



Bridge year proposal 2021



Catalyzing partnerships,
capacity building and research
towards entrepreneurial
farming in Central Africa

Executive summary

The Consortium for Improving Agriculture-based Livelihoods in Central Africa (CIALCA) is an innovative research-for-development (R4D) partnership operating in Burundi, eastern DR Congo, and Rwanda. CIALCA is led by IITA, the Alliance of Bioversity International and CIAT, and the Joint FAO/IAEA Programme on Nuclear Techniques in Food and Agriculture and has a 15-year legacy of conducting agricultural research for improving livelihoods in Central Africa. Through its R4D approach, CIALCA contributes to real transformation for achieving Sustainable Development Goals (SDG) 1 (No poverty) and 2 (Zero hunger), with positive impacts on SDG 4 (Quality Education), SDG 5 (Gender equity), SDG9 (Industry, innovation and infrastructure), SDG 12 (Responsible consumption and production), SDG 13 (Climate action) and SDG 15 (Life on land), SDG 16 (Peace, justice and institutions) and SDG 17 (Partnerships for the goals). Since its initial establishment in 2005 the Consortium has been supported by the Belgian Directorate General for Development Cooperation and Humanitarian Aid (DGD). The current phase of CIALCA 2017-2020 is officially ending on 31 December 2020.

CIALCA is proposing a bridge-fund of EUR 680,000 for the period of 1 January 2021 - 31 December 2021. During this Bridge year, CIALCA will continue its vision and mission statement formulated as follows:

- Vision statement: Sustainable agricultural intensification for improved food, income, gender equality, nutrition and environmental security in the Great Lakes Region.
- Mission statement: CIALCA facilitates access to science products and decision support for development partners, private sector organizations, and policy makers operating within the Great Lakes Region through three Pillars: (i) Partnerships and Policies, (ii) Capacity Development, and (iii) Innovation and Scaling.

During the 2017-2020 phase, CIALCA partners and co-investments reach approximately 1.5M households in Rwanda, Burundi, and eastern DR Congo. This 'CIALCA-reach' has been achieved through major progress against the 2017-2020 outcomes:

- 9 Strategic partnerships have been established and partners are engaged in the design, testing and/or validation of CIALCA innovations. 4 of the 9 partnerships are based on principles of co-investment, and progress is captured in an ICT-based MEL system;
- 10 M USD of cumulative co-investment through 12 R4D projects was attracted with government, development and private sector partners for a variety of CIALCA spin-off projects and programs;

- 12 Future policy, science or business leaders have been capacitated through their long-term engagement in CIALCA capacity development activities with Belgian Universities (PhD and MSc);
- 200 Staff representing 50 research or development organisations have been trained on core CIALCA themes and quality of science;
- 11 CIALCA production-, nutrition-, and market access related innovations are being designed, tested and/or validated with research and development partners;
- 24 CIALCA scientific publications and 11 news items have captured CIALCA research, innovation and learning;
- 6 ICT-based decision support tools have been designed, tested, validated with partners, including 1 up-to-date CIALCA data base available to partners online;
- 5 Development partners and/or projects use the CIALCA segmentation framework to explore diverse innovation options to farm households in the Great Lakes Region.

The bridge-year 2021 proposal strongly builds on the 2017-2020 phase and proposes 8 follow-up outcomes that CIALCA seeks to further achieve by the end of 2021:

- 5 Government, public or private partners with a proven capacity to deliver innovations in the Great Lakes Region have integrated CIALCA products into their research and delivery systems;
- 12 M USD of cumulative co-investment through 14 R4D projects was attracted with government, development

- and private sector partners for a variety of CIALCA spin-off projects and programs;
- 10 New innovation and scaling partners have expressed intend to co-invest in innovation and scaling activities with CIALCA under One CGIAR from 2022 onwards;
- 8 Graduated CIALCA students are leading/engaged in research and innovation within their respective national academia, development or business sectors;
- 10 Research or development organizations have the capacity to structurally use CIALCA decision support tools;
- 1 Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been co-designed with academic and NARS institutes;
- 5 Additional CIALCA scientific publications and 10 CIALCA news items have captured CIALCA research, innovation and learning;
- 5 Scaling strategy development processes with government, public and/or private sector partners have been initiated to avail innovations for sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region under One CGIAR.

- poses activities and outputs covering three distinct Themes:
- **THEME 1:** Consolidate and ensure continuity of ongoing investments in partnerships, capacity development, and innovation to improve agricultural livelihoods ('Continuity, consolidation and alignment of CIALCA investments');
 - **THEME 2:** Embed CIALCA innovations and learning in policy, extension and development strategies and agricultural curricula to achieve impact at scale ('Advocacy and enabling environment for scaling CIALCA innovations');
 - **THEME 3:** Empower a transition towards One CGIAR in the Great Lakes Region. During this transition year, we will continue and consolidate CIALCA's work to contribute to the five Strategic Areas of Impact of One CGIAR: Gender, Climate, Poverty, Nutrition and Environment ('Enable a transition towards One CGIAR').

The proposed Thematic Focus for 2021 is fully aligned with and builds on the Three Pillars of CIALCA 2017-2020, and focuses on delivering 7 tangible Outputs through 21 Activities:

To deliver on those outcomes and reach a total of 2M households in the Great Lakes Region, CIALCA 2021 pro-

Bridge-year 2021 Themes	PILLAR 1 Partnerships and Policies	PILLAR 2 Capacity Development	PILLAR 3 Innovation and Scaling
THEME 1 Continuity, consolidation and alignment of CIALCA investments	Continuation, expansion and consolidation of partnership agreements with FAO/IAEA, NARS, development partners (Output 1.1, Act 1.1.1; 1.1.2; 1.1.3)	Continuation of 8 CIALCA PhD students with Belgian and African Universities (Output 1.2, Act 1.2.1; 1.2.2; 1.2.3)	Publication, synthesis and prospect of CIALCA innovations and related spin-off projects and new proposals (Output 1.3, Act 1.3.1; 1.3.2; 1.3.3; 1.3.4)
THEME 2 Advocacy and enabling environment for scaling CIALCA innovations	Mapping and engaging public and private sector scaling partners with interest in embedding CIALCA innovations in their policy or business strategies (Output 2.2, Act 2.2.2)	Strengthened capacity for integrative agricultural systems research in the national agricultural research systems of Rwanda, Burundi and DR Congo (Output 2.1, Act 2.1.1; 2.1.2; 2.1.3)	Develop a vision and research agenda for integrated systems research under One CGIAR in collaboration with the other CGIAR centres and partners in the Great Lakes Region (Output 3.2, Act 3.2.2)
THEME 3 Empower a transition towards One CGIAR	Demand-mapping in the Great Lakes Region with government, public and private sector partners to inform R4D agenda and partnership models for One CGIAR in the Great Lakes Region (Output 3.2, Act 3.2.1; 3.2.3)	Develop a vision and research agenda for integrated systems research under One CGIAR in collaboration with the other CGIAR centres and partners in the Great Lakes Region (Output 3.2, Act 3.2.2)	Scientifically documented practical perspective for One CGIAR: Lessons from a long-term Consortium in Central Africa (Output 3.1, Act 3.1.1; 3.1.2)

Background

2017-2020 CIALCA Achievements

Under the current phase of CIALCA 2017-2020, good progress has been made along the CIALCA Theory of Change and Impact Pathway. Investments in the 3 CIALCA Pillars have translated into 8 Outcomes:

- 9 Strategic partnerships have been established and partners are engaged in the design, testing and/or validation of CIALCA innovations. 4 of the 9 partnerships are based on principles of co-investment, and progress is captured in an ICT-based MEL system;
- 10 M USD of cumulative co-investment through 12 R4D projects was attracted with government, development and private sector partners for a variety of CIALCA spin-off projects and programs;
- 12 Future policy, science or business leaders have been capacitated through their long-term engagement in CIALCA capacity development activities with Belgian Universities (PhD and MSc);
- 200 Staff representing 50 research or development organisations have been trained on core CIALCA themes and quality of science;
- 11 CIALCA production-, nutrition-, and market access related innovations are being designed, tested and/or validated with research and development partners;
- 24 CIALCA scientific publications and 11 news items have captured CIALCA research, innovation and learning;
- 6 ICT-based decision support tools have been designed, tested, validated with partners, including 1 up-to-date CIALCA-base available to partners online;
- 5 Development partners and/or projects use the CIALCA segmentation framework to explore diverse innovation options to farm households in the Great Lakes Region.

These outcomes have enabled us to make good progress along our Theory of Change and impact pathway through which CIALCA partners and co-investments reach approximately 1.5M households in Rwanda, Burundi, and eastern DR Congo during the 2017-2020 period. A more detailed CIALCA Results Framework that integrates the 2017-2020 and 2021 activities, outputs, outcomes and achievements can be found as Annex to this CIALCA bridge-year proposal.

CIALCA in a changing and dynamic context

We live at a critical moment in time, where we have an urgent need and opportunity to transform our food systems, for human and planetary health, for equity and social justice. This bridge-year proposal is developed in the midst of the global COVID-19 crisis. The crisis shows the importance of developing sustainable and resilient regional and local food systems for nutrition, income and stability in the Great Lakes Region, and how continued investment in partnerships, capacity development, and agricultural innovation and scaling is crucial for that.

The CGIAR is the only global partnership addressing agricultural research for development, and plays a challenging but unique role in catalyzing a food system transformation that works for and offers opportunities to the most vulnerable. To meet this ambition, the CGIAR research strategy and program for 2022-2030 will be restructured around five Strategic Areas of Impact: **Gender, Climate, Poverty, Nutrition and Environment**. This transition process is also referred to as One CGIAR.

CIALCA has a long tradition of identifying and testing innovations that boost crop productivity, but also take into account the dietary needs of rural populations, income and the local agro-ecological settings. During the CIALCA 2021 bridge year, we will continue and consolidate CIALCA's work around the Three Pillars and integrate those within the 5 Strategic Areas of Impact of One CGIAR.

CIALCA delivers research for development, focused on improving agriculture-based livelihoods while working within climate and environmental boundaries. CIALCA has embraced the challenge to better understand the pathways for different farmers in stepping-up the pyramid from 'subsistence' to 'farming with commercial potential' and 'commercial farming' in the Great Lakes Region. CIALCA has developed farm household typologies to better understand heterogeneity among farmers which can enable the tailoring of agricultural services and partners interventions for more inclusive agricultural growth. In addition, CIALCA identifies sustainable agriculture-nutrition transitions that avoid potential trade-offs between agricultural commercialization and household nutrition. Empowering different groups of farmers (incl. women and youth) in agricultural

ASSUMPTIONS

The incorporation of food and agricultural systems research and innovations contributes to enhanced adaptive management, anticipating tradeoffs and optimizing for multiple outcomes simultaneously

Decision-makers/ Program managers are willing to co-invest in joint capacity building for food systems and agricultural research and innovations

Local research, policy, private sector and civil society demand for relevant research and innovations for more sustainable food and agricultural systems

CIALCA THEORY OF CHANGE AND IMPACT PATHWAY

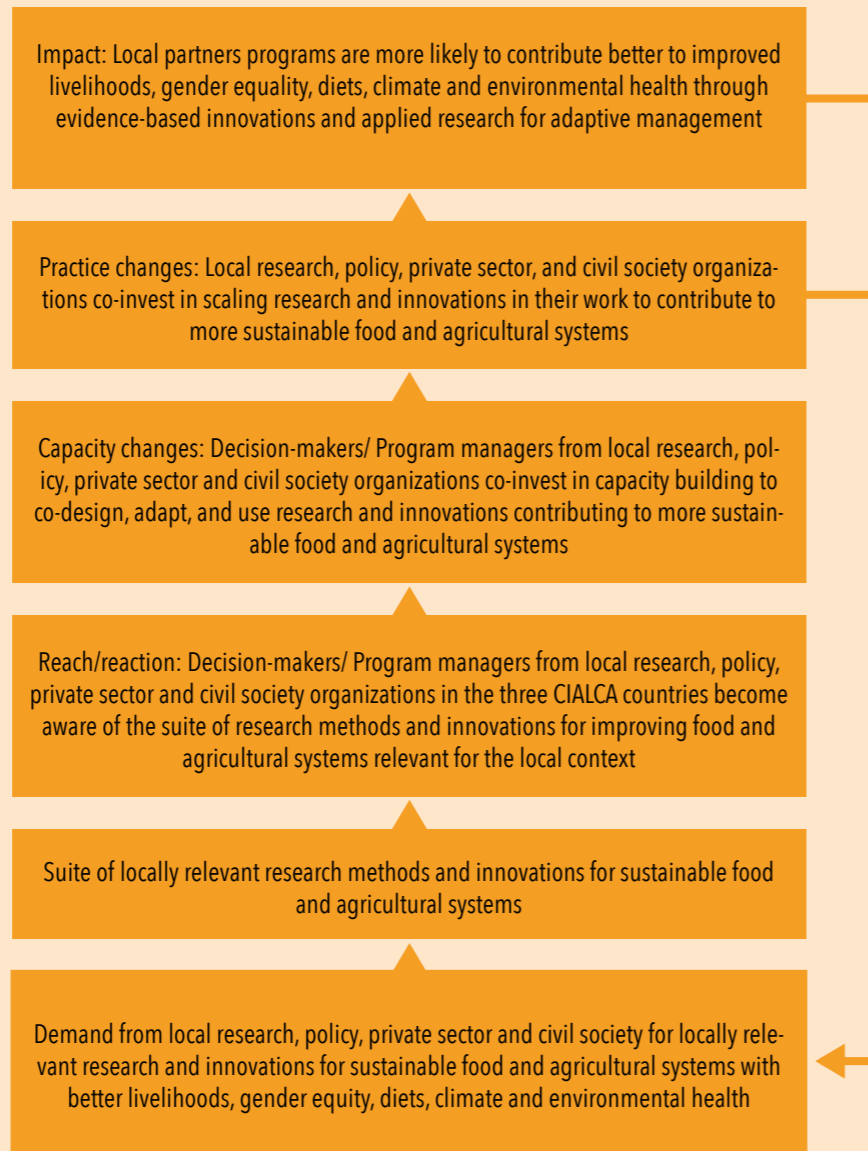


Figure 1. CIALCA Theory of Change and Impact Pathway that visualizes how CIALCA Pillars, Achieved 2017-2020 Outcomes and Expected 2021 Outcomes result in impact at scale.

CIALCA 2017-2020 (achieved)

CIALCA partners and co-investments reach approximately 1.5M households in Rwanda, Burundi, and DRC in efforts to achieve SDG 1, 2, 4, 5, 9, 10, 12, 13, 15, 16 and 17 Targets

- 9 Strategic partnerships have been established and partners are engaged in the design, testing and/or validation of CIALCA innovations. 4 of the 9 partnerships are based on principles of co-investment, and progress is captured in an ICT-based MEL system.
- 10 M USD of cumulative co-investment through 12 R4D projects was attracted with government, development and private sector partners for a variety of CIALCA spin-off projects and programs.

- 12 Future policy, science or business leaders have been capacitated through their long-term engagement in CIALCA capacity development activities with Belgian Universities (PhD, MSc).
- 200 Staff representing 50 research or development organisations have been trained on core CIALCA themes and quality of science.

- 11 CIALCA production-, nutrition-, and market access related innovations are being designed, tested and/or validated with research and development partners.
- 24 CIALCA scientific publications and 11 news items have captured CIALCA research, innovation and learning.
- 6 ICT-based decision support tools have been designed, tested, validated with partners, including 1 up-to-date CIALCA data base available to partners online.
- 5 Development partners and/or projects use the CIALCA segmentation framework to explore diverse innovation options to farm households in the Great Lakes Region.

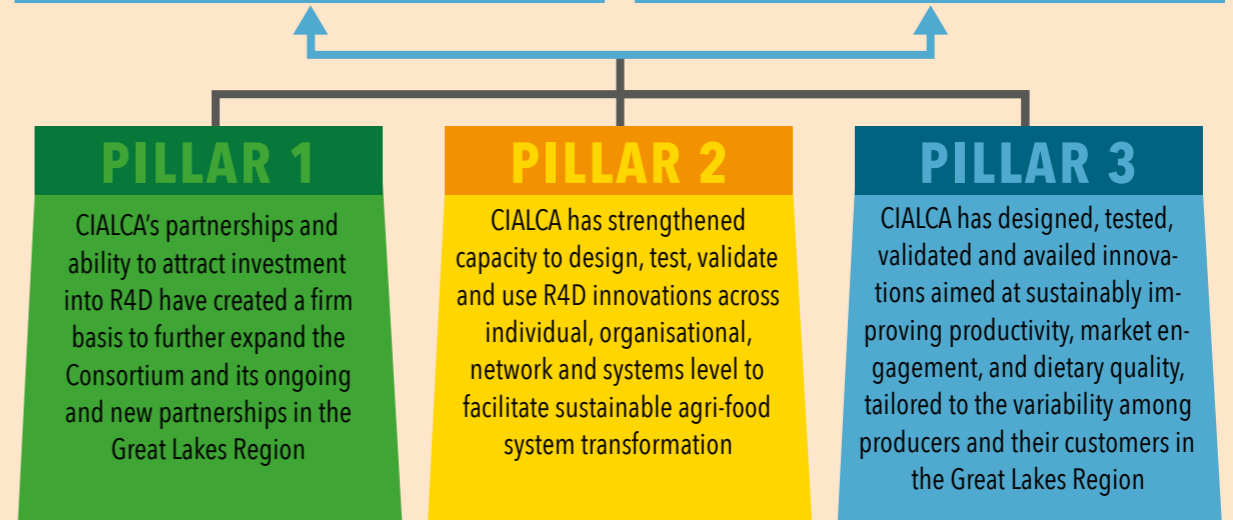
CIALCA 2021 (expected)

CIALCA partners and co-investments reach approximately 2M households in Rwanda, Burundi, and DRC in efforts to achieve SDG 1, 2, 4, 5, 9, 10, 12, 13, 15, 16 and 17 Targets

- 5 Government, public or private partners with a proven capacity to deliver innovations in the Great Lakes Region have integrated CIALCA products into their research and delivery systems.
- 12 M USD of cumulative co-investment through 14 R4D projects was attracted with government, development and private sector partners for a variety of CIALCA spin-off projects and programs.
- 10 New innovation and scaling partners have expressed intend to co-invest in innovation and scaling activities with CIALCA under One CGIAR from 2022 onwards.

- 8 Graduated CIALCA students are leading/engaged in research and innovation within their respective national academia, development or business sectors.
- 10 Research or development organizations have the capacity to structurally use CIALCA decision support tools.
- 1 Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been co-designed with academic and NARS institutes.

- 5 Additional CIALCA scientific publications and 6 CIALCA news items have captured CIALCA research, innovation and learning.
- 5 Scaling strategy development processes with government, public and/or private sector partners have been initiated to avail innovations for sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region under One CGIAR.



The three CIALCA pillars act in parallel and reinforce each other to achieve outcomes and long-term impact

REACH

OUTCOMES

PILLARS

intensification, business and research is such a pathway that can contribute to both household income and nutrition. These transition processes take place in a context where concerns about climate change and environmental sustainability are increasing. Climate change has become a real challenge in the Great Lakes Region with more unpredictable seasons, rainfall and droughts. CIALCA invests in cutting-edge technologies like isotopes and ICT applications to help counteract climate hazards and related agricultural problems (e.g. increasing pests and diseases). CIALCA has further shown that various agroecological practices can help build resilience and integrate ecosystem services in farming systems. There is an increasing demand for scaling such agroecological practices in an economically sustainable way.

A proposal for a CIALCA Bridge Year 2021

Given ongoing transition processes in Belgium and in the CGIAR, CIALCA requests for a bridge-fund of EUR 680,000 for the period of 1 January 2021 - 31 December 2021. The bridge-fund will allow the consortium to work on three Themes:

1. Continue, consolidate and align ongoing investments in partnerships, capacity development, knowledge services and innovations,
2. Embed CIALCA innovations and learning in policy and development strategies and agricultural curricula to achieve impact at scale, and
3. Enable a transition towards One CGIAR platform.

The bridge-year 2021 proposal strongly builds on the 2017-2020 phase and proposes 8 additional Outcomes that CIALCA expects to achieve by the end of 2021:

- 5 Government, public or private partners with a proven capacity to deliver innovations in the Great Lakes Region have integrated CIALCA products into their research and delivery systems;
- 12 M USD of cumulative co-investment through 14 R4D projects was attracted with government, development and private sector partners for a variety of CIALCA spin-off projects and programs;
- 10 New innovation and scaling partners have expressed intend to co-invest in innovation and scaling activities with CIALCA under One CGIAR from 2022 onwards;
- 8 Graduated CIALCA students are leading/engaged in research and innovation within their respective national academia, development or business sectors;
- 10 Research or development organizations have the capacity to structurally use CIALCA decision support tools;

- 1 Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been co-designed with academic and NARS institutes;
- 5 Additional CIALCA scientific publications and 10 CIALCA news items have captured CIALCA research, innovation and learning;
- 5 Scaling strategy development processes with government, public and/or private sector partners have been initiated to avail innovations for sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region under One CGIAR.

This CIALCA bridge-year proposal provides an overview of the main rationale, outputs and partnerships against each of the above Themes. It also introduces the timeline and summary budget for delivering against the outputs and outcomes. The bridge-year proposal is expected to leverage and build on the 2017-2020 outcomes to reach a total of 2M households in the Great Lakes Region.

Bridge-year 2021 Themes

Based on an assessment of ongoing progress of CIALCA, feedback received during the CIALCA mid-term review meeting, and in the context of several transitions that are ongoing in the International Agricultural Research for Development community (CGIAR), the CIALCA team proposes a bridge-year for 2021. The bridge-year Themes are carefully aligned with the CIALCA Pillars to ensure continuity and focus. CIALCA will continue to build on existing partnerships and networks and where possible engage new partners based on our principles of co-investment and working demand-driven. The Bridge-year Themes are further introduced in the below sections. For each Theme, the rationale, key outputs and core activities will be elaborated.

THEME 1

Continuity, consolidation and alignment of CIALCA investments

A key strength of CIALCA is its ability to move with time, anticipating and adapting to the changing needs of the region. The three integrated pillars that shape CIALCA's identity (1) partnership and policies, (2) capacity development, and (3) innovation and scaling, have shown to be key to enable this dynamic nature. During this bridge year, we will continue, consolidate, and further align CIALCA's core activities with other new initiatives that CIALCA has helped to enable in the region.

Rationale

In the 2017-2020 CIALCA phase, a series of new impactful and innovative partnerships have been established. Examples include: a collaboration with the Joint FAO/IAEA Programme of Nuclear Techniques in Food and Agriculture, for leading cutting-edge research on adaptation of cassava and banana-based systems to climate change; a partnership with One Acre Fund, for developing inclusive tailored packages to better serve their ~350,000 client farmers in Rwanda; a partnership with the International Fertilizer Development Center (IFDC), for setting site-specific fertilizer recommendations in the region; and a partnership with the American Refugee Committee (ARC, now ALIGHT), for developing more sustainable food systems solutions for healthier diets of their ~150,000 refugee population and hosting communities. Those types of partnerships have proven critical for better linking research with delivery and enabling evidence-based adaptive management in deliv-

ery. Trust has been built between CIALCA and those partners and there is demand to continue and expand the partnerships, building upon the co-investment model where the partners and CIALCA jointly invest. It is therefore critical to continue those partnerships to solidify the joint impact on agricultural livelihoods.

Besides the successful implementation of MSc theses by students from all three target countries, a cohort of 8 students has started their PhD in 2018-2019 at Belgium universities (KULeuven, UGhent, Université Catholique de Louvain (UCL), and Université de Liège). They cover a series of new cross-cutting themes aligned with the five Strategic Areas of Impact: Counteracting drought in cassava production (Climate), Nutrition & entrepreneurial farming (Nutrition & Poverty), Promising agriculture-nutrition pathways in the Great Lakes Region (Nutrition & Poverty), Sustainable cassava farming practices for improved livelihoods (Poverty & Environment) Socio-ecological resilience of farmers livelihoods (Poverty & Environment), Gender and sustainable intensification of banana-based farming systems (Gender). CIALCA thereby empowers local stakeholders such as NARS and universities to build new long-term capacity to address critical regional and global challenges. The PhD students will continue their field and course work in 2021. The COVID-19 crisis is currently delaying their fieldwork, which makes the prospect of a bridge year even more important.

CIALCA continues to develop and leverage scientific innovations for improving agricultural livelihoods depending on banana- and cassava-based systems. Several spin-off or CIALCA-linked projects have emerged from such innovations. For example, the GIZ-funded ICT4BXW project has developed and tested a smart-phone application for tracking and helping manage and control the Banana Xanthomonas Wilt disease, using the single disease stem removal (SDSR). The CGIAR-funded TRICOT Scaling Fund project is a citizen-science project testing a series of novel cassava varieties with CIALCA farmers. A new initiative called Citizen-H2D3 has been established through CIALCA to capture in near real-time critical individual dietary data through a simple mobile application. CIALCA is critical for those projects in terms of knowledge, capacity development, network and partnerships. In this bridge year, we will further advance CIALCA's innovations together with those aligned projects and also leverage innovations from other projects to CIALCA. For example, the African Cassava Agronomy Initiative (ACAI) has developed a digital platform AKILIMO to facilitate site-specific fertilizer recommendations and other practices for cassava farming. CIALCA's results from the nutrient omission trials can directly feed into this and thereby benefit cassava farmers in the Central and East African region. The CGIAR Research Program on Roots and Tubers and Banana (RTB) has invested USD 1 Million to further align and integrate AKILIMO with CIALCA.

THEME 1 Outcomes

- 8 Graduated CIALCA students are leading/engaged in research and innovation within their respective national academia, development or business sectors;
- 5 Additional CIALCA scientific publications and 10 CIALCA news items have captured CIALCA research, innovation and learning;
- 12M USD of cumulative co-investment through 14 R4D projects for a variety of CIALCA spin-off projects and programs was attracted with government, development and private sector partners.

THEME 1 Outputs and Core Activities

Output 1.1

Continuation, expansion and consolidation of partnership agreements with the Joint FAO/IAEA Programme, the NARS of Burundi, Rwanda and eastern DR Congo, development partners such as One Acre Fund (OAF), International Fertilizer Development Center (IFDC), and ALIGHT, and with the Belgian universities.

Core activities

- 1.1.1 Sign renewal and expansion of partnership agreements.
- 1.1.2 Partnership meeting to consolidate impact and synergies between activities.
- 1.1.3 Continued field work with partners.

Output 1.2

Continuation of 8 CIALCA with the Belgian universities KU-Leuven, Ghent University, Université Catholique de Louvain and Université de Liège, and with Wageningen University in the Netherlands.

Core activities

- 1.2.1 Continued field and course work of PhD students.
- 1.2.2 Integration of PhD work and findings with partnerships where fit.
- 1.2.3 CIALCA PhD symposium with the 8 CIALCA PhD students (in person or virtual).

Output 1.3

Publication, synthesis and prospect of CIALCA innovations and related spin-off projects and new proposals.

Core activities

- 1.3.1 Write-up validation of farm typology analyses and results and move to the next step in producing and testing co-developed tailored packages with One Acre Fund.
- 1.3.2 Synthesize promising banana disease management practices for the Great Lakes Region and develop related proposals.
- 1.3.3 Publish paper on use of nutrition-smart production metrics in CIALCA.
- 1.3.4 Align and consolidate how innovations that contribute to the different areas of impact (gender, nutrition, poverty, climate, environment) can be further integrated with each other (e.g. climate and nutrition-smart practices).

THEME 2

Advocacy and enabling environment for the scaling of CIALCA innovations

Over the past 15 years of CIALCA have been characterized by phases that focused more on research and innovation, and phases that have focused more on the dissemination of research outputs and scaling of innovation (www.cialca.org/about). The current phase of CIALCA can be characterized as a research and innovation phase, with emphasis on understanding entrepreneurial farming, household heterogeneity, site-specific and climate-smart crop management recommendations, and ICT for agriculture. A bridge-year in 2021 could be used to create enabling conditions for the scaling of CIALCA innovations.

Rationale

CIALCA has a strong focus on capacity development of students and young researchers. Currently, PhD-students are conducting their doctoral studies with Belgian Universities under the CIALCA umbrella. In addition, several interns, BSc and MSc students from the national universities of Burundi, Rwanda and DR Congo have been offered the opportunity to conduct research on key CIALCA themes. CIALCA invests in capacity development of young agricultural researchers and believes that it could broaden its reach by embedding some of our key products and learning within university curricula and/or NARS training programs in the Great Lakes Region. By doing so, key CIALCA learning will be passed on to the next generation of agricultural science, business and policy leaders.

A second strategy for increasing the impact of CIALCA innovations at scale is by actively engaging public and private scaling partners. Scaling partners for CIALCA innovations will be primarily the governments and their agricultural research and extension systems, social enterprises (e.g. One Acre Fund) and development organizations (e.g. ENABEL), and small- medium- and large-scale enterprises. In addition, it can explore the integration of CIALCA innovations within Development Bank investment programs (e.g. PNDA in eastern DR Congo). CIALCA will invest in developing an innovation catalogue, with evidence of the readiness of these innovations for scaling. The most promising CIALCA innovations will be presented to public and private scaling partners through an innovation-fair. Based on mutual interest, we will facilitate a match-making and negotiation process that results in jointly developed and agreed-upon scaling strategies based on CIALCA's principles of co-invest-

ment. The implementation of several of these strategies may be short-term and can be kick-started during 2021, while others may be more long-term and require additional resource mobilization.

THEME 2 Outcomes

- 1 Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been co-designed with academic and NARS colleagues from Rwanda, Burundi and DR Congo;
- 5 Government, public or private partners with a proven capacity to deliver innovations in the Great Lakes Region have integrated CIALCA products into their research and delivery systems;
- 10 Research or development organizations have the capacity to structurally use CIALCA ICT-based decision support tools.

THEME 2 Outputs and Core Activities

Output 2.1

Strengthened capacity for integrated agricultural research in the national agricultural research systems (NARS) of Rwanda, Burundi and DR Congo based on 15 years of CIALCA work in the Great Lakes Region.

Core activities

- 2.1.1 Conduct a capacity development needs assessment with agricultural universities and NARS in Rwanda, Burundi and DR Congo.
- 2.1.2 Co-design a program for capacity development for integrated agricultural systems research in the Great Lakes Region around CIALCA's pillars.
- 2.1.3 Test and embed capacity development activities with the agricultural universities and NARS in Rwanda, Burundi and DR Congo (e.g. through a Training of Trainers event).

Output 2.2

Scaling strategy development and implementation for scaling-ready CIALCA innovations with public and private sector partners.

Core activities

- 2.2.1 Develop an inventory of existing CIALCA and other relevant CGIAR innovations and evidence of their scaling readiness in the Great Lakes Region.
- 2.2.2 Identify and engage public and private sector scaling partners who could be interested in embedding CIALCA innovations in their policy or business strategies.
- 2.2.3 Facilitate a match-making process with high-potential scaling partners that results in jointly developed and agreed-upon scaling strategies based on principles of co-investments.

THEME 3

Enable a transition towards One CGIAR

Since its origin in 2005, CIALCA has been coordinated by organizations that form part of the CGIAR, a global agricultural research for development partnership. These organizations, now consisting of the Alliance (merger of former CIAT and Bioversity International) and the International Institute of Tropical Agriculture (IITA), are now transferring towards a future, more unified and integrated CGIAR, also referred to as 'One CGIAR'. One CGIAR provides opportunities for CIALCA as an innovative research for development consortium, which has been operating along some key principles of One CGIAR.

Rationale

CIALCA has long-term experience in terms of facilitating and coordinating partnerships between international and national agricultural research and development organizations. This is one of the key drivers in the One CGIAR and CIALCA should mobilize its expertise and experiences in the Great Lakes Region and globally. In that sense, CIALCA can mobilize One CGIAR in terms of its ambitions to:

- Enable country and regional coordination and partnership networks.
- Support continuous demand-mapping among government, public and private sectors, and align research agendas with the needs of development partners.
- Respond to Global Grand Challenges such as poverty, malnutrition and climate change.
- Conduct inclusive and integrated transdisciplinary research around 5 Impact Areas.

CIALCA has the experience and credibility to enable a transition towards One CGIAR in the Great Lakes Region. CIALCA can serve as a model for One CGIAR and how CGIAR centres can work together with research and development partners around a regionally defined R4D investment plan. On the other hand, One CGIAR offers opportunities for CIALCA to further expand its mandate, investments and expertise base, for example by broadening its collaboration with other CGIAR centres in the region (e.g. IFPRI, CIP, ICRAF and ILRI) which will further empower the consortium to achieve its long-term outcomes on sustainably improving agricultural livelihoods.

THEME 3 Outcomes

- 5 Scaling strategy development processes with government, public and/or private sector partners have been initiated to avail innovations for sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region under One CGIAR.
- 10 Innovation and Scaling partners have expressed intent to co-invest in innovation and scaling activities with CIALCA under One CGIAR from 2022 onwards.

THEME 3 Outputs and Core Activities

Output 3.1

Documented practical perspective for One CGIAR: Lessons from 15 years of CGIAR Consortium work in Central Africa.

Core activities

- 3.1.1 Collect and analyze data on lessons learned from 15 years of collaborative CGIAR research for development in the Great Lakes Region.
- 3.1.2 Develop and publish perspective paper in response to the Food Policy Special Issue on One CGIAR.

Output 3.2

Synthesis and sharing of ideas and guidelines of how CIALCA can support a transition towards One CGIAR, and what could be the role of CIALCA in One CGIAR in the Great Lakes Region.

Core activities

- 3.2.1 Demand-mapping in the Great Lakes Region with government, public and private sector partners to inform R4D agenda and partnership models for One CGIAR in the Great Lakes Region.
- 3.2.2 Develop a vision and research agenda for integrated systems research under One CGIAR in collaboration with the other CGIAR centres in the Great Lakes Region.
- 3.2.3 Regular interaction with DGD to exchange information on One CGIAR and related processes.

Indicative budget (summary)

CIALCA developed a 2021 activity-based budget for the realization of the outputs. A summary budget in EURO can be found below. A more detailed budget and breakdown can be provided on-demand.

Budget per Pillar/ Output/ Activity	IITA	Alliance	FAO/IAEA	Total
PILLAR 1: Partnerships and Policies				
Output 1.1: Continuation partner co-investments (Act 1.1.1; 1.1.2; 1.1.3)	€ 35.000	€ 31.818	€ 38.636	€ 105.455
Output 2.2: Mapping partner scaling needs (Act 2.2.2)	€ 18.864	€ 5.000	-	€ 23.864
Output 3.2: Partner demand mapping to inform One CGIAR R4D agenda (Act 3.2.1; 3.2.3)	€ 7.727	€ 3.182	-	€ 10.909
PILLAR 2: Capacity Development				
Output 1.2: Continuation PhD work (Act 1.2.1; 1.2.2; 1.2.3)	€ 70.455	€ 52.727	€ 36.364	€ 159.545
Output 2.1: Curriculum development systems research (Output 2.1, Act 2.1.1; 2.1.2; 2.1.3)	€ 59.545	€ 29.091	-	€ 88.636
Output 3.2: Strengthen capacity to develop vision and R4D agenda One CGIAR (Act 3.2.2)	€ 19.065	€ 6.818	-	€ 25.883
PILLAR 3: Innovation and Scaling				
Output 1.3: Synthesize CIALCA innovations (Act 1.3.1; 1.3.2; 1.3.3; 1.3.4)	€ 6.818	€ 20.455	-	€ 27.273
Output 2.2: Scaling strategy development (Act 2.2.1; 2.2.3)	€ 28.182	€ 5.000	-	€ 33.182
Output 3.1: Science documentation CIALCA (Act 3.1.1; 3.1.2)	€ 39.545	€ 12.273	-	€ 51.818
Cross-cutting (MEL, Open Access, Office costs)	€ 54.545	€ 4.545	-	€ 59.091
Total direct costs	€ 339.746	€ 170.909	€ 75.000	€ 585.655
Indirect costs and pass through fees	€ 65.290	€ 29.055	-	€ 94.345
Total costs	€ 405.036	€ 199.964	€ 75.000	€ 680.000

The budget maximum for the bridge-fund 2021 was determined by taking 25% of the total 2017-2020 budget (EUR 2.72M) which equals EUR 680,000 (=1 year of funding).

Budget per line item	IITA	Alliance	FAO/IAEA	Total
Personnel (IRS)	€ 156.818	€ 70.909	€ 75.000	€ 227.727
Personnel (NRS)	€ 27.273	€ 12.273		€ 39.545
Consultants/outsourcing	€ 19.065	€ 13.636		€ 32.701
Sub-agreements partners	€ 13.636	€ 27.273		€ 115.909
Travel	€ 25.909	€ 13.636		€ 39.545
Meetings	€ 15.909	€ 7.273		€ 23.182
Operations	€ 25.000	€ 18.182		€ 43.182
Equipment/ other costs	€ 56.136	€ 7.727		€ 63.864
Total direct costs	€ 339.746	€ 170.909	€ 75.000	€ 585.655
Indirect costs and pass through fees	€ 65.290	€ 29.055		€ 94.345
Total costs	€ 405.036	€ 199.964	€ 75.000	€ 680.000

Activity timeline

To implement the core activities and deliver the outputs the below timeline and budget is proposed.

Activity number and activity description	J	F	M	A	M	J	J	A	S	O	N	D
1.1.1 Expansion of partnership agreements	x											
1.1.2 Partnership meeting				x								
1.1.3 Continued field work with partners		x	x	x	x	x	x	x	x			
1.2.1 Continued PhD field and course work	x	x	x	x	x	x	x	x	x	x		
1.2.2 Integration of PhD work and findings										x	x	x
1.2.3 CIALCA PhD symposium									x			
1.3.1 Write-up validation of farm typology				x	x	x						
1.3.2 Synthesize banana disease work						x	x	x				
1.3.3 Paper nutrition-smart metrics								x	x	x		
1.3.4 Integrate innovations in policy and			x	x	x	x	x	x	x	x	x	
2.1.1 Capacity development needs assessment	x	x										
2.1.2 Co-design capacity development activities with academia and NARS			x	x	x	x	x	x				
2.1.3 Deliver capacity development activities									x	x	x	x
2.2.1 Inventory of CIALCA innovations	x	x										
2.2.2 Engage scaling partners			x	x								
2.2.3 Develop scaling strategies with partners					x	x	x	x	x	x	x	x
3.1.1 Document 15 years CIALCA/ CGIAR R4D	x	x	x									
3.1.2 Publish CIALCA One CGIAR paper				x	x	x	x	x	x	x	x	x
3.2.1 Demand-mapping for One CGIAR			x	x	x	x						
3.2.2 Develop vision and research agenda							x	x	x	x	x	x
3.2.3 Exchanges with DGD on One CGIAR			x			x			x			x

annexes

PILLAR 1		Objective 1: Partnerships and Policies To leverage public and private partnerships for impact along the agri-food system and set up an inclusive, ICT-based monitoring, evaluation and learning (ME&L) system					Achievements and progress towards impact						
Year	Activities	Outputs	Outcomes 2017-2020	Outcomes 2021	CIALCA Pillar 1 contribution	Contribution to SDGs and SDG Targets	Achievements 2018	Achievements 2019	Achievements 2020	Expected achievements 2021			
2017 - 20220	ACTIVITY 1.1 Mapping of the demand for R4D solutions within RTB systems.	OUTPUT 1.1 The demand for research and innovation has been assembled and documented in the CIALCA Theory of Change (ToC).	9 Strategic partnerships have been established and partners are engaged in the design, testing, validation and/or use of CIALCA innovations. 4 of the 9 partnerships are based on principles of co-investment, and progress is captured in an ICT-based MEL system.		CIALCA's partnerships and ability to attract investment into R4D have created a firm basis to further expand the Consortium and its ongoing and new partnerships in the Great Lakes Region	SDG1 Targets 1.1; 1.2; 1.4; 1.5; 1.a;1.b SDG2 Targets 2.1; 2.3; 2.4; 2.a SDG9 Targets 9.b SDG16 Targets 16.10 SDG17 Targets 17.3; 17.6; 17.7; 17.14; 17.17	5 MoUs have been developed with key knowledge and scaling partners, after CIALCA demand-mapping has been concluded.	9 MoUs have been developed or renewed with key knowledge and scaling partners	9 MoUs have been developed or renewed with key knowledge and scaling partners				
	ACTIVITY 1.2 Agreement on the zones of influence in consultation with scaling partners.	OUTPUT 1.2 Zones of influence have been agreed upon and are adapted and documented in the ToC								3 CIALCA co-investment agreements have been developed or renewed. Partners have invested with CIALCA in implementing R4D activities.	4 CIALCA co-investment agreements have been developed or renewed. Partners have invested with CIALCA in implementing R4D activities.		
	ACTIVITY 1.3 Engagement with value chain partners (private, public) that are active with proven capacity to deliver in the Great Lakes Region.	OUTPUT 1.3 By the end of each year, agreements are reached with development partners on specific contributions from CIALCA.								1 of the MoUs with a scaling partner (One Acre Fund Rwanda) is currently being reviewed and renewed based on a successful first phase.	2 agreements are being reviewed and renewed based on a successful collaboration		
	ACTIVITY 1.4 Activation of a participatory, inclusive and gender-sensitive ME&L framework	OUTPUT 1.4 An ICT-based data collection and ME&L framework is functional and used by stakeholders								1 MEL platform is successfully being used by CIALCA (CGIAR Monitoring, Evaluation and Learning platform) and digital data collection system has been developed	6 CIALCA deliverables have been entered in the CGIAR MEL platform	4 CIALCA deliverables have been entered in the CGIAR MEL platform	
2017 - 20221	ACTIVITY 1.5 Co-design of government, development or business R4D investment strategies for sustainable intensification	OUTPUT 1.5 CIALCA has contributed to the shaping of R4D investments of government, development and business partners	10 M USD of cumulative co-investment through 12 R4D projects was attracted with government, development and private sector partners for a variety of CIALCA spin-off projects and programs	12M USD of cumulative co-investment through 14 R4D projects for a variety of CIALCA spin-off projects and programs was attracted with government, development and private sector partners			7.25 M USD of investment in a variety of sustainable intensification R4D projects and programs was attracted with government, development and private sector partners in 2018	9.25 M USD of cumulative investment in a variety of sustainable intensification R4D projects and programs was attracted with government, development and private sector partners in 2019	10 M USD of cumulative investment in a variety of sustainable intensification R4D projects and programs was attracted with government, development and private sector partners in 2020. 1 Policy advocacy initiative to mainstream Single Disease Stem Removal for Banana Xanthomonas Wilt management was completed	12 M USD of cumulative investment in a variety of sustainable intensification R4D projects and programs was attracted with government, development and private sector partners in 2021			
2021	ACTIVITY 1.1.1 Sign renewal and expansion of partnership agreements	OUTPUT 1.1 Continuation, expansion and consolidations of partnership agreements								5 MoUs have been renewed or newly developed and signed			
	ACTIVITY 1.1.2 Partnership meetings to consolidate impact and synergies between activities			5 Government, public or private partners with a proven capacity to deliver innovations in the Great Lakes Region have integrated CIALCA products into their research and delivery systems						10 Online meetings with core CIALCA partners have been conducted and recorded			
	ACTIVITY 1.1.3 Continued field work with partners									5 Ongoing fieldwork partnerships have been continued			
	ACTIVITY 2.2.2 Identify and engage public and private sector scaling partners who could be interested in embedding CIALCA innovations in their policy or business strategies	OUTPUT 2.2 Scaling strategy development and implementation for scaling-ready CIALCA innovations with public and private sector partners									1 Inventory of public and private sector scaling partners and their interest in integrating CIALCA innovations in their business or policy strategies has been developed		
	ACTIVITY 3.2.1 Demand-mapping in the Great Lakes Region with government, public and private sector partners to inform R4D agenda and partnership models for One CGIAR in the Great Lakes Region	OUTPUT 3.2 Strengthen capacity and support synthesis and sharing of ideas and guidelines on how CIALCA can support a transition towards One CGIAR, and what could be the role of CIALCA in One CGIAR in the Great Lakes Region			10 Innovation and Scaling partners have expressed intend to co-invest in innovation and scaling activities with CIALCA under One CGIAR from 2022 onwards						25 Potential CIALCA innovation and scaling partners have expressed their demand for CIALCA innovations		
ACTIVITY 3.2.3 Regular interaction with DGD to exchange information on One CGIAR and related processes										4 Updates on the One CGIAR transition process have been provided to DGD			

PILLAR 2		Objective 2: Capacity development To strengthen the capacity of national scientists and practitioners and National Agricultural Research Institutions (NARIs) to facilitate sustainable agri-food system transformation					Achievements and progress towards outcomes							
	Activities	Outputs	Outcomes 2017-2020	Outcomes 2021	CIALCA Pillar 2 contribution	Contribution to SDGs and SDG Targets	Achievements 2018	Achievements 2019	Achievements 2020	Expected achievements 2021				
2017-2020	ACTIVITY 2.1 Implementation of PhD projects	OUTPUT 2.1 By the end of 2020, at least 3 new PhD candidates and hosting universities have been identified and at least 5 PhD candidates have successfully defended their PhD-thesis	12 Future policy, science or business leaders have been capacitated through their long-term engagement in CIALCA capacity development activities (PhD, MSc and interns)		CIALCA has strengthened capacity to design, test, validate and use R4D innovations across individual, organisational, network and systems level to facilitate sustainable agri-food system transformation	SDG1 Targets 1.1; 1.2; 1.4; 1.5 SDG2 Targets 2.1; 2.3; 2.4; 2.a SDG4 Targets 4.4; 4.b	3 CIALCA PhD students have graduated in 2018 (2 Burundian, 1 European) 4 new PhD students have been selected process and are starting as sandwich PhD students with Belgian universities 5 extra PHD students have been funded as a result of CIALCA leverage.This leads to 9 currently on-going CIALCA-related PhDs	5 CIALCA PhD students have graduated (2 Burundian, 1 Ugandan, 2 European) 1 CIALCA PhD from Rwanda was stopped as a result of not passing his exams. 3 Remaining PhD students have started their fieldwork 8 PhD students (1 Burundian, 3 Congolese, 1 Rwandan, 3 European) are currently conducting their PhD under the CIALCA framework with Belgian universities (1 on gender, 3 on climate, 2 on poverty, 2 on nutrition, 1 on environment)	3 CIALCA PhD students are advancing their fieldwork					
	ACTIVITY 2.2 Implementation of MSc projects	OUTPUT 2.2 By the end of 2020, at least 3 MSc candidates and hosting universities have been identified									SDG5 (Targets 5.b) SDG9 Targets 9.5; 9.b; 9.c	4 thesis research students have been selected from a Competitive call with the University of Rwanda 1 Belgian MSc student performed her thesis research in CIALCA	3 MSc students and 2 interns were supported by CIALCA. All 3 MSc students have graduated 1 Call for students for Burundi has been developed and advertised 1 MSc student for DRC has been identified	1 intern have been supported by CIALCA
2017-2021	ACTIVITY 2.3 Development of a decision support framework and strategy, built on ICT principles that supports science-based decision making	OUTPUT 2.3 By the end of 2019, an ICT-based decision support framework and strategy is developed and validated with decision-makers	6 ICT-based decision support tools have been designed, tested, validated with partners, including 1 CIALCA data base has been developed, is available for research and development partners online, and is updated continuously	10 Research or development organizations have the capacity to structurally use CIALCA ICT-based decision support tools	SDG12 Targets 12.a SDG13 Targets 13.3; 13.b SDG17 Targets 17.6; 17.8; 17.9; 17.18	SDG12 Targets 12.a SDG13 Targets 13.3; 13.b SDG17 Targets 17.6; 17.8; 17.9; 17.18	3 ICT-based data collection and decision support tools are being designed with partners (RHoMIS, AKILIMO and ICT4BXW)	4 ICT-based decision support tools are being tested with partners (Know-Your-Farmer, RHoMIS, AKILIMO and ICT4BXW) 4 R4D projects have been supported by CIALCA in digital data collection and mainstreaming the collection of household data in the Great Lakes Region (RUNRESS, ICT4BXW, CASS and CBSD)	5 ICT-based decision support tools are being tested and validated with partners (Know-Your-Farmer, RHoMIS, AKILIMO, Climob and ICT4BXW)	5 ICT-based decision support tools are being validated and used with partners (Know-Your-Farmer, RHoMIS, AKILIMO, Climob and ICT4BXW)				
	ACTIVITY 2.4 Activation of CIALCA-base, assembling and disseminating information for the Great Lakes	OUTPUT 2.4 By the end of 2018, CIALCA-base is functional, accessible for partners, and continuously updated with new information									2 New collaborations with other projects e.g. ACAI (acai-project.org) and RHoMIS (www.rhomis.org) resulted in a new strategy for the CIALCA-base which is being developed that is able to include relevant innovations, build as much as possible on existing efforts, linking or integrating them rather than setting up a separate data system	1 CIALCA base has been developed and is available on cialca.shinyapps.io/cialca_base_2files and will be updated continuously	200 visits on CIALCA base have been recorded in the reporting year	300 visits on CIALCA base have been recorded in the reporting year
	ACTIVITY 2.5 Facilitation of the capacity development of last-mile delivery to NARS and other service providers	OUTPUT 2.5 By the end of 2020, a first group of service providers have been trained on using CIALCA recommendations and on a yearly basis, groups are added	200 Staff representing 50 research or development organisations have been trained on core CIALCA themes and quality of science								24 researchers from across different countries, research and development projects, and organizations attended the training on Open Data Kit organized by CIALCA in January 2018	30 participants from 12 countries joined the nutrition and gender training while 20 PhDs and partners attended an ICT for agriculture workshop 74 partners and students have been trained on core CIALCA themes such as gender and nutrition and the use of ICT and digital tools in research for development	61 people received online training on Art of publishing Scientific Research (32 males and 29 females) 135 people have been trained on core CIALCA themes during 5 capacity development events	
2021	ACTIVITY 1.2.1 Continued field and course work of CIALCA PhD students	OUTPUT 1.2 Continuation of 8 CIALCA PhDs with the Belgian universities KUL, UGhent, UCL and ULiege, and with WUR in the Netherlands		8 Graduated CIALCA students are leading/engaged in research and innovation within their respective national academia, development or business sectors						2 CIALCA PhD students have graduated or submitted their doctoral thesis				
	ACTIVITY 1.2.2 Integration of PhD work and findings with partnerships where fit									2 virtual events have been organised with a focus on sharing and/or integrating PhD research with CIALCA partners				
	ACTIVITY 1.2.3 CIALCA PhD symposium with the 8 CIALCA PhD students (in person or virtual)									1 Real-life or virtual workshop will be organised for the PhD students to share their research progress and findings within the broader CIALCA community				

PILLAR 2		Objective 2: Capacity development To strengthen the capacity of national scientists and practitioners and National Agricultural Research Institutions (NARIs) to facilitate sustainable agri-food system transformation					Achievements and progress towards outcomes				
		Activities	Outputs	Outcomes 2017-2020	Outcomes 2021	CIALCA Pillar 2 contribution	Contribution to SDGs and SDG Targets	Achievements 2018	Achievements 2019	Achievements 2020	Expected achievements 2021
2021	ACTIVITY 2.1.1 Conduct a capacity development needs assessment with agricultural universities and NARS in Rwanda, Burundi and DR Congo	OUTPUT 2.1 Strengthen capacity for integrated agricultural research in the national agricultural research systems (NARS) of Rwanda, Burundi and DR Congo based on 15 years of CIALCA work in the Great Lakes Region		1 Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been co-designed with academic and NARS colleagues from Rwanda, Burundi and DR Congo						3 Capacity development needs assessments have been conducted with stakeholders from the agricultural universities and NARS in Rwanda, Burundi and DR Congo	
	ACTIVITY 2.1.2 Co-design a program for capacity development for integrated agricultural systems research in the Great Lakes Region based on the CIALCA Pillars									1 Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been co-designed with academic and NARS colleagues from Rwanda, Burundi and DR Congo	
	ACTIVITY 2.1.3 Test and embed capacity development activities with the agricultural universities and NARS in Rwanda, Burundi and DR Congo									1 Round of testing, evaluation and improvement of the Program for capacity development for integrated agricultural systems research in the Great Lakes Region has been completed	
	ACTIVITY 3.2.2 Develop a vision, R4D agenda and propose partnership models for integrated systems research under One CGIAR in collaboration with the other CGIAR centres in the Great Lakes Region	OUTPUT 3.2 Strengthen capacity and support synthesis and sharing of ideas and guidelines on how CIALCA can support a transition towards One CGIAR, and what could be the role of CIALCA in One CGIAR in the Great Lakes Region								3 Visions, R4D agendas and partnership models for integrated systems research under One CGIAR are documented together with the other CGIAR Centres (1 for each country)	

PILLAR 3

Objective 3: Innovation and Scaling

To develop, validate, and avail best get innovations and related implementation processes aiming at sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region.

Achievements and progress towards outcomes

	Activities	Outputs	Outcomes 2017-2020	Outcomes 2021	CIALCA Pillar 3 contribution	Contribution to SDGs and SDG Targets	Achievements 2018	Achievements 2019	Achievements 2020	Expected achievements 2021
2017-2020	ACTIVITY 3.1 Develop typologies of farmer characteristics and livelihood strategies in banana- and cassava-based systems that enables better targeting of innovations and implementation processes	OUTPUT 3.1 By the end of 2018, an inventory of farmer characteristics (location, age, gender, socio-economic status) and livelihood strategies (production objectives, risk coping strategies, etc.) has been developed	5 Development partners and/or projects use the CIALCA segmentation framework to explore diverse innovation options to farm households in the Great Lakes Region		CIALCA has designed, tested, validated and availed innovations aimed at sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region	SDG1 Targets 1.1; 1.2; 1.4; 1.5 SDG2 Targets 2.1; 2.3; 2.4 SDG10 Targets 10.2; 10.3 SDG12 Targets 12.2; 12.4 SDG13 Targets 13.1 SDG15 Targets 15.3; 15.5 SDG17 Targets 17.6; 17.7; 17.8; 17.18	2700 Households were surveyed in Rwanda in collaboration of One Acre Fund and similar typology surveys are planned for Burundi and DR Congo. All CIALCA PhDs will integrate typology work in their doctoral thesis research	10 Farm household typologies have been developed in collaboration with agricultural service providers in Rwanda. PhD data collection using typology approach is ongoing and at least 2 other projects have also incorporated CIALCA typology questions	200 Farm households and 21 Agricultural Experts have been interviewed to validate the farm household typologies for Rwanda. 1 Scientific publication on farm household typologies in Rwanda has been published	
	ACTIVITY 3.2 Assembly and prioritization of production-, nutrition, and market access-related interventions towards sustainable agriculture generated by CIALCA and other R&D initiatives	OUTPUT 3.2 By the end of 2017, production-, nutrition, and market access-related interventions have been assembled, integrated in CIALCA-base, and prioritized based on stakeholder demand	11 CIALCA production-, nutrition-, and market access related innovations are being designed, tested and/or validated with research and development partners				10 R4D Interventions have been prioritised across the Great Lakes Region together with government, public and private sector partners	11 CIALCA innovations are being designed and/or tested with next- and end-users	11 CIALCA innovations are being tested, validated and/or used with next- and end-users	
	ACTIVITY 3.3 Validation with of best-bet interventions including aspects of risk and alignment to the status of agricultural companies	OUTPUT 3.3 By the end of 2018 and yearly thereafter, a set of production-related interventions has been identified that target different farm classes and are ready for scaling					121 First season nutrient omission trials (NOT) have been established to calibrate the site-specific fertilizer recommendation Decision Support Tools 69 Farmer Promotors representing 8 Districts in Rwanda are involved in a CIALCA spin-off project ICT4BXW that is developing and testing an ICT-based BXW management decision support tool	120 Second season nutrient omission trials (NOT) have been established and from the first season 2136 samples have been taken for nutrient analysis to calibrate the site-specific fertilizer recommendation Decision Support Tools 728 Farms were diagnosed using the ICT4BXW App that is available from GooglePlayStore: https://play.google.com/store/apps/details?id=com.bxw.app&hl=fr	1516 Samples have been taken for nutrient analysis to calibrate the site-specific fertilizer recommendation Decision Support Tools 1595 Farms were diagnosed using the ICT4BXW App that is available from GooglePlayStore: https://play.google.com/store/apps/details?id=com.bxw.app&hl=fr ; and 34,018 calls	
	ACTIVITY 3.4 Evaluation of trade-offs of interventions in relation to productivity, nutritional status, value chain access, and environmental conditions	OUTPUT 3.4 By the end of each R4D campaign, trade-offs of production interventions are understood					2 PhD studies were designed and started with the topic of trade-offs at the centre of their research proposal	2 CIALCA students (1 PhD and 1 MSc) that studied trade-offs in BXW management in banana-based agroecosystems defended their theses successfully		
	ACTIVITY 3.5 Development of production-, nutrition-, and market access-related recommendations for integration in the decision support framework (Activity 2.3)	OUTPUT 3.5 By the end of each R4D campaign, lessons learnt are integrated in the decision support framework of public and private stakeholders					4 Co-investment arrangements were developed with public and private sector stakeholders with an interest in collaborating with CIALCA in developing decision support tools	4 Government, public and private organizations are partnering with CIALCA to develop an/or improve decision support tools to improve their practices and operations	7 Government, public and private organizations are partnering with CIALCA to develop an/or improve decision support tools to improve their practices and operations	
2017-2021	ACTIVITY 3.6.1 CIALCA innovation and scaling processes and results have been published in scientific articles	OUTPUT 3.6 CIALCA lessons learned are captured and shared with broader academic and practitioner audiences as part of ongoing learning towards scientific progress and impact	24 CIALCA scientific publications and 11 CIALCA news items have captured CIALCA research, innovation and learning	5 Additional CIALCA scientific publications and 6 CIALCA news items have captured CIALCA research, innovation and learning			10 CIALCA articles have been published in scientific journals	9 CIALCA articles have been published in scientific journals	5 CIALCA articles have been published in scientific journals	
	ACTIVITY 3.6.2 CIALCA experiences, news and updates are shared on the new CIALCA website						1 New CIALCA website has been developed and is online on www.cialca.org	8 CIALCA news items and/or blogs have been developed and shared through the CIALCA website	3 CIALCA news items and/or blogs have been developed and shared through the CIALCA website	6 CIALCA news items and/or blogs have been developed and shared through the CIALCA website
	ACTIVITY 1.3.1 Write-up validation of farm typology analyses and results and move to the next step in producing and testing co-developed tailored packages with One Acre Fund	OUTPUT 1.3 Publication, synthesis and prospect of CIALCA innovations and related spin-off projects and new proposals								2 Scientific articles on the use of typology approaches in advancing commercially-oriented agriculture have been published or under review

PILLAR 3		Objective 3: Innovation and Scaling To develop, validate, and avail best get innovations and related implementation processes aiming at sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region.					Achievements and progress towards outcomes				
		Activities	Outputs	Outcomes 2017-2020	Outcomes 2021	CIALCA Pillar 3 contribution	Contribution to SDGs and SDG Targets	Achievements 2018	Achievements 2019	Achievements 2020	Expected achievements 2021
2017-2021	ACTIVITY 1.3.2 Synthesize promising banana disease management practices for the Great Lakes Region and develop related proposals									1 Publication that synthesizes scientific research on banana disease management in the Great Lakes Region has been published	
	ACTIVITY 1.3.3 Publish paper on use of nutrition-smart production metrics in CIALCA									1 Publication on the use of nutrition-smart production metrics in CIALCA has been published	
	ACTIVITY 1.3.4 Align and consolidate how innovations that contribute to the different areas of impact (gender, nutrition, poverty, climate, environment) can be further integrated with each other (e.g. climate and nutrition-smart practices)									1 Project proposal has been developed and submitted with a focus on how innovations that contribute to the different areas of impact (gender, nutrition, poverty, climate, environment) can be further integrated with each other (e.g. climate and nutrition-smart practices)	
2021	ACTIVITY 2.2.1 Develop an inventory of existing CIALCA and other relevant CGIAR innovations and evidence of their Scaling Readiness in the Great Lakes Region	OUTPUT 2.2 Scaling strategy development for scaling-ready CIALCA innovations with public and private sector scaling partners has been initiated		5 Scaling strategy development processes with government, public and/or private sector partners have been initiated to avail innovations for sustainably improving productivity, market engagement, and dietary quality, tailored to the variability among producers and their customers in the Great Lakes Region under One CGIAR						1 Inventory of CIALCA innovations and their Scaling Readiness has been developed	
	ACTIVITY 2.2.3 Facilitate a match making process with high-potential scaling partners that results in jointly developed and agreed-upon scaling strategies based on principles of co-investments									3 Scaling Strategy development processes have been initiated with scaling partners in the Great Lakes Region	
	ACTIVITY 3.1.1 Collect and analyze data on lessons learned from 15 years of collaborative CGIAR research for development in the Great Lakes Region	OUTPUT 3.1 Documented practical perspective for One CGIAR: Lessons Learned from 15 years of CGIAR Consortium work in Central Africa								1 Online survey developed and conducted among CIALCA colleagues to on lessons learned from 15 years of collaborative CGIAR research for development in the Great Lakes Region and data analysed	
	ACTIVITY 3.1.2 Develop and publish perspective paper on 15 years of collaborative CGIAR research for development in the Great Lakes Region									1 Perspective paper on 15 years of CGIAR consortium work and key lessons for One CGIAR published	

