market (e.g., price) shocks. It will focus on fine-scale, locally relevant research and solutions that are best developed and piloted by local researchers and practitioners. Progress in meeting these challenges will be achieved through better understanding of needs, co-generation of research, building of research technical skills, and professional research skills, which develops impact pathways into policy support. The implementation of activities will be guided by a set of key research questions and in the context of a collaborative network of researchers and practitioners that can sustain and propagate capacity and knowledge more broadly. The ACE will also aim to translate the research to national climate, water, and agricultural offices and other stakeholders at the community and national levels, as facilitated by our stakeholder engagement.	
Malawi	• Agri-food systems and nutrition • Agribusiness and entrepreneurship • Statistical analysis, foresight and data management	**Aquaculture and Fisheries Center of Excellence (AquaFish) at LUANAR** AquaFish seeks to build on the successes and lessons of the previous 5 years to address existing and emerging challenges in integrated aquatic and terrestrial food systems. It suggests a 3-pronged approach with emphasis on 1) capacity building in sustainable integrated and synergistic fish-crop-livestock production models at community, academic and industry level; 2) shifting towards commercially based food systems with emphasis on agro-based SMEs that seek to inclusively create jobs and raise incomes, and increase food and nutritional security of households and communities; and 3) transiting from the current inconsistent, weak and contradictory and incoherent policy frameworks to improved policy frameworks that will enable the desired transformations. To achieve these targets, AquaFish has secured partnerships with a wide array of international and national partners for experience sharing, shared learning and to ensure that the proposed interventions are holistic in nature and balance the interests of all actors. AquaFish will also implement community-based initiatives such as the Farmer Field Schools, co-implementation of food processing facilities in the communities and other interventions aimed at increasing agricultural profitability and enterprise creation to achieve greater food and economic resilience of communities.	**6**

Malawi	• Agribusiness and entrepreneurship • Agri-food systems and nutrition • Agri. risk mgmt. and climate proofing • Rural innovations and agricultural extension	**African Centre of Excellence in Underutilized and Neglected Biodiversity (ACENUB) at Muzuzu University** The objectives of ACENUB will be to: (1) strengthen conservation and value-addition to indigenous knowledge in the utilization of underutilized and neglected biodiversity; (2) enhance skills development in agri-food systems using trans-disciplinary approaches and applied research; and (3) strengthen/establish Mzuzu University linkages with the national, regional and international agricultural sector, private and public entities related to agri-food systems. The activities of ACENUB will strengthen conservation, value-addition to, and create business opportunities in indigenous knowledge in the utilization of underutilized and neglected biodiversity in Malawi and sub-Saharan Africa. To achieve this, the proposed ACENUB will focus on teaching, research, outreach, and capacity building that will result in enhanced sustainable production of PhD and Masters graduates jointly with partners. Several innovative ways will be used to deliver the trainings. Priority focus will be on introducing training and learning approaches that are pedagogical and incorporates experiential learning approaches towards addressing the needs of the agriculture sector. Engagement of local/regional industries and local communities will be emphasized.	**6**

The selected ACEs will be accountable for measurable results. Disbursements under this component will be linked to achievement of results, namely Performance Based Conditions (PBCs) which focus on improving the quality and quantity of graduates and research in the field of agriculture and themes described above. The results linked to disbursements include:

a) Number of students enrolled in relevant programs at Masters and PhD levels. Additional incentives will be provided for enrolling regional and female students. This PBC is expected to promote an increase in both the quality of technical skills in agriculture and the quantity of students enrolling in and completing programs of value to the labor market.
b) Accreditation of agriculture education programs to promote quality of agriculture higher education programs.
c) Partnerships for collaboration in applied research and training to promote quality of training and research.
d) Peer-reviewed journal papers or conference papers to promote quantity of high-quality research.
e) Faculty and student exchanges to promote regional research and teaching collaborations for better quality agriculture higher education.
f) External revenue generation to promote sustainability of the ACE.
g) Incubate new enterprises to contribute to productivity and innovation.

Institutional strengthening PBCs have been included to incentivize implementation performance and sustained achievement of results. A foundational PBC which rewards (i) timely preparation of ACE implementation plans; (ii) establishment of the ACE Project Implementation Team (PIT); and (iii) an MoU between the University management and ACE highlighting the roles and responsibilities of the ACE and the University has been included. This PBC is different from

what was included in the parent project and reflects the lessons learned from implementation of the Project. The foundational PBC under the parent project focused on development of the implementation plan, however, implementation experience shows that functional arrangements between the host University and the ACE are critical to the successful implementation of the ACE's proposals.

A new institutional strengthening PBC to incentivize National Steering Committees (NSC) to actively engage with ACEs has been introduced. The ACEs operate under the authority of their national governments. NSCs were established under the parent project to supervise ACE performance at the country level and ensure alignment with the national government's strategic agendas. The role of the NSC has been fundamental in addressing governance and project management challenges at the ACEs. Support from NSCs has not only been helpful for the ACEs to resolve implementation bottlenecks but has been the platform for creating linkages with sector policies and activities and influencing the wider higher education systems and institutions in the participating countries. Experience from the parent project shows that when NSCs have been active, there has been a positive turnaround in performance of ACEs. However, the parent project did not provide any resources for the operation of the NSC or incentive for their engagement resulting in only a few NSCs playing their role as envisaged. Based on this key lesson learned, a new PBC to promote engagement of the NSC has been included. The NSC will be expanded to include representatives from the Ministries of Agriculture and from related industry to promote linkages with policy and practices and improve employment prospects of graduates.

Component 2: Capacity building support to Agriculture ACEs through regional interventions (Revised from US$5 million to US$10 million)

This component will finance additional regional activities related to provide technical support and guidance to the selected Agriculture ACEs for implementation of their proposals. The RFU will partner with regional technical organizations focusing on the agriculture sector to provide this support to Agriculture ACEs. Additional activities that this project will finance under the expanded scope will include: (a) enhancement of regional network of agriculture higher education institutions through knowledge exchange, and facilitating staff and student mobility; (b) establishment of a think-tank to promote knowledge generation, regional policy development, collaboration and advocacy around agri-food systems in the Eastern and Southern Africa region; (c) facilitation of business incubation and acceleration, and technical support for establishment of incubation centers; (d) technical assistance to Agriculture ACEs to support resource mobilization efforts including training for development of funding proposals among other activities; (e) scholarships to female students enrolled in Agriculture ACEs; (f) leadership and management training for ACE leaders; and (g) capacity enhancement of Agriculture ACEs on fiduciary, social and environment aspects through training programs, especially focused on strengthening systems to prevent/address gender-based violence (GBV).

Component 3: Facilitation, Coordination and Administration of Project Implementation (Revised from US$3 million to US$8 million)

This component will finance additional regional activities of the RFU related to coordinating the ACEs, supervising implementation, and coordinating their monitoring and evaluation across the participating countries. It will also include results verification for the results-based component of the project through an independent third party which will enable disbursements to the ACEs. The RFU will also support the ACEs to ensure fiduciary and safeguards compliance of the ACEs with a specific focus on functional Grievance Redress Mechanisms. The coordinating role of the IUCEA has been essential for smooth functioning of the ACEs under the parent project. The RFU undertakes bi-annual Technical and Advisory Meetings with all participating countries which has been an effective forum for knowledge sharing, promoting academic networks and exchanges of ideas for enhancing results of the ACEs. IUCEA will continue to play this role for the new ACEs

selected under the AF including training for its Project Implementation Teams on operational matters and coordinating technical support to the ACEs.

E. Implementation

Institutional and Implementation Arrangements

Implementation arrangements for the AF will remain the same as for the parent project. The Regional Steering Committee (RSC) at the regional level which has representatives from all the ACE II participating countries will continue to be the governing body for the project. It will continue to meet twice a year to review project progress and provide strategic guidance and advice for implementation as well as make decisions critical to support successful implementation of the project. A Permanent Chair for the RSC was elected in 2020 to promote continuity of leadership and has further strengthened functioning of the RSC. The RSC played a critical role in guiding the AF design and approved the IEC's evaluation report for selection of institutions to benefit from this AF.

The RFU will continue to provide support to the RSC and be responsible for overall technical support to the ACEs and for implementation of Components 2 and 3 of the project. IUCEA as the RFU will continue to coordinate implementation of project activities. It has built adequate systems through the implementation of the parent project to effectively support implementation, monitor performance and verify results through an independent verification agency over the last 5 years of implementation. Given the focus on the agriculture sector, IUCEA will partner with the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) to provide technical support to the Agriculture ACEs selected for support under the AF. RUFORUM is a network organization of 145 universities from 38 African countries. It seeks to achieve a vibrant agricultural sector linked to African universities that can produce high-performing graduates and high-quality research, responsive to the demands of Africa's farmers for innovations, and able to generate sustainable livelihoods and national economic development. Accordingly, RUFORUM strengthens the capacities of universities to foster innovations responsive to the demands of smallholder farmers and value chains through the training of high-quality researchers, the output of impact-oriented research, and the maintenance of collaborative working relations among researchers, farmers, market actors, national agricultural research and advocacy institutions, and governments. RUFORUM and IUCEA have been collaborating on the ACE selection process for the proposed AF and will continue to strengthen this collaboration for joint support to the agriculture ACEs and for undertaking regional activities under Components 2 and 3 of the project.

At the national level, the NSCs for Malawi and Mozambique will continue to provide support to the ACEs in their respective countries for implementation. The NSCs will have representation from Ministries of Agriculture and Ministries of Higher Education to strengthen linkages with policy making in the agriculture sector in the two countries. In addition, incentives are provided under the AF to the NSCs to provide regular, intensive support to the ACEs given their importance in ensuring success of the ACEs under the parent project.

At the institution level, the selected ACEs will be responsible for implementation of their proposals and achieving the results agreed under the AF. They will establish implementation teams with adequate staffing to undertake key functions, including fiduciary, environment and social safeguards compliance. The RFU will provide training and technical support to these implementation teams to build their capacity to successfully implement their activities and remain in compliance with the fiduciary and safeguards requirements.

.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The locations of the selected ACEs that will benefit from AF are as follows: Lilongwe University of Agriculture and Natural Resources (LUANAR) is located to the South West of Lilongwe, the capital city of Malawi. Lilongwe is in the Central region of Malawi. It is surrounded by Naminyani hill, Bunda hill and another unnamed mountain. The hills are rocky in some areas and forested. The common fauna are lizards, baboons snakes and birds. Apart from the mountainous areas, the rest of the land is a plain. The area is also surrounded by an old forest and many other individual trees. Other than the well-equipped-for-purpose built environment, the University has huge area of bare grounds that is used for crop production, being an agricultural institution. There is a fish dam that is utilized for Aquaculture studies. LUANAR is surrounded by a dominant tribe of the Chewas. Mzuzu University (MZUNI) is located to the North of Malawi, Northwest of Mzuzu City. It was founded in 1997 and admitted its first class of students in 1999. With five faculties and three centres, the University has a student population of 4,067: 2,709 generic and 1,358 open and distance learning students; 184 academic staff; and 270 support staff (Mzuzu University Registry Record). The University has some patches of trees. The terrain is mountainous. The university is within city boundaries hence mostly affected by urban activities. The dominant tribe is Tumbuka. University of Malawi (UNIMA) is located in the old capital city of Malawi, Zomba district. Zomba is in the southern region of Malawi. The University of Malawi is a public university which was established in 1965 and has 5000 students in a variety of undergraduate programmes. UNIMA is within the city boundaries of Zomba. The institution has some old trees and a stream that passes within its boundaries. The terrain in mountainous. The dominant tribe is Yao. Eduardo Mondlane University (UEM). Established in 1962, the university has about 40 000 students enrolled in 17 faculties and schools and 12 centers. The sub-project will be implemented by the Faculty of Agronomy and Forestry Engineering (FAEF) that is located on the main campus in the Kampfumu district, Maputo city in Mozambique. FAEF building is largely surrounded by undeveloped land, with an experimental agricultural field in the southern part and a botanical garden and herbarium on the western side which is home for several birds, arthropods and reptiles.

G. Environmental and Social Safeguards Specialists on the Team

Svetlana Khvostova, Environmental Specialist
Bruno Alberto Nhancale, Environmental Specialist
Ben Okindo Ayako Miranga, Environmental Specialist
Caroline Emma Phillips, Social Specialist
Kudakwashe Dube, Social Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	
Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	No	
Forests OP/BP 4.36	No	
Pest Management OP 4.09	No	
Physical Cultural Resources OP/BP 4.11	No	
Indigenous Peoples OP/BP 4.10	No	
Involuntary Resettlement OP/BP 4.12	No	
Safety of Dams OP/BP 4.37	No	
Projects on International Waterways OP/BP 7.50	No	
Projects in Disputed Areas OP/BP 7.60	No	

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The AF will focus on the agriculture sector given high demand from participating countries for further need for building technical capacity in key thematic areas within the agriculture sector which could in the long term contribute to increased agriculture productivity and food security across the continent. The AF will scale up the existing three components of the parent project to strengthen a larger number of Agriculture Africa Centre of Excellences (ACEs) in Malawi and Mozambique and provide technical support at the regional level. The AF project environmental and social risks and impacts have been assessed as moderate (category B) as the parent project. Project activities focus on strengthening ACEs institutions capacity to deliver quality post-graduate education and build collaborative research capacity in the regional priority areas. All civil works will take place on existing campus grounds, i.e., within existing physical footprint, and therefore do not require any land taking nor will they cause involuntary resettlement, loss of assets and/or restriction of access to resources or livelihoods.

The Environmental Assessment (OP 4.01) is triggered for this AF project. The potential environmental and social impacts include noise and vibrations during minor construction and renovation of structures; soil erosion; traffic disruptions; generation of both hazardous and non-hazardous waste; sexual exploitation and abuse (sea) and sexual harassment (SH) risks; occupational and community health and safety issues during construction. These impacts are expected to be site specific, reversible, and can easily be mitigated. The OP 4.12 is not triggered for this AF the

proposed civil works will take place on existing university campus grounds, i.e., within the existing physical footprint, and therefore do not require any land take and will not cause involuntary resettlement, loss of assets, and/or restriction of access to resources or livelihoods.

The participating universities (ACEs) will prepare the environmental and social management plans (ESMPs) for the respective sub-projects. The ESMPs will include the SEA/SH action plan to articulate preventive measures for students, staff and community members. The ESMPs will be prepared, approved by the World Bank, and disclosed as condition for disbursement of funds to the respective ACE II institutions. The ACE II institutions will be required to hire or appoint qualified environmental and social focal points to support in the management of environmental risks and impacts associated with the implementation of the sub-projects. The project will train and capacity build the environmental and social focal point on risks such as stakeholder engagement, SEA/SH, grievance management and occupational health and safety (OHS).

The ACEs and the RFU will establish, publicize, maintain, and operate an accessible grievance redress mechanism, to receive and facilitate resolution of concerns and grievances in relation to the AF Project, promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to a AF Project-affected parties, at no cost and without retribution, including concerns and grievances filed anonymously ;and the grievance mechanism shall be equipped to receive, register, and facilitate the resolution of SEA/SH complaints, including through the referral of survivors to relevant gender-based violence service providers, all in a safe, confidential, and survivor-centered manner.

The last two last implementation support mission, the environmental and social performance of the project was assessed as moderately satisfactory (MS). This was due to three ACE II institutions that were not managing hazardous waste materials appropriately. The mission recommended that the institutions prepare specific waste management plans to remedy the risks, these actions will be monitored by the TT.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
The AF Project activities are unlikely to have indirect to long term impacts. Most project activities are in teaching/training, learning, research and minor construction and renovation activities. Their long term impacts on environment are low.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
Each ACE II benefiting from the AF will prepare the ESMP to manage potential environmental and and social risks and impacts.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.
The Regional Steering Committee for ACE II will continue to be the governing body for the AF. It will be supported by the Regional Facilitation Unit (RFU), Inter-University Council of East Africa (IUCEA) at the regional level. The RFU is familiar with managing safeguard issues, and similar to the parent project, the RFU will be responsible for ensuring safeguard compliance of the ACEs. The selected ACEs will be responsible for implementation of their ESMPs and compliance with the World Bank safeguard policies. To strengthen safeguard implementation capacity, each ACE will hire or appoint an environmental specialist and social specialist to support management of ESHS risks and impacts of the Project and thereafter maintain these positions throughout Project implementation.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The AF will support strengthening capacity in key themes within the agriculture sector. Building on the frameworks established during an earlier (2015-2018) exploration of major issues related to advanced skills and knowledge in agriculture higher education, extensive consultations with stakeholders (including policymakers, academicians, civil society, students, vulnerable groups and private sector representatives) in both regional and country-based engagements were held between September 2021 and February 2022. Country-level consultations were held in both Malawi and Mozambique with the respective Ministries of Agriculture, Ministries of Education, Universities, TVETs, Development Partners and farmers' associations such as the National Farmers Federation in Malawi. As a result of this consensus-building exercise, six (6) key themes and focus areas have become the framework thematic focus areas for the project.

To ensure a participatory, inclusive, and culturally appropriate approach during the Project's life cycle, the ACEs will prepare a Stakeholder Engagement Plan (SEP), as part of the ESMP, to guide engagement with project stakeholders. The SEP will include project beneficiaries and those directly impacted by project implementation, as well as other interested parties. Special consideration will be given to disadvantaged and vulnerable groups/persons. Disclosure of the ESMPs will be done on the World Bank's external website and the respective websites of the ACEs and RFU.

B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors

"In country" Disclosure

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting) (N.B. The sections below appear only if corresponding safeguard policy is triggered)

CONTACT POINT

World Bank

Roberta Malee Bassett
Senior Education Specialist

Huma Ali Waheed
Senior Education Specialist

Borrower/Client/Recipient

Ministry Of Finance and Economic Planning, Republic of Rwanda
Caleb Rwamuganza
Permanent Secretary

Ministry of Finance and Planning, United Republic of Tanzania
Emmanuel Mpawe Tutuba
Permanent Secretary
peter.masolwa@hazina.go.tz

Ministry of Finance, Planning and Economic Development, Republic of Uganda
Keith Muhakanizi
Permanent Secretary

National Treasury, Republic of Kenya
Julius Muia
Principal Secretary
info@scac.go.ke

Ministry of Finance
Ronald Mangani
Secretary to the Treasury

Ministry of Economy and Finance, Republic of Mozambique
Adriano Ubisse
National Planning Director

Ministry of Finance, Republic of Zambia
Mr. Mukuli Chikuba
Permanent Secretary
mukuli.chikuba@mof.gov.zm

Federal Democratic Republic of Ethiopia
Fisseha Aberra
Director, International Financial Institutions Cooperation

Implementing Agencies

Ministry of Education, Federal Democratic Republic of Ethiopia
Dr. Zerihun Kebede
Director General, Higher Education and Academic Affairs

Ministry of Education and Sports
Rose Nassali Lukwago
Permanent Secretary

Ministry of Education, Science and Technology, Republic of Malawi
Lonely Magreta
Principal Secretary

Ministry of Education and Vocational Training, United Republic of Tanzania
James Mdoe
Deputy Permanent Secretary
james.mdoe@moe.go.tz

Ministry of Education (MoE)
Mr. Mabvuto Sakala
Permanent Secretary
mabvuto.sakala@mohe.gov.zm

Ministry of Science & Technology, Higher, Technical & Professional Education, Republic of Mozambique
Celso Laice
Permanent Secretary

Ministry of Education

Collette A. Suda
Principal Secretary, State Department of Higher Education

Ministry of Education, Republic of Rwanda
Mike Hughes
Adviser, Science, Technology and Innovation

Inter-University Council for East Africa
Gaspard Banyankimbona
Executive Secretary
gbanyankimbona@iucea.org

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: http://www.worldbank.org/projects

APPROVAL

Task Team Leader(s):	Roberta Malee Bassett Huma Ali Waheed

Approved By

Safeguards Advisor:	Maria Do Socorro Alves Da Cunha	13-May-2022
Practice Manager/Manager:	Safaa El Tayeb El-Kogali	18-May-2022
Country Director:	Mohammed Dalil Essakali	18-May-2022