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# Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 20-Feb-2018 | Report No: PIDISDSC21247



**BASIC INFORMATION**

**A. Basic Project Data**

Country Africa	Project ID P162416	Parent Project ID (if any)	Project Name Eastern and Central Africa Agriculture Transformation Project (P162416)
Region AFRICA	Estimated Appraisal Date Apr 03, 2018	Estimated Board Date Jun 27, 2018	Practice Area (Lead) Agriculture
Financing Instrument Investment Project Financing	Borrower(s) Uganda: Ministry of Finance, Planning, and Economic Development, Burundi: Ministry of Finance, Budget and Privatisation, RoC: Ministry of Planning, Statistics and Regional Integration, DRC: Ministry of Finance	Implementing Agency Uganda: Ministry of Agriculture, Animal Industry and Fisheries, Kenya: Ministry of Agriculture, Livestock and Fisheries, DRC: Ministry of Agriculture, Burundi: Ministry of Agriculture and Livestock, RoC: Ministry of Scientific Research and Technological Innovation	

**Proposed Development Objective(s)**

The development objective is to enhance regional collaboration to increase productivity, climate resilience, and smallholder farmer access to the regional market for food commodities and products

**Financing (in USD Million)**

Financing Source	Amount
International Development Association (IDA)	312.00
<b>Total Project Cost</b>	<b>312.00</b>

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track II-The review did authorize the preparation to continue
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Other Decision (as needed)

## B. Introduction and Context

### Regional Context

- 1. Economic progress and poverty reduction has been uneven across the Eastern and Central Africa region, and ongoing challenges related to rising oil prices, drought, and instability will impact near-term growth prospects.** The region has experienced uneven growth for decades such that some countries have reached middle-income status (e.g. Kenya and Republic of Congo) while others are still low-income countries, including Uganda, Tanzania, DRC, and Burundi. Growth patterns in recent years have also been uneven. For example, while Tanzania has posted remarkable GDP growth of more than 7 percent in 2014 and 2015, growth in Burundi was negative (-3.9 percent) in 2015, mainly due to conflict and instability. Growth in Uganda improved in 2014 and 2015 with annual GDP growth rate staying above 5 percent and expected to rise to 5.6 percent in FY19. But in neighboring DRC, the GDP growth rate has decelerated from an average of 9 percent in 2013 and 2014 to 6.9 percent in 2015, with further deceleration projected in the near-term. Kenya's growth in recent years has surpassed regional peers and other lower-middle-income countries, but growth is expected to decelerate to 5.5 percent in 2017 – a 0.5 percentage point mark down from the 2016 forecast. This is primarily because of: (i) drought; (ii) slowdown in credit growth; and (iii) rise in global oil prices. On the other hand, the rise in oil prices bodes quite well for growth in the Republic of Congo (RoC) where oil accounts for more than half of GDP and more than 80 percent of total exports. Higher oil prices would enable the RoC to continue posting the steady GDP growth of more than 5 percent, which has been ongoing for the past 10 years. However, despite steady growth, the RoC continues to suffer from high rates of poverty and inequality, mainly because growth has been jobless. Poverty remains a major concern not just in RoC but across the entire region, despite significant gains in poverty reduction in recent years. Overall, the incidence of poverty ranges from 19.5 percent in Uganda (2012), 28 percent in Tanzania (2012), 39 percent in Kenya (2012), 46.5 percent in RoC (2011), 63.6 percent in DRC (2012), and 70 percent in Burundi (2016). Poverty rates are relatively higher in rural areas where majority of the population live, relying on agriculture and non-farm rural income. Therefore, growth in agriculture and rural sectors continue to provide the best prospects for poverty reduction than growth in non-agriculture.
- 2. The participating countries are at early stages of structural transformation of their economies, with agriculture playing a major role in the economy, and agricultural productivity growth a key driver for structural transformation.** The structural transformation process is a pathway to successful development that has been followed by virtually all countries that started off with a large agriculture sector<sup>1</sup>. Agriculture productivity growth is key to structural transformation as the sector would be a major employer at the beginning of the process. However, many of the people employed in the sector are a residual labor force made up of low-skill individuals that cannot find employment elsewhere and stay under-employed in family farms. Productivity growth in agriculture and non-agriculture sectors will cause excess labor to move out of primary agriculture. As the share of employment in primary agriculture declines, labor productivity in agriculture increases partly because fewer

<sup>1</sup> Agriculture for Development, World Development Report (2008)



people are working in the sector, and also because growth in food manufacturing and service sectors would create demand for raw materials from agriculture. Growth boosts wages and higher wages increase the general level of demand in the economy, including demand for food – especially because most people would be spending significant share of their budgets on food. Furthermore, the increased wages and growth across sectors boosts per-capita incomes and leads to significant shifts in consumption patterns. Consumers move away from traditional staples and towards diversified diets and high value foods such as fresh fruits and vegetables, animal proteins, processed foods, and ready to eat or easy to prepare meals. The growth in food markets creates opportunities for jobs in food manufacturing and food services, including in agro-processing, cold chains, food storage, food retailing, and more generally in the business of keeping food fresh, safe, and nutritious and delivering it to customers. The resulting jobs in agribusiness are likely better jobs in terms of purchasing power parity relative to lost jobs in primary agriculture. And the growing demand also opens up opportunities for farmers to move up the value chain and invest in these agribusiness, thus raising their incomes, reducing poverty, and advancing shared prosperity.

3. **The regional food market is enormous, and it is expected to grow even further in the next decades, driven by structural transformation, rising incomes, growing populations, and increased urbanization.** The total market for food and beverages in candidate countries – Kenya, Uganda, Tanzania, DRC, Burundi, and Republic of Congo is about US\$60 billion<sup>2</sup>. Food markets play a major role in meeting the food needs of both urban and rural consumers in Sub-Saharan Africa. It is estimated that about 60 percent of the food consumed in the region is purchased from both traditional and modern retail outlets<sup>3</sup>. The share of food purchases is expected to grow even further. Most of the growth will come from urban consumers, with supermarkets capturing the segment for perishable and highly processed foods, while the remaining segments of food demand will largely be supplied through traditional channels. More generally in Sub-Saharan Africa, urban food markets alone are expected to grow four times by about \$400 billion between 2010 and 2030, which is much faster than rural food markets because: (i) per-capita value of food consumption is 25 percent higher in urban areas than rural areas<sup>4</sup>; and (ii) the population in major cities is expected to grow rapidly over the next decade – for example Nairobi, Dar es Salaam, and Kinshasa are all projected to grow at more than 40 percent between 2015 and 2025.
4. **However, regional food markets are poorly integrated and there are large unexploited gains from increased intra-regional trade.** Limited regional integration stifles opportunities to accelerate growth. It is well recognized that increased regional integration will improve the performance of economies in Sub-Saharan Africa and enable the region improve competitiveness in global markets<sup>5</sup>. A more integrated Africa could tackle some of the most difficult supply-side constraints, facilitate stronger integration in the global economy, and unlock the continent's economic growth potential – especially in areas such as agriculture and agribusiness which are expected to drive growth in the next decades. Already most countries in the region participate in both export and import markets for various commodities – except DRC and RoC, which are large importers in most food categories. However, none of the countries is a top import origin or top export destination for the region's agricultural trade. For example, a ranking of top import origins for aggregate agricultural commodities shows that most of the imports are from outside the region. The major sources of imports are Indonesia, India, and France – in that order. Uganda is the highest ranked source of agricultural imports from within the region, but it only accounts for less than 4% of the imports<sup>6</sup>. These aggregate patterns hold for specific commodities where the region is net importer, including: (i)

<sup>2</sup> Estimate for each country is a product of its current population and food and beverage consumption/capita extrapolated from 2010 to 2016

<sup>3</sup> Tschirley (2015)

<sup>4</sup> Africa Agribusiness Report (2015)

<sup>5</sup> IDA and IBRD Regional Integration Assistance Strategy for Sub-Saharan Africa (2008)

<sup>6</sup> Calculations based on COMTRADE data



cereal products (rice, wheat, processed cereals); (ii) fats and oils; (iii) fisheries products (fresh, chilled, frozen, dried, salted, smoked fish); and livestock products (bovine and non-bovine meats, milk and cream, processed products). With regard to export markets, the highest ranked export destinations for agricultural commodities are the Netherlands, China, and Somalia – in that order. Kenya is the highest ranked export destination at 7<sup>th</sup> followed by DRC at 10<sup>th</sup>. These patterns hold for specific commodities where the region is net exporter, including: (i) fresh fruits and vegetables; and (ii) cash crops (sugar, molasses, and honey) – see Annex I. The trade patterns suggest an enormous potential in regional integration of food markets, including in regional import substitution. Expanding access to regional markets should be viewed as part of a wider strategy to reach global markets, building on successful models such as horticulture exports from Kenya to Netherlands and the European Union.

## Sectoral and Institutional Context

5. **Agriculture in sub-Saharan Africa suffers from low productivity growth, mainly due to slow progress in the technology of production and inefficient use of available technology – and the low productivity growth has delayed structural transformation.** While agriculture output growth in sub-Saharan Africa (SSA) has improved over the last several decades, productivity growth lags far behind other regions. The output growth gap between SSA and other developing regions has narrowed down tremendously, by about 83 percent between 1961-84 and 1984-2012<sup>7</sup>. The output growth gap measured in terms of average annual output growth between SSA and other developing countries was 0.73 percentage points between 1961 and 1984 (1.91 percent in SSA versus 2.64 percent in other developing countries). More recently, the gap has been narrowed down to 0.12 percentage points between 1985 and 2012 (3.35 in SSA versus 3.47 in other developing countries). However, output growth in SSA has largely been driven by expansion in area under cultivation, while in other regions, output growth is mainly through productivity growth driven by input intensification and Total Factor Productivity (TFP) growth (see figure 1 below). For example, between 1985 and 2012 about 63 percent of annual output growth in SSA was due to area expansion while only 17 percent of growth in other developing countries was due to area expansion. On the other hand, input intensification and TFP growth played a major role in agricultural output growth in other developing countries, accounting for 32 percent and 51 percent of the growth. In contrast, input intensification and TFP growth accounted for a paltry 8 percent and 29 percent of agricultural output growth in SSA.
6. **Agricultural Total Factor Productivity in the region is lagging behind because: (a) the performance of new technology of production is not significantly different from that of old technologies; and (b) farmers are less efficient in using available technology of production.** Over the last few decades, agriculture in SSA has lagged far behind in TFP growth compared to Brazil, South Africa, and China (see figure 2 above). Even worse, countries such as Uganda, Burundi, and DRC have experienced negative TFP growth. And while Kenya, Tanzania, and Ethiopia have experienced some TFP growth, their performance pales in comparison with China, South Africa, and Brazil where TFP growth has been roughly twice higher. The significantly low progress on TFP growth can be attributed to: (i) weak technical progress in agriculture such that performance of new technologies is not significantly higher than old ones; and (ii) inefficient use of existing technology by farmers, mainly due to weak dissemination and advisory systems and sub-optimal adoption. *There is an enormous opportunity to grow agriculture in SSA through input intensification and TFP growth – driven by research and development to generate new technology that dramatically outperforms old technologies, effective dissemination and advisory services, skilled labor force to apply the technologies correctly, and linkages with markets that reward better technology of production.* Promoting TFP growth in agriculture is consistent with WBG Regional Strategy Update (2017) message that future growth in African countries will increasingly need to come from higher total factor productivity.

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<sup>7</sup> Goyal and Nash (2016)



7. **Climate change is a major challenge for agriculture in the region and the sector is also a major contributor to GHG emissions.** Most global climate models project severe and adverse consequences for crops and livestock, especially for the most food-insecure regions. For example, under a business-as-usual scenario, climate change will reduce yields of staple crops significantly in Kenya by 2030 – maize yields will reduce by 12 percent, rice by 23 percent, and wheat by 13 percent<sup>8</sup>. Water scarcity will result in less productive pastures, lower dairy yields, and higher risks for spread of crop and livestock diseases.<sup>9</sup> Tanzania’s agriculture is also vulnerable to climate change and according to the Gain Vulnerability Index, Tanzania ranks 160/192 for food sector vulnerability, 171/192 on adaptive capacity, and scores 149/182 for overall vulnerability. The effect of changing climate is already affecting agriculture. For example, farmers in RoC, particularly in the province of Plateau, are experiencing: (i) earlier planting times and longer crop cycles; (ii) soil degradation, which makes some crops no longer suitable; and (iii) greater occurrences of flooding. Overall, the Congo basin seems to be less exposed to climate change compared to dryer parts of Africa, but Congolese farmers are particularly poor and isolated, and therefore vulnerable to any modest climate impacts and other external shocks. Agriculture is not only vulnerable to climate change but also the largest contributor to total national emissions in most countries – for example the sector contributes 79 percent and 70 percent of greenhouse gas (GHG) emissions respectively in RoC and Tanzania.
8. **The participating countries in the region have identified several important actions in agriculture to combat climate change.** Meeting the challenges of climate change requires investments to build the resilience of crop and livestock sectors to near-term shocks and adapting to long-term trends of the changing climate. Climate-smart agriculture (CSA) offers an appropriate strategic framework for responding to and reducing the adverse effects of climate change, because it aims to: (i) sustainably increase agricultural productivity and incomes; (ii) adapt and build resilience to climate change; (iii) reduce and/or remove greenhouse gas (GHG) emissions, where possible<sup>10</sup>; (iv) climate-risk management such as crop insurance; and (v) re-orienting agricultural research and development towards climate resilient technologies and management practices, etc. The Intended Nationally Determined Contribution (INDC) for Kenya aims to enhance the resilience of the agriculture, livestock, and fisheries value chains by promoting climate smart agriculture (CSA) and livestock development. The INDC for Uganda indicates that the country endeavors to expand CSA through various strategies, including expanding research on climate resilient crops and animal breeds, expanding crop and livestock diversification, expanding rangeland management, encouraging agro-forestry, and expanding small scale water infrastructure for irrigation. Tanzania’s INDC indicates that national adaptation contributions will reduce climate related disasters from 70 percent to 50 percent. The INDC for Burundi outlines several measures to address climate change, including replacing mineral fertilizer with organic fertilizer by 2030, water control to increase agricultural and livestock production, integrating CSA into the National Agricultural Investment Plan (NAIP), developing sustainable production systems, and conservation of soil and water resources.
9. **Malnutrition is a major challenge in the region.** For example, in DRC, over 6 million people are severely food insecure, with malnutrition affecting 43 percent of children under five. The food insecurity and malnutrition can be traced to decades of declining agriculture production – which has fallen by 40 percent since 1990. Malnutrition in DRC is the underlying cause of 48 percent of the deaths among under-5-year-olds, and the prevalence of malnutrition among pregnant women and children under 5 years old remains one of the highest in Africa. Food safety concerns are significant, mainly compounded by capacity constraints in the organization mandated to

<sup>8</sup> FICCF (2014).

<sup>9</sup> See Porter, J.R., L. Xie, A.J. Challinor, K. Cochrane, S.M. Howden, M.M. Iqbal, D.B. Lowbell, and M. I. Travasso (2014),

“Food Security and Food Production Systems,” in *Climate Change 2014: Impacts, Adaptation, and Vulnerability, Part A*, Cambridge University Press, New York, pp. 502, 511.

<sup>10</sup> FAO



control and test food – the Office Congolais du Contrôle (OCC). In neighboring RoC, the malnutrition rate is also high (32 percent), with a total of 1.4 million people estimated as malnourished and 31 percent of children stunted. The main causes of malnutrition include: (a) inadequate access to quality food; (b) poor hygiene practices and lack of awareness of food and nutrition requirements; and (c) unsafe food. Nutrition-sensitive agriculture offers an appropriate approach to address these challenges, through: (a) bio-fortification to improve nutritive value of foods, especially with micronutrients such as iron, zinc, and vitamins; (b) using agriculture extension services to transmit nutrition messages – so that farmers not only know about how to produce a commodity, but also the nutritional value of food, the benefits of these nutrients, how to prepare local recipes from these foods without losing the nutrition value, food safety hazards at different stages (on-farm, harvesting, storage, prepared meals), and safe preservation of prepared meals; and (c) building capacity for food safety.

10. **Access to skilled manpower is a major challenge faced by agricultural value chains.** Although agriculture employs majority of the labor force in the region, many people employed in the sector are a residual labor force made up of low-skill individuals that cannot find employment elsewhere and stay under-employed in family farms. This has contributed to relatively low labor productivity in agriculture, such that the contribution of agriculture to GDP is far lower than its share of employment. In addition to an unskilled workforce, labor productivity in the sector is hampered by weak delivery of complementary services for improving labor productivity e.g. mechanization. For example, in Uganda the agriculture sector employs 72 percent of the labor force, most of which are female. However, labor productivity in agriculture lags far behind the rest of the economy, such that despite occupying nearly 72 percent of the labor force, agriculture generates only 23 percent of national GDP. Other factors contributing to low productivity include poor technology of production, weak agricultural infrastructure, weak market linkages, and very low on-farm mechanization – even when compared to other countries in Sub-Saharan Africa (SSA). The youth are an important source of agricultural labor – with about 62 percent of the youth in SSA employed on family farms, compared to 16 percent in wage employment, and 22 percent in household enterprises. In Tanzania the youth<sup>11</sup> represent roughly 18 percent of the population and comprised about 28 percent of the labor force in 2010. But most young people have low skill levels and narrow skill sets and tend to be employed in low-productivity activities in the agricultural sector. In the RoC, about 63 percent of the population are self-employed in either agriculture or the informal services. The youth are severely affected by unemployment, with the unemployment rate for those aged 15-29 standing at about 32.7 percent. The high unemployment among youth in agriculture is partly because current agriculture education systems are weak and characterized by: (i) mismatch between training curricula and skills needed by the private and public sectors; and (ii) curricula that are geared towards employment and not innovation, entrepreneurship, and problem solving.
11. **Regional agricultural value chains face multiple challenges in accessing formal markets due to weak regional integration of markets for food commodities and products.** While most countries in the region participate in export and import markets for various commodities (except DRC and RoC), the food markets are poorly integrated such that the top import origins or export destinations for agricultural commodities are outside the region. Regional value chains are facing challenges in accessing regional markets, mainly due to: (i) weak access to remunerative markets, especially for smallholders who account for most production; (ii) food safety and phytosanitary standards, and the difficulty of connecting smallholders with improved technology of production to meet the needs of ever more demanding urban markets; (iii) policies that distort access to regional markets; (iv) uninsured price risk, especially in output markets; (v) poor access to finance; (vi) inadequate skills along commodity value chains; and (vii) engagement with small-holders to produce consistent quality. Partly due to these challenges of accessing formal markets, informal trade among countries in the region is huge. It is estimated that informal trade is perhaps largest for maize trade along the Tanzania-Kenya corridor, followed by beans and

<sup>11</sup> Persons between the ages of 15 and 24.





maize along the Uganda-Kenya corridor in 2014<sup>12</sup> Overall, Uganda's informal trade within the EAC Customs Union, DRC and Sudan, was equivalent to 85.1% of its formal trade in 2006, such that Uganda's large formal trade deficit of \$161 million is reduced to a small deficit of 10 million when informal flows are counted<sup>13</sup>. Majority of smallholder farmers are only able to access informal markets characterized by: (i) spot transactions conducted at the farm gate, roadside, and village markets; (ii) little reward for quality because there are no grades and standards; and (iii) weak incentives to upgrade the technology of production or incur costly post-harvest management; etc.

12. **The principal challenges facing agriculture in the region call for agriculture transformation, through strategic investments, conducive policies, and effective institutions to not only kick-start structural transformation but also ensure the process benefits smallholder farmers, provides jobs, and raises incomes in the domestic sectors.** Agricultural productivity growth is a key trigger for structural transformation, and productivity growth is key to increasing farm incomes, but productivity growth alone will not be sufficient. The process of structural transformation will expand economic activities in food manufacturing and food services<sup>14</sup>. Jobs from these agribusiness activities are projected to be better than jobs in primary agriculture in terms of purchasing power parity<sup>15</sup>. The enormous opportunities presented by growing food markets would not be accessible to the smallholder farmers, unless policies and strategic investments are geared towards providing farmers with better technology of production, linkages with emerging food markets, financial services, etc. Without such investments, the emerging demand will be met through imports – and the region would lose an opportunity to create jobs in food services and agro-industry, including cold storage, food warehousing, food logistics, food transportation and distribution, and food related financial services such as banking and insurance to the inputs sector, farming sector, and agro-processing sectors. Among the key areas for strategic interventions are: (i) enhancing technology of production along commodity value chains, including by providing farmers with access to technical knowledge and improved seeds and breeds; (ii) building resilience in primary agriculture to changing climate and promoting nutrition-sensitive agriculture and food safety; (iii) developing critical skills to meet the needs of current and future food systems, including skills required by private and public sectors; (iv) forming partnerships and alliances that connect farmers with markets and enable farmers to understand market needs and produce for the market, (v) regional integration of markets for technology of production, food commodities and food products; and (vi) facilitating a policy and regulatory environment that actively enables regional collaboration in developing solutions across the value chain and encourages private-sector participation, including in technology development. *These strategic interventions are considered to be key elements of agricultural transformation that will guide project design.*

#### Relationship to CPF

13. **The proposed project is consistent with the WBG approach to regional integration and the AFR Regional Strategy Update (2017) which supports structural transformation for growth and poverty reduction through competitiveness, resilience to shocks, and macro stability.** The technical components will directly support *competitiveness* and *resilience to shocks*, including through: (a) boosting agriculture productivity to improve the sectors competitiveness; (b) skills development, including technical skills and higher education, to generate competent skills that meet the needs of the private and public sectors; (c) building competitiveness of smallholder

<sup>12</sup> [Food Security and Nutrition Working Group, January 2015](#)

<sup>13</sup> [CUTS GRC \(2010\)](#)

<sup>14</sup> including in agro-processing, cold chains and food storage, food retailing, and more generally the business of keeping food fresh, safe, and nutritious and delivering it to customers – all of which will have strong linkages to primary agriculture

<sup>15</sup> Tschirley and Reardon (2017)





farmers to access formal regional markets for food; (d) nutrition sensitive agriculture to address malnutrition and contribute to long-term human capital development; and (e) climate smart agriculture practices to build resilience in the food system. In this context, the project will seek regional solutions to: (i) generate highly productive technologies and improve farmers access to the technologies, innovations, and management practices; (ii) adapting to the threat of climate change, through a regional approach to development of resilient technologies (seeds and breeds) and management practices that improve water use efficiency; (iii) improve smallholder farmers access to regional value chains and removing barriers to movement of agricultural inputs and produce; (iv) leverage human capital and skills that may not be available in each country to support regional agenda for transformation of agriculture; (v) develop skills for the food system to meet the needs of public and private sectors; and (vi) promote innovative approaches in the business of agriculture and create sustainable regional collaboration for agriculture transformation. Furthermore, the project contributes to the Africa region's priorities for regional integration under IDA 18<sup>16</sup>, in particular because the emerging technical components will directly address priorities related to: (i) *"boost agricultural productivity and promote job creation"*: and (ii) *address policy coordination failures and promote movement of goods, services and people*.

14. **The proposed project is consistent with the World Bank's strategic framework of engagement in all participating countries.**
15. **Kenya: The proposed project is closely aligned with the Country Partnership Strategy FY 2014–2018 and its goals of eliminating extreme poverty and boosting shared prosperity by 2030, as well as the Africa Climate Business Plan<sup>17</sup>.** The CPS is firmly anchored in the framework of the government's Vision 2030, which aims for a globally competitive and prosperous nation with a high quality of life for its citizens. In particular, the project will contribute to the CPS's Domain 2 *"Protection and Potential – Human Resources Development for Shared Prosperity"*, through improving agricultural performance and increasing incomes of the rural poor. In addition, the project will contribute to Domain 3 *"Consistency and Equity – Delivering a Devolution Dividend"* through promoting local decision-making and smooth delivery of devolved agricultural services. There is also a link to Domain 1 *"Competitiveness and Sustainability – Growth to Eradicate Poverty"* through improving the productivity of the agricultural sector, creating an enabling environment for public-private partnerships in agribusiness, developing value chains, and promoting innovative rural financial markets
16. **Tanzania: The proposed project is consistent with the draft Country Partnership Framework (CPF).** The project will directly contribute to two out of three proposed pillars: namely pillar 1 – *Promote Diversified Private Sector Growth and Enhanced Productivity* and pillar 2 – *Investment in Human Capital and Equal Opportunity*. In addition, the project is well aligned with the findings of the Strategic Country Diagnosis (SCD), which emphasized the need for a transformational approach to investments in the agricultural sector, built around diversification, market linkages, and technological change, while emphasizing agro-industry and agro-processing. The SCD underscores the role of agricultural research and development to boosting productivity through improved access to inputs, seeds, and technology. It calls for increased investment in agriculture research and development to improve productivity, drive growth in the sector, and raise incomes. The project's design will draw from the Agricultural Sector Development Program II, which aims to improve technology generation and delivery systems through

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<sup>16</sup>Background Note for the Regional Integration WPA Discussions for IDA 18

<sup>17</sup> Accelerating Climate Resilience and Low-Carbon Development



investments in strategic and adaptive research activities on priority commodity value chains for crops, livestock and fisheries.

17. **Uganda: The proposed project will directly contribute to Country Partnership Framework (CPF).** Specifically, the project will raise incomes in rural areas, which is a strategic focus of the CPF, and in addition address objectives three and four of the CPF – namely increasing agricultural commercialization, and enhancing the resilience of the poor and vulnerable. Consistent with the CPF, the project will support concerted efforts to catalyze investments in agriculture, improve delivery of agricultural services, move farmers up the value chain to post-harvest management and agro-processing, and boost agriculture exports to regional markets for food commodities and products. The project is also consistent with national priorities as stipulated in various policy documents, including the National Development Plan II (2015/16-2019/20) and Vision 2040, which rightly recognize that agriculture is the backbone of the Uganda economy, and outline strategies to enhance the sector’s contribution to wealth creation, jobs, and inclusive growth.
18. **Burundi: the proposed project is aligned with Burundi’s Country Assistance Strategy (CAS) for FY13–FY16, the CAS Performance and Learning Review (PLR), and the Bank’s approach to supporting Fragile and Conflict Affected States.** The project will contribute to pillar 1 of the CAS on improving competitiveness of agriculture for growth and employment, and to pillar 2 by increasing resilience of agriculture to consolidate peace and social stability. The project is consistent with the PLR which extends the CAS for two years and proposes a greater focus on increasing broad-based economic opportunities, in particular transforming agriculture to drive poverty reduction and provide food and incomes, which would help set the foundations for improved peace and stability. The project will also contribute to pillars 1 and 4 of the country’s Strategic Framework to fight Poverty (CSLP), which aims for: (i) transformation of the Burundian economy to sustain growth and create jobs; and (ii) management of space and environment in harmony with sustainable development. Consistent with the recommendations of the Burundi Risk and Resilience Assessment, the proposed project will support smallholders and poorest households, including groups vulnerable to external shocks.
19. **Democratic Republic of Congo (DRC). The proposed project is directly aligned with the three strategic themes of the draft Country Partnership Framework for FY18-FY20.** The draft Country Partnership Framework will be built around three strategic themes: (i) accelerating economic growth that is private sector-driven and job creating; (ii) improving the productivity and incomes of the poor through rural and agriculture development and social protection; (iii) supporting accountable governance through public financial management and decentralization. These themes are consistent with governments objective to reduce rural poverty by 2020 by restoring and modernizing agricultural production systems, improving nutrition and food security, and mobilizing significant public and private sector investments. In recent years, agriculture has become a top priority for DRC government as evidenced by increased allocation of budget from 3 percent to 8 percent in 2016, which comes close to the CAADP goal of 10 percent that African countries have committed through the Malabo declaration. The proposed project is well aligned with all pillars of the 2013 National Agricultural Investment Plan (*Programme National d’Investissements Agricoles-PNIA*), including: (i) fostering value chains and agribusiness; (ii) achieving food security; (iii) enhancing research, extension, and training; (iv) improving sector governance, gender participation and institutional capacity; and (v) adapting to climate change.
20. **Republic of Congo (RoC): The proposed project is consistent with the Country Partnership Strategy FY12-17.** The CPS aims to support the country’s development into an “increasingly stable, competitive and diversified economy with enhanced opportunities for productive employment, diversifying the economy for import substitution and improved food security and nutrition.” The proposed project supports the first strategic objective of increasing



competitiveness to achieve inclusive growth and reduce poverty. Furthermore, the project is also consistent with government strategies and policies for development of agriculture, including the 2015 National Agricultural Investment Plan (the *Plan National d'Investissements Agricoles et de Sécurité Alimentaire et Nutritionnelle* - PNIASAN). The Investment Plan adopted a comprehensive framework aiming for: (i) development of crop, livestock and fisheries; (ii) exploration of forest resources; (iii) improved access to land and rural finance; (iv) agriculture research and extension; (v) institutional capacity development; and (vi) enhancing food security and nutrition status.

### C. Proposed Development Objective(s)

**Note to Task Teams:** The PDO has been pre-populated from the datasheet for the first time for your convenience. Please keep it up to date whenever it is changed in the datasheet.

21. The development objective is to enhance regional collaboration to improve productivity, resilience, and competitiveness of selected agricultural commodity value chains and increase smallholder farmer access to the regional market for food commodities and products.

#### Key Results (From PCN)

22. The proposed key results indicators are: (i) number of direct beneficiaries (% female); (ii) number of improved technologies, innovations and management practices (TIMPS) released by multiple countries, and by country (% climate smart); (iii) time and cost saved in technology development; (iv) increase in crop productivity (average annual yields) for selected crops and livestock productivity (liters per lactation); and (v) volume and value of commodities marketed in various platforms (productive alliances, commodity exchanges, direct purchases etc.).

### D. Concept Description

23. **The proposed regional project meets all the eligibility criteria for Regional IDA** The eligibility criteria for regional IDA is met because: (i) the project includes more than three countries; (ii) the project generates *goods of a public nature* that will be shared widely among participating countries (and most probably beyond) while providing mechanisms to respond to common challenges (e.g. outbreaks of crop and animal pests and diseases and natural disasters such as drought); (iii) there is clear evidence of regional commitment to the project, building on the regional collaboration established in the first phase (EAAPP), and most recently demonstrated by very constructive consultations during the multi-country project identification mission workshop of April 2-13, 2017 which formed the basis for this concept note and where countries confirmed interest for the project and its proposed objectives and technical components; and (iv) the project will provide a platform for policy harmonization across the region to create an enabling policy and regulatory environment for regional collaboration in development, transfer, and exchange of technologies – as well as promote regional integration of markets for food commodities. Four countries have already requested the project in writing (Uganda, Tanzania, Kenya, and Burundi) and competent officials in two more countries have confirmed interest to participate in the project (DRC, and RoC).
24. **The proposed regional project is an effective approach to address the principal challenges facing agriculture in the region and will generate important *goods of a public nature* to accelerate agricultural transformation.** The principal challenges facing agriculture in the region include: (i) low productivity growth, mainly because the



performance of new technologies of production is not significantly different from old technologies, and inefficiencies in using available technology of production; (ii) climate change, which will affect productivity in a sector that is itself a major contributor to GHG emissions; (iii) malnutrition and food safety; (iv) weak access to skilled manpower across the value chains; and (v) weak access to formal regional markets due to poor regional integration of markets for food commodities and products. The proposed regional project will provide a mechanism for countries to collaborate in development, transfer, and dissemination of solutions across selected agricultural value chains. The collaboration would allow scientists in the region to access a richer set of genetic materials, exchange knowledge and technical expertise, and better utilize the institutional capacities and physical facilities in the region. This will enable faster development of better technologies, innovations, and management practices. It also saves money and time, by eliminating duplicating efforts, and enabling countries to leapfrog the hurdles of scientific trials and evaluations. The project will focus on technologies that are not only productive but also resilient to changing climate and varieties that are more nutritious (e.g. bio-fortified with essential micronutrients and vitamins). The collaboration will be institutionalized through formal networks embedded in the regional centers of excellence for priority commodities. The collaboration will also involve transferring lessons on advancing the role of private sector in technology development (e.g. in seed multiplication), which then leads to higher adoption rate for new technologies and innovations in delivering inputs to farmers (e.g. packaging inputs with knowledge and advisory services) – both of which improve farm-level efficiency in use of technologies and contribute to faster technical progress at the farm level.

25. Most of the regional collaboration will be through regional centers of leadership/excellence mandated to provide solutions across the selected commodity value chains, including guiding and leading technology development. The regional centers will collaborate with selected learning institutions to develop critical knowledge and skills demanded by the food system, including by the private and public sectors, in research and technology development, as well as foster entrepreneurship and innovation. The proposed project will harmonize selected policies across the region to create a conducive regulatory environment for regional collaboration in development, transfer, and exchange of technologies – which then enables sustainable regional collaboration and private sector investment in technology development beyond the life of the project. Access to formal markets is a major constraint for agriculture in the region, and a huge amount of regional trade in agriculture commodities is informal. The project will support smallholder farmers to access regional value chains through proven approaches, such as productive alliances, and support (at least on pilot basis) the use of regional commodity exchanges to improve regional integration of markets for agricultural commodities. Overall, the regional collaboration will generate important *goods of a public nature*, including: (a) technologies, innovations, and management practices – for example improved varieties and breeds; (b) capacities created in the regional centers of leadership/excellence – for example laboratories, databases and information; and (c) formal networks of competent scientists to underpin sustainable collaboration; (d) harmonized regional policies and improved capacity for policy analysis; (e) gene banks for germplasm conservation; (f) reduction of greenhouse gas (GHG) emissions; (g) regional platforms for access to formal markets – e.g. productive alliances and regional commodity exchanges.
26. **The proposed project will build from the success of the regional agriculture projects in Africa.** Since 2008 the World Bank has supported three regional agriculture productivity projects: West Africa Agricultural Productivity Project (WAAPP); Agriculture Productivity Project for Southern Africa (APPSA); and East Africa Agricultural Productivity Project (EAAPP) – which was implemented in four countries (Ethiopia, Kenya, Tanzania, and Uganda) from 2009-2015. These projects have been quite successful in: (i) initiating and strengthening regional collaboration in development, transfer, and dissemination of agricultural technologies; (ii) training and capacity building; and (iii) increasing farmers access to the technologies, innovations, and management practices. (A report to provide a full account of technologies developed by EAAPP is attached to this concept note). In particular,



EAAPP was quite successful in implementing 33 regionally prioritized agricultural research projects, generating 472 new technologies, innovations and management practices (TIMPs), disseminating 67 existing and new TIMPs in multiple countries, and development and use of 69 technology uptake pathways to convey relevant information and knowledge products. The regional collaboration in sharing of new technologies led to (a) two Tanzanian rice varieties being released in Kenya and Uganda, and undergoing trials in Ethiopia; (b) assisted dairy reproductive technologies from Kenya sent to the other participating countries (Uganda, Tanzania, and Ethiopia); (c) four clones of Napier grass from Kenya being recommended for dissemination in Uganda; (d) botanical seeds of cassava with enhanced carotene from Uganda shared with Ethiopia, Tanzania and Kenya; and (e) Ethiopia distributing 306 improved wheat germplasm to the other participating countries. In addition, the project facilitated the sale of 203,241 tons of commercial seeds of pasture, rice and wheat by seed companies, farmers and farmer organizations across the region. The project also formed 270 agribusiness units along the value chains of rice, wheat, dairy and cassava – with a focus on women and rural unemployed youth. And as part of the capacity building efforts, the project trained a total of 44 PhD and 105 MSc in the four participating countries

**27. The proposed project will draw from lessons learned in regional agriculture projects in Africa.** The overall experience from the regional agriculture projects provides important lessons that will be incorporated in project design, especially the following:

- Agricultural productivity alone is not sufficient to exploit the full potential of the sector in raising farmers' incomes, providing jobs, and reducing poverty.
- Regional collaboration in development and transfer of technologies is likely to be sustainable beyond the project if there are institutionalized arrangements for collaboration, such as formal networks of collaborators that would also provide a platform for continuing capacity building.
- Strong linkages between the regional centers of specialization/leadership/excellence and national satellite centers would ensure that countries can draw the benefits of a regional project even without hosting a regional center and that collaboration can be sustained.
- Inadequate linkages with global sources of knowledge (CGIAR, universities, etc.) deprives regional projects from realizing their full potential.
- Synergies with national projects provide an efficient mechanism for reaching beneficiaries and strengthening capacities
- Inadequate involvement of the private sector in the development, transfer, and dissemination of the TIMPs constrains adoption of technologies and productivity growth.
- Regional policy harmonization is key to facilitating and sustaining regional collaboration and involvement of the private sector, and the policy harmonization process is more successful in projects where the coordination arrangements have access to regional platforms for committing political ownership at the national level.

**28. The proposed project will focus on transformation of agriculture in the region.** The aim of agriculture transformation is to improve the effectiveness of the sector in raising incomes, reducing poverty, improving nutrition outcomes, addressing the challenges of changing climate, fostering regional integration of markets for food commodities and products, and providing better jobs – including to skilled youth and women. This is a strategic shift from previous regional agricultural projects that had focused primarily on productivity. The project's technical aspects will be guided by the following elements of agricultural transformation: (i) enhancing technology of production along the entire commodity value chains, including by providing farmers with access to technical knowledge and improved seeds and breeds; (ii) building resilience in primary agriculture to changing climate and promoting nutrition-sensitive agriculture and food safety; (iii) developing critical skills to meet the needs of current and future food systems, including skills required by private and public sectors; (iv) forming partnerships



and alliances that connect farmers with markets and enable farmers to understand market needs and produce for the market, (v) regional integration of markets for technology of production, food commodities and food products; and (vi) facilitating a policy and regulatory environment that actively enables regional collaboration in developing solutions across the value chain and which encourages private-sector participation, including in technology development.

29. **The following project components have been identified to contribute to transformation of agriculture in the region:** Component 1 will work on Regional Commodity Programs; Component 2 will focus on Agriculture Education, Skills Development, and Service Delivery; Component 3 will work on Markets and Enabling Policies; and Component 4 will support Program Coordination and Project Management.

### Component 1: Regional Commodity Programs (US\$ ??)

30. The objective of this component is to enhance regional collaboration in the development of agricultural technologies, innovations, and management practices (TIMPS) for selected commodities and to facilitate exchange and dissemination of the TIMPS across national boundaries. Agricultural technologies are developed for agro-ecological conditions and not national boundaries. The participating countries in the Eastern and Central Africa region not only shares similar agro-ecological conditions but also face similar challenges on many aspects of agriculture, including pests and diseases and changing climate. The adaptation solutions to climate change are relevant across national boundaries and likewise the effectiveness of measures to mitigate climate change depend on coordinated action across countries. On the other hand, capacities for technology development and agricultural sciences is not equally distributed among countries. Regional collaboration provides a platform for faster development of technologies and faster technical change at the farm level. It also saves money and time, by eliminating duplicating efforts, and enables countries to leapfrog the hurdles of scientific trials and evaluations by providing access to proven technologies. The experience from regional agricultural productivity projects shows that collaboration in technology development and transfer of genetic materials generates important outcomes such as: (i) efficient use of existing knowledge, technical expertise, institutional capacity and physical facilities; (iii) faster development of new technologies, innovations, and management practices; and (iv) organized transfer of genetic materials, germplasms, planting materials, breeding stock and technologies across national boundaries. These outcomes translate into important development impacts such as increased agricultural productivity, higher farm incomes, poverty reduction.
31. The component will focus on commodities that are important for regional food and nutrition security, and strategic regional value chains to create jobs and provide income generation opportunities. The criteria to select the commodities will be developed during project preparation<sup>18</sup> and will draw from analytical work aimed at identifying commodities that meet these characteristics<sup>19</sup>.
32. The component is organized into three sub-components: (i) establishment and strengthening of regional and national centers of leadership/excellence; (ii) collaborative development, transfer, and dissemination of agricultural technologies; and (iii) emergency response.

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<sup>18</sup> Countries have already started discussing the criteria during project identification and the engagement will continue through preparation

<sup>19</sup> A proposed collaboration with IFPRI would take advantage of the several datasets, tools, and models available with IFPRI to conduct analysis that would provide information to implement the criteria, as well as inform the regional agenda for technology development on a year to year basis





**Sub-Component 1.1: Establishment and Strengthening of Regional and National Centers of Leadership/Excellence.**

33. The objective of this sub-component is to strengthen selected centers to lead and guide collaboration in development and exchange of TIMPS and transfer of scientific knowledge across the region. Two types of centers will be supported: (i) regional centers with a regional mandate; and (ii) national centers that will develop institutionalized linkages with the selected regional centers.
34. The project's investments in the regional centers will strengthen the human, institutional, and infrastructure capacities to enable the centers become platforms for: (i) coordinating regional priorities for development of agricultural TIMPs; (ii) advancing innovations and solutions along value chains, including post-harvest management, food safety, and development of food products; (iii) establishing linkages with global sources of knowledge, including CGIAR centers, US land grant universities, and national and regional universities; and (iv) establishing strong linkages with the private sector, especially agribusinesses involved in both input and output markets for food commodities and products. The project will also finance activities to eventually transform the selected centers into certified Regional Centers of Excellence for a specific commodity or group of commodities, based on agreed criteria. The support may include: (a) establishing formal network of researchers and other collaborators in regional commodity programs; (b) capacity building on leadership and governance; (c) physical infrastructure such as scientific labs and incubation centers; etc.
35. This sub-component will build on the efforts of the EAAPP where four commodity-based Regional Centers of Excellence (RCoE) were established for: cassava (Uganda), dairy (Kenya), rice (Tanzania), and wheat (Uganda). While EAAPP had designated investments as RCoE from the onset, the proposed approach for ECAAT will be a graduation model similar to WAAPP, where the centers earn the RCoE recognition after meeting an established technical criteria and passing an external evaluation based on the set criteria. The technical criteria will be developed during project preparation in consultation with key stakeholders, including: project countries, regional organizations for agriculture research, international research institutes, and regional agricultural programs in Africa (e.g. WAAPP and APPSA).
36. The project will also consider new regional centers for selected commodities that were not covered by EAAPP and thematic areas that cut across commodities. A number of commodities and thematic areas have already been proposed by participating countries and the selection will be made during project preparation<sup>20</sup>. The new regional centers will follow a graduation model where they begin as centers of leadership and work towards earning the recognition of RCoE.
37. The sub-component will finance a regional learning agenda mainly focused on modeling different scenarios and mapping of the ecological zones using spatial analysis tools to help inform regional priorities for research and development. The project will hold annual scientific conferences every year to present the analytical findings from the models, progress on developing TIMPs, as well as receive feedback from stakeholders, and crowd in the private sector.

**Sub-Component 1.2: Collaborative Development, Transfer, and Dissemination of Technologies.**

38. The objective of this sub-component is to facilitate the planning, development, transfer, exchange, and dissemination of TIMPS across participating countries – and in partnership with the regional projects for West

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<sup>20</sup> The proposed commodities include dairy goats, beef, potato, nutrition enriched beans, bananas, and sorghum – and the proposed thematic areas include control of transboundary diseases and land husbandry



Africa (WAATP) and Southern Africa (APPSA). The component will finance: (i) transfer and dissemination of TIMPs developed under EAAPP to new countries, as well as scaling-out TIMPs developed in later stages of EAAPP to all participating countries; (ii) mainstreaming of climate-smart and nutrition-sensitive agriculture into the regional priorities for agriculture; (iii) enhancing the role of private sector in technology development; and (iv) collaboration with other regional agriculture projects (especially WAATP and APPSA) in development and transfer of TIMPs. The new countries are keen to receive technologies developed under EAAPP because: (i) the technologies are for key staples that are strategic for food security in their countries; (ii) they are facing similar challenges in a production environment characterized by similar agro-ecological conditions; (iii) they provide an opportunity to leapfrog and catch up with the EAAPP countries in terms of technical progress; (iv) they reduce cost of developing new or same TIMPs; and (v) they provide learning opportunities through regional integration in agricultural research and development. To support scaling-out of technologies the project will finance: (a) packaging of TIMPs and facilitating their transfer among the countries; (b) performance evaluation of the TIMPs with a view of improving them to enhance adoption by farmers; and (c) dissemination to farmers, which will include organizing farmers into producer organization, and linking them to markets.

39. The project will finance regional and national sub-projects on the following climate smart agriculture (CSA) investments: (i) development, transfer, and dissemination of varieties that are resilient to weather stress, drought, and diseases; (ii) establishing breeding programs for animals that are more resilient to climate, weather, and diseases (e.g. Sahiwal) and demand less feed and water resources (e.g. dairy goat); (iii) supporting innovations and management practices that improve water use efficiency – for example agronomic practices that identify, update, and disseminate knowledge on critical irrigation for different commodities; and (iv) sharing knowledge on efficient systems of irrigation.
40. The project will finance regional and national sub-projects on the following nutrition-sensitive and food safety investments: (a) transfer of bio-fortified genetic materials to improve the speed of developing such varieties across the region; (b) transfer global knowledge on using agriculture extension services to transmit nutrition messages – so that farmers not only know about how to produce a commodity, but also the nutritional value of food, the benefits of these nutrients, how to prepare local recipes from these foods without losing the nutrition value, food safety hazards at different stages (on-farm, harvesting, storage, prepared meals), and safe preservation of prepared meals; and (c) building capacity for food safety, sanitary, phytosanitary, zoo-sanitary, and microbial resistance.
41. The project support to enhance the role of private sector in technology development is based on global experience which shows that countries where the private sector has played a major role in seed multiplication have seen better outcomes, including higher adoption rate of new technologies and innovations in delivering inputs to farmers – for example packaging inputs with knowledge and advisory services. These outcomes have translated to increased production and productivity. The project will finance national research organizations across participating countries and the private sector (including farmer organizations) to: (i) establish mechanisms to involve both private sector seed multipliers and a critical mass of farmers in technology needs assessment and priority setting; (ii) involve the private sector and farmers in later stages of trials and evaluation of promising varieties – such that by the time a variety is released both the private seed multipliers (the supply side) and farmers (the demand side) would have necessary information about the performance of the variety – which would in turn facilitate a market for seeds; and (iii) establish partnerships with the private sector to develop ICT tools for disseminating TIMPs to farmers, including innovations such as e-extension models capable of reaching many farmers at relatively lower cost.



42. The expected results from component 1 include: (i) number of improved technologies, innovations and management practices (TIMPS) released by multiple countries (% climate smart); (ii) number of TIMPS released by country (% climate smart); (iii) time and cost saved in technology development; (iv) number of farmers adopting improved technologies; (v) amount of GHG emissions reduced; (vi) increased crop and livestock productivity for selected commodities; (vii) number of networks for scientists established; and (viii) number of regional centers of leadership/excellence established or strengthened.

### **Sub-Component 1.3: Emergency Response.**

43. This sub-component provides a mechanism for emergency response to crisis of a regional nature, affecting at least two participating countries, and with the goal to enhance resilience and improve recovery from the crisis. Examples of such crises might include drought, severe weather events, and pests and diseases – such as the army worm currently ravaging crops across many countries in the region. No funds will be allocated to this sub-component. However, in case of emergency funds can be re-allocated to this sub-component following a joint decision by the Bank and client country.

### **Component 2: Agriculture Education, Skills Development, and Service Delivery (US \$??)**

44. In sub-Saharan Africa, the performance of new technologies is not very different from old technologies, and this is partly responsible for low growth in total factor productivity. Improving the skills of scientists, especially at Masters and Ph.D. levels, coupled with better research facilities will facilitate a leap in technical change in agriculture. Labor productivity in agriculture is lower than in non-agriculture sectors, partly because of an unskilled workforce and weak delivery of complementary services for improving labor productivity. However, despite the low labor productivity, agriculture is projected to remain a major sector for formal and informal employment<sup>21</sup>, even after faster employment growth in manufacturing and service sectors. Agriculture will remain an important sources of jobs because: (a) the primary agriculture sector will remain significant, even though manufacturing and services sector will grow faster; and (b) many of the new jobs in manufacturing and services would be in agribusiness, including in agro-processing, cold chains and food storage, food retailing, and more generally the business of keeping food fresh, safe, and nutritious and delivering it to customers – all of which will have strong linkages to primary agriculture. The many new jobs in agribusiness will need to be filled with skilled labor force in various aspects of post-harvest management, food safety, and food logistics – together with services and capacities to improve labor productivity, for example mechanization in primary production and food processing. There is need for supply-side interventions in agriculture education and skills development, especially because the current agriculture education systems are faced with several challenges, including: (i) a mismatch between training curricula and skills needed by the private and public sectors; and (ii) the curricula are geared towards employment and not innovation, entrepreneurship, and problem solving. Furthermore, complementary services such as mechanization are weak because of lack of innovative approaches to efficient service delivery in agriculture and weak collaboration between public and private sector to establish sustainable service delivery models that respond to farmer's needs.

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<sup>21</sup> Filmer, et al. (2014)



45. The objective of this component is to provide the current and future labor force with critical knowledge and skills that: (a) promote faster technical change in agriculture, especially in technology development, and innovations to improve access to markets; (b) meet the needs of private sector agribusinesses and the public sector – including policy analysis; (c) are likely to be employable by the food system now and in the future; and (d) encourage innovation and entrepreneurship in transforming agricultural value chains and linking primary agriculture with the emerging food system and formal markets. Three sub-components are proposed to contribute to this objective: (i) establishment of centers of leadership/excellence in key disciplines of agriculture education; (ii) enhancing skills of stakeholders along value chains; and (iii) promoting effective models for service delivery.

### **Sub-Component 2.1: Establishment of Centers of Leadership in Selected Disciplines**

46. The objective of this sub-component is to provide relevant and quality agricultural education in selected disciplines that are key to transformation of agriculture value chains, including in technology development, primary production, and post-harvest management. The centers of leadership in agriculture education will be affiliated with the commodity regional centers of leadership/excellence developed under component 1. The specific disciplines will be selected during project preparation based on analytical work and stakeholder consultations, including with the private sector agribusinesses, universities, and the public sector agencies<sup>22</sup>. The project will finance competitively selected joint proposals from tertiary learning institutions (agricultural universities, university departments and agricultural colleges) and the commodity regional centers of leadership/excellence formed under component 1. The proposals may be in the form of Institution Development Plans (IDP's) which will include investments to: (i) achieve leadership and excellence, with a proposed mechanism for collaboration with other tertiary institutions in the region; (ii) improve learning outcomes and future employment for students by providing relevant and quality education and developing skills that encourage innovation, entrepreneurship, and problem solving; (iii) establishing sustainable linkages with private sector agribusinesses and the public sector to ensure continuous feedback on curricula objectives and delivery; (iv) improving teaching performance, effectiveness, and capacity building of the faculty; (iv) enhancing management, governance and sustainability of the institution.

### **Sub-Component 2.2: Enhancing Skills of Stakeholders Along Value Chains**

47. The objective of this sub-component is to strengthen capacity (human, institutional, and infrastructure) of stakeholders along commodity value chains to improve access to regional and global markets. The focus will be on farmers, food entrepreneurs, agricultural training centers, policy departments of agriculture ministries, and middle level institutions offering certificates and diploma's in agriculture and agribusiness. The project will finance competitively selected Skills Development Plans (SDP) by candidate institutions such as agricultural training centers, policy departments of agriculture ministries, and middle level institutions offering certificates and diploma's in agriculture and agribusiness. The candidate skills to be supported by the project include: (i) climate-smart agriculture practices; (ii) trainings on Good Agricultural Practices (GAPs) to facilitate adoption of Global GAPs for selected commodities; (iii) post-harvest management, including training on processing, food handling and storage, food safety, agricultural extension, (iv) agricultural policy analysis; (v) development of farm management and business development plans, including trainings on marketing, business, accounting, and financial management; (vi) animal health and improved animal husbandry; (vii) fabricating and maintaining agricultural machineries; and (viii) capacity in leadership and governance.

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<sup>22</sup> Consultations during project identification suggested disciplines such as food science and technology, mechanization, irrigation efficiency, agribusiness entrepreneurship and management, and food safety



### **Sub-Component 2.3: Promoting Effective Models for Service Delivery**

48. The objective of this sub-component is to develop and then scale-out innovative and efficient models of delivering agricultural services (e.g. mechanization) across the region. It will target stakeholders along the value chain, especially the private sector operators such as individuals, small and medium sized enterprises, and farmer organizations. The project will finance competitively selected Innovation Grants to: (i) promote innovative and effective business models for mechanization, such as leasing or repair services; (ii) gender-responsive testing, fabrication, and commercialization of appropriate agricultural mechanization; (iii) developing ICT-based platforms for agricultural advisory services (e.g. mobile apps, e-marketing services, e-extension, pest and disease control, nutrition-awareness); (iii) incubation support to develop and commercialize innovative food and agricultural products; and (iv) services to improve value chain performance – for example logistics and online platforms.
49. The expected results from component 2 include: (i) number of centers of leadership/excellence established for providing relevant education for the food system; (ii) number of stakeholder (labor force, farmers etc.) trained with critical skills for the food system; (iii) number of farmers accessing mechanization services; (iv) number of farmers accessing labor-reducing technologies (% women); (v) number of farmers accessing innovative ICT based extension and advisory services (% women); and (vi) innovative food and agricultural products.

### **Component 3: Enabling Policies and Agricultural Markets (US\$ ??)**

50. The development and transfer of agricultural technologies is hampered by a number of policy failures, including: (i) weak or poorly implemented seed policies that fail to provide for – or enforce – the strategic role of private sector in seed system; (ii) weak internal seed laws and regulations leading to poor quality seed and breeds; (iii) weak implementation of intellectual property rights leading to underinvestment in the sector, especially by private sector; and (iv) ineffective harmonization of regional seed laws, regulations and standards. Furthermore, the policy and regulatory environment for testing, evaluation, and validation of genetic materials varies widely among countries in the Eastern and Central Africa region. The differences in certification systems, standards and procedures have led to diminished trust among seed certification authorities in the different countries, which is not surprising because some countries have not even passed a Seed Act to provide a basic framework and essential principles to govern research and development on improved seeds and marketing. Clearly, the harmonization of these policies across countries is important to create an enabling environment for sustainable regional collaboration in development and transfer of agricultural technologies and germplasm for crops and livestock. The benefits of harmonization of regional policies, laws, and regulations include: (i) reducing costs of technology development by preventing duplicative efforts across countries; (ii) faster technical change at the farm-level from dissemination of technologies developed in other countries; (iii) leveraging regional knowledge to generate solutions to common problems; and (iv) upgrading national policies with best practices.
51. The demand for food is rising in the region, driven by growing incomes and population growth, and yet access to markets continues to be a major challenge for majority of smallholder farmers, especially access to regional formal and remunerative markets for food commodities and products. Agriculture can drive incomes, poverty reduction, and jobs if smallholder farmers participate in formal markets characterized by: (i) modern value chains that can pass on information about food attributes demanded by consumers back to the farmers so that production is consumer-oriented; (ii) opportunities to upgrade the technology of production and receive cutting-edge advisory



services; (iii) potential to move-up the value chain and provide marketing services, such as post-harvest management and primary processing; and (iv) linkages with agribusinesses that operate at scale, especially in output markets.

52. The objectives of this component are: (i) to create an enabling policy and regulatory environment for regional collaboration in development, transfer, and exchange of technologies; and (ii) to improve smallholder farmer's access to regional and national markets for food commodities and products. Two sub-components are proposed: (a) enabling policies; and (b) linking smallholder farmers access to markets to regional and national markets.

### **Sub-Component 3.1 Enabling Policies**

53. The objective of this sub-component is to create a conducive policy and regulatory environment for regional collaboration in development, transfer, and exchange of technologies. The project will finance: (i) completion of regional harmonization of about 17 policies, laws, and regulations identified for harmonization under EAAPP; and (ii) identification, formulation, and harmonization of new policies, including intellectual property rights on plant and animal germplasm – which is key for sustainable regional collaboration and private sector investment. The project support will specifically finance: (a) thorough review of status of harmonization of policies in EAAPP countries and expansion of the process in new countries; (b) participatory identification of new policies for harmonization; (c) translation of the provisions of harmonized policies into an operation plan and guidelines for participating countries; (d) review of national legal frameworks and political economies to ascertain consistency with harmonization protocols; (e) assessment of the technical, institutional and human capacities; (f) customized support to countries to effectively harmonize and domesticate the policies; and (i) partnerships with country level champions to lead the adoption of policies and processes, etc. In providing this support, the project will draw from lessons learned under EAAPP and WAAPP on policy harmonization, including: (i) countries are at different stages in policy development such that a one-size-fit-all harmonization process hardly works and support should be customized to country needs; (ii) the coordination mechanism for policy harmonization are effective when buttressed by a regional platform for committing political ownership at country level; (iii) effective coordination of the process is key to ensure both the concept and benefits of policy harmonization are well understood by participating countries; and (iv) domestication of harmonized policies, including the drafting of associated procedures, regulations, and laws is an important final step to ensure the policies become effective.

### **Sub-Component 3.2: linking smallholder farmers access to markets to regional and national markets**

54. The objective of this sub-component is to improve smallholder farmer's access to regional and national markets for food commodities and products. The project will finance: (i) linking farmers to regional value chains; and (iii) piloting the use of warehouse receipt systems linked to regional commodity exchanges as a means of enabling farmers access regional commodity markets<sup>23</sup>. On linking farmers with regional value chains, the project will finance: (i) identification of regional value chains that meet commonly agreed characteristics (e.g. regional import substitution, clear surplus and deficit countries, scope for value addition); (ii) agribusiness incubation grants to help farmers access markets; (iii) formation of horizontal alliance between smallholder producers and other stakeholders (e.g. productive alliances) to coordinate production with marketing and de-risk agribusiness investments – perhaps through partial credit guarantees; (iv) commodity innovation platforms that bring together all value chain actors (input providers, varieties, production, buyers etc.). The support to pilot the use of warehouse receipt systems linked to regional commodity exchanges will include financing: (a) review of

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<sup>23</sup> Other benefits of warehouse receipt systems include: (i) improvement of commodity grades and standards; (ii) reduction of post-harvest storage losses especially for grains; (iii) access to finance and commodity insurance; and (iv) mitigation of price risks





implementation of warehouse receipt systems (WRS) and regional commodity exchanges; and (b) piloting WRS linked to a regional commodity exchanges in selected countries – with possible support including addition of priority commodities that are strategic for food security or regional value chains and partial credit guarantee to de-risk investments.

55. The expected results from component 3 include: (i) number of harmonized policies domesticated by countries; (ii) number of farmers accessing regional and national markets (% women); (iv) volume and value of commodities marketed in various platforms (productive alliances, commodity exchanges, direct purchases etc.); (v) value of warehousing receipts issued, by commodity; and (vi) amount of private investment leveraged in de-risked agribusinesses.

#### **Component 4: Regional Coordination and Project Management (US\$ ??)**

56. The objective of this component is to coordinate the project at the regional and national levels. Two sub-components are envisaged: (i) regional coordination and learning; (ii) national project management and evaluation.

##### **Sub-Component 4.2: Regional Coordination and Learning**

57. The objective of this sub-component is to facilitate regional collaboration and continuous learning across participating countries and technical components. The arrangements will build from the structures that were developed for EAAPP and lessons learned in coordinating regional agricultural projects. The EAAPP was coordinated by ASARECA, which is a sub-regional organization (SRO) mandated to coordinate agricultural R&D in Eastern and Central Africa. However, unlike in EAAPP not all ECAAT countries are members of ASARECA – the Republic of Congo is a member of CORAF/WECARD, an SRO with similar mandate in West and Central Africa. The coordination arrangements will be determined during project preparation. The arrangements will most likely include organizations<sup>24</sup> mandated to coordinate regional collaboration on the project's technical areas in participating countries, subject to meeting certain qualifications. Criteria to identify qualifying SRO's will include: (a) clear technical mandate from participating countries; (b) strong technical capacity in agriculture research and development or other technical areas of the project; (c) demonstrated good accountability, including fiduciary integrity and transparency; (d) physical presence in Eastern and Central Africa; and (e) ability to manage partnerships with the private sector, agriculture science community, and other collaborators. The SRO's involved in coordinating the project will be required to jointly sign and implement a Memorandum of Understanding (MoU) that will be supervised by high-level Regional Steering Committee, whose membership will be determined during project preparation. A key lesson learned in regional agricultural projects is that effective coordination, especially of policy harmonization, not only requires working through SRO's with technical capacity but also access to platforms for securing political good will and commitment by the participating countries. Therefore, the proposed coordination arrangements will most likely involve two regional organizations (REC's) that collectively cover all participating countries – the East Africa Community (EAC) and Economic Community of Central African States (ECCAS). The REC's will sign and implement MoU that will be supervised by a high-level Regional Steering Committee.

##### **Sub-Component 4.2: National Project Management and Evaluation**

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<sup>24</sup> The leading candidates are ASARECA, CORAF/WECARD, RUFORUM, FARA and AFAAS. The learning agenda will most likely involve IFPRI.



58. The objective of this sub-component is to facilitate project implementation, management, and evaluation in each participating country. The project will finance coordination of all project implementation agencies at the national level, and the development and implementation of a robust M&E and MIS that would not only track the project performance, but also adoption rates, and feedback from the stakeholders. Annual R&D shows will also be financed both at the regional and national levels to share the project activities and its achievements. The national project coordination unit will be properly staffed with managerial staff, fiduciary staff (safeguards, financial management, and procurement) as well as technical specialists on key aspects of the project – including agricultural research and development, agricultural marketing, and trade.

59. The expected results from component 4 include: (i) timely implementation progress of regional and national sub-projects; (ii) effective dissemination and communication of project results and challenges; (iii) timely M&E reports; and (iv) functioning MIS.

**Note to Task Teams:** The following sections are system generated and can only be edited online in the Portal.

## SAFEGUARDS

### A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

This proposed regional project is assigned the Environmental Assessment category (Cat B), predicated on the fact that especially subprojects proposed under Component 1 (Regional Commodity Programs) would involve civil works (physical infrastructure such as scientific labs and incubation centers, etc.), development of food products, development and transfer across borders of crop varieties (including bio-fortified genetic materials) and animal breeds, adoption of water use efficiency practices, improving nutritional value of local food, preparation and preservation of local recipes from local foods, etc. Thus, aside construction related social and environmental impacts, execution of a good number of the proposed interventions may lead to phytosanitary, zoo-sanitary but also human health and safety issues as result of emergence of pests and diseases, which may require the application of pesticides and microbial organisms.

Given the nature of the proposed interventions with specific micro-project designs and locations not known at the time of project design and preparation, the project will take a framework approach, as an upstream due diligence measure, to managing environmental and social safeguards risks and impacts. At this stage, three framework reports and one management plan will be developed by the project. These frameworks and plans are:

- a) Environmental and Social Management Framework (ESMF) in response to OP/BP 4.01 (Environmental Assessment);
- b) Integrated Pest Management Plan (IPMP) in response to OP 4.09 (Pest Management);
- c) Resettlement Policy Framework (RPF) in response to OP/BP 4.12 (Involuntary Resettlement); and
- d) Indigenous Peoples Planning Framework (IPPF) or Vulnerable and Marginalized Group Framework (VMGF) in response to OP/BP 4.10 (Indigenous Peoples).

It is recommended that each participating country will prepare country-specific ESMFs, IPMPs, RPFs and IPPFs/VMGFs. This determination/conclusion was based on several considerations, including the fact that there is no uniformity in the choice of language for the reports (Burundi, Republic of Congo and Democratic Republic of Congo choose to use the French language, while the other five participating countries use English as lingua franca).



**B. Borrower’s Institutional Capacity for Safeguard Policies**

Capacity for safeguard instrument implementation within the Ministries of Agriculture in Kenya, Tanzania and Uganda who are likely to be leading implementation of ECAATP is satisfactory. The Ministries of Agriculture of these countries participated in the implementation of the closed Regional Eastern Africa Agricultural Productivity Project (EAAPP) that was financed by the Bank. Aside implementing EAAPP, these countries have implemented other country-level agricultural sector projects, and are implementing ongoing Bank financed operations in the agriculture sector in their respective countries. Thus, capacity to coordinate and oversee safeguard implementation has been sufficiently built. On the contrary, Burundi, DRC and ROC lack sufficient capacity to develop and implement safeguard instruments under this project. Based on information availed to the safeguard team during the November 2017 project preparation workshop, it is recommended to undertake an in-depth assessment of the Borrowers’ institutional capacity before the appraisal mission scheduled to take place in March 2018. The findings of the in-depth safeguard capacity assessment and recommended capacity building program will be documented in the frameworks (ESMF, RPF, VMGF and IPMP) prepared for each participating country.

**C. Environmental and Social Safeguards Specialists on the Team**

Edward Felix Dwumfour, Environmental Safeguards Specialist  
Lilian Wambui Kahindo, Social Safeguards Specialist  
Adrian Howard Cutler, Social Safeguards Specialist

**D. Policies that might apply**

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	This policy is triggered on the assumption that subprojects proposed under Component 1 (Regional Commodity Programs) would involve civil works (physical infrastructure such as scientific labs and incubation centers, etc.), development of food products, development and transfer across borders of crop varieties (including bio-fortified genetic materials) and animal breeds, adoption of water use efficiency practices, improving nutritional value of local food, preparation and preservation of local recipes from local foods, etc. Thus, aside construction related social and environmental impacts, execution of a good number of the proposed interventions may lead to phyto-sanitary and zoo-sanitary issues, but also human health and safety issues, resulting from emergence of pests and diseases, which may require the application of pesticides and microbial organisms. Given the nature of the proposed interventions with specific micro-project designs and locations not known at the time of project design and preparation, the project will take a framework approach, as an



upstream due diligence measure, to managing environmental and social safeguards risks and impacts. In this regard, each participating will develop framework reports namely Environmental and Social Management Framework (ESMF) and Integrated Pest Management Plan (IPMP), which will be consulted upon and disclosed in-country and at the World Bank’s InfoShop and external website. The ESMF for each country would include a generic ESMP template to address construction-related impacts. In accordance with the World Bank Safeguards Policy and in reference with country-specific environmental and social sustainability instruments, during the implementation phase of the project, the appropriate and relevant site-specific safeguards instruments such as ESIA/ESMPs would be prepared, consulted upon and disclosed in-country and at the World Bank InfoShop and external website prior to commencement of any project activities deemed likely to result in any adverse environmental risks and social impacts.

Natural Habitats OP/BP 4.04	Yes	The WB policy on Natural Habitats is triggered because implementation of project activities such as water harvesting facilities, crop farming and animal husbandry, technology introduction and innovative approaches, etc. may likely result in disturbances to sensitive and fragile ecological systems. However, during the implementation phase of the project conscious efforts would be made to avoid introducing any significant risks to natural habitats by avoiding such areas and/or instituting timely and cost-effective remediation measures.
Forests OP/BP 4.36	No	The project will not work on or intrude forests.
Pest Management OP 4.09	Yes	The policy is triggered because the project would support the development and transfer across borders of crop varieties (including bio-fortified genetic materials) and animal breeds. These activities could lead to phyto-sanitary and zoo-sanitary issues resulting from emergence of pests and diseases, which may require the application of pesticides and microbial organisms. An Integrated Pest Management Plan (IPMP) would be prepared by each participating country based upon current pest management



		<p>practices and challenges in each of the participating country, current knowledge on IPM and pesticide use, pesticide regulatory and institutional regimes in each of the participating country. The IPMP may have to be country-specific, given the differences in country's regulatory and institutional regimes, pesticide uses and awareness of IPM.</p>
Physical Cultural Resources OP/BP 4.11	Yes	<p>At this stage of project design, it is not easily determinable whether Physical Cultural Resources would be encountered during the implementation phase of the proposed project. In the event implementation of project activities involving civil works could affect physical cultural resources, a Physical Cultural Resources Plan (as a standalone report or integrated into an ESIA/ESMP) would be developed, consulted upon and disclosed. On the other hand, "chance find" procedures would be incorporated into ESIA/ESMPs.</p>
Indigenous Peoples OP/BP 4.10	TBD	<p>The locations of the works are yet to be determined and as, in some countries, IPs are highly localized, we will determine the likely impact of the project on IPs as prior to appraisal after undertaking social screening in each of the participation countries. IPPFs/VMGFs will be prepared prior to appraisal where needed. The specific IPPP/VMGP will be prepared and disclosed during implementation and prior to commencement of any activities that could have impacts on IPs</p>
Involuntary Resettlement OP/BP 4.12	Yes	<p>This policy is triggered on the assumption that land may be acquired for infrastructure works such as construction and rehabilitation of scientific laboratories and incubation centers, etc. in or outside existing premises/properties of participating centers/institutions. At this stage of project preparation, the project will adopt the framework approach and prepare a country specific Resettlement Policy Framework (RPF) as a separate document to the ESMF and IPPF/VGMF. If during the implementation phase there should be need to acquire land for a project activity, the project will prepare site-specific abbreviated or a full-scale Resettlement Action Plan (aRAP/RAP). The project is not expected to finance investment activities that are likely to involve any massive land take and resulting in significant economic and physical displacement of people and communities. It will not involve the construction of dams or new road infrastructure. Any irrigation activities will be on-</p>



		farm and restricted to transferring knowledge on highly-efficient water systems.
Safety of Dams OP/BP 4.37	No	The project will not construct or rehabilitate dams or extract water from any dams in use or under construction
Projects on International Waterways OP/BP 7.50	No	Project activities will not be implemented on international waterways nor abstract water from tributaries of international waters.
Projects in Disputed Areas OP/BP 7.60	No	The project will not work in disputed areas.

### **E. Safeguard Preparation Plan**

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 26, 2018

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

The safeguard studies were launched in November 2017 and be will completed by February 2018

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**Note to Task Teams:** End of system generated content, document is editable from here.