

UNIVERSITY ENGAGEMENT WITH FARMING COMMUNITIES IN AFRICA

Community Action Research Platforms



EARTHSCAN FOOD AND AGRICULTURE

EDITED BY ANTHONY EGERU,
MEGAN LINDOW
AND KAY MUIR LERESCHE



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UNIVERSITY ENGAGEMENT WITH FARMING COMMUNITIES IN AFRICA

This book explains and explores how collaborations can be built and strengthened between African universities and farming communities to address real-world contemporary challenges.

The book focuses on Community Action Research Platforms, an approach that has successfully enabled African universities to break free of the ivory tower and prove their relevance to society through deep collaborative engagements in targeted agricultural value chains. Developed in a pan-African network of universities (RUFORUM) focused on capacity building in agriculture, the approach has been tested in diverse settings over the last 15 years. The book draws on the experiences and lessons from 21 different projects initiated by RUFORUM member universities in Benin, Botswana, Ethiopia, Ghana, Kenya, Malawi, Namibia, South Africa, Sudan, Tanzania, Uganda and Zimbabwe. It highlights a critical yet underutilised role for African universities as collaborators and catalysts for multi-sector solutions. These are solutions that increase productivity and address climate change. They develop livelihoods and resilience in rural communities, as well as promote farmers' access to markets, innovation and trade while safeguarding biodiversity and enhancing food and nutrition security. The book makes a case for repositioning African universities as fulcrums of development in society. It shares the rich experiences, learnings and scientific findings of diverse researchers, practitioners and students who have been working towards achieving this reality on the ground.

This multidisciplinary book holds appeal for university leaders, higher education, agrifood and development specialists, researchers and practitioners, policymakers and development agencies engaged in African agriculture and rural development, higher education and sustainable growth.

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*Edited by
Anthony Egeru, Megan Lindow
and Kay Muir Leresche*



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FOREWORD

If there are two realities that will shape the future of Africa, it's these: one, agriculture is among the largest economic sectors of the continent – and Africa's single biggest employer. Second: Africa is the youngest continent in the world, with over 70 percent of the population under the age of thirty. Combined, these twin realities have an impact on almost all facets of Africa's future. They have implications for addressing and mitigating climate change. Reducing food insecurity. Bolstering health. In fact, it's impossible to have a conversation about Africa's socio-economic future apart from these two realities.

So, at the Mastercard Foundation, both these truisms are central to our work. In 2018, we launched our Young Africa Works strategy and set a bold target of enabling dignified and fulfilling work for 30 million young people, with a strong focus on the economic inclusion of young women, forcibly displaced youth and young people living with disabilities. The agricultural sector has pride of place in our strategy as one of the cross-cutting sectors that African countries have a stake in, and where there is a huge opportunity to deliver improvements in income and create more work opportunities.

We do so in part by getting young people engaged in innovating to address challenges facing the sector – and their communities. This book is a testament to what's possible when you train young people, connect them to communities and empower them to solve problems. It also demonstrates the critical role higher education institutions must play in that process.

Ultimately, this literature is the product of an ongoing, eight-year partnership between the Mastercard Foundation and RUFORUM, which we are incredibly proud of. We launched our partnership with RUFORUM in 2016, with the goal of enabling African agricultural universities and the young people they train to create solutions for the agricultural sector by testing, applying and scaling cutting-edge

science, technology and agricultural practices, while bringing entrepreneurial energy into the sector. As part of the partnership, young people studying at RUFORUM universities were placed in community settings to problem-solve alongside community members on agricultural issues they were facing.

There is so much to learn from what young people have achieved through their community-based projects and engagements – particularly for institutions and organisations, like RUFORUM and the Foundation, that believe that developing solutions to pressing global challenges must start by engaging, equipping and enabling the next generation of leaders. Congratulations to RUFORUM for leading the way.

Reeta Roy
President and CEO, Mastercard Foundation

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The authors would also like to acknowledge all of the RUFORUM member universities that supported the CARPs, as well as all government departments and ministries, international agencies, TVETs, non-governmental organisations, private sector, research institutes, researchers and students who collaborated in the platforms.

The welcome, support and expertise brought by the smallholder farmers and their communities ensured the vibrancy and sustainability of the relationships formed.



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INTRODUCTION

Anthony Egeru, Patrick Okori and Megan Lindow

Introduction

Universities are well positioned to play a catalytic role in rural development through agriculture and food systems in the global south. In Africa, many universities have struggled to fulfil this potential and remain stuck in ‘ivory tower’ mode. This book proposes a method to enable African and global south universities to break free of the ivory tower and reposition themselves through structured engagements with communities and other societal actors that are both practical and transformative. The essential elements of this approach are articulated below:

- **Community action research platforms (CARPs)** are multidisciplinary, multi-stakeholder innovation platforms intended to catalyse on-the-ground rural transformation through participatory research and capacity building in targeted smallholder agricultural value chains to improve livelihoods providing opportunities for locally relevant research and experiential learning.
- **CARPs are innovation platforms**, collaborative arrangements involving a variety of different community, academic and non-academic stakeholders with the purpose of producing innovations to increase agricultural productivity and strengthen commodity value chains.
- **CARPs are interdisciplinary**, meaning that they integrate a variety of academic disciplines to ensure that various land-based, production, post-harvest, marketing, processing, nutrition, and organisational issues are addressed comprehensively rather than in isolation.
- **CARPs are multi-stakeholder**, meaning that each platform brings together different actors from local and national governments, Technical Vocational Educational Training institutions (TVETs), extension services, non-governmental

2 Introduction

organisations (NGOs) and the private sector with the universities and communities engaged in the value chain in the research area.

- **Value chain** is a term that encapsulates all the activities involved in producing a particular agricultural commodity from soils to nourishment, including crop and animal husbandry, planting, harvesting, processing, value-addition, marketing and consumption.

Universities have the potential to serve as fulcrums of development in their societies if they align their research towards a transdisciplinary and collaborative vision that brings together students, communities, governments, tertiary training colleges, civil society and the private sector in the development of agricultural value chains. Historically, the colonial era design of many traditional African universities, combined with serious underfunding and weak capacity building, has made it difficult for these institutions to serve the development needs of their societies. As a result, African universities now face a crisis of relevance, particularly as they struggle to address the needs of the continent's rapidly growing young populations (Kraybill, Lynam and Adipala, 2021). Addressing this context, this book explores the evolution and potential of a pathway to relevance for African universities which positions students, researchers and institutions alike as change agents, facilitators of development and 'scaling laboratories' supporting rural communities in taking up useful innovations to create new industries and transform their livelihoods.

The CARP methodology developed within the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) which is a pan-African network of more than 160 universities focused on human capacity building and institutional strengthening in agriculture and food systems. Since its inception in 2004, RUFORUM has championed the role of African higher education to policymakers and development partners while simultaneously working to transform the sector with an emphasis on student-centred experiential learning, community engagement and participatory action research. Over time, these efforts have focused increasingly on inculcating entrepreneurship in students, institutions and rural communities in order to stimulate much-needed agro-industrial growth (Woldimichael et al., 2017). This book presents a rich array of stories and case studies sharing lessons of how the CARPs developed and how they have catalysed a multitude of different impacts and spinoffs across diverse settings and contexts.

Highlighting the experiences of the CARPs, this book seeks to demonstrate the powerful effect universities can have when they focus their efforts in training, research and innovation on developing targeted rural value chains with communities and wider stakeholders. Relationship building and the facilitation of partnerships among communities, researchers, government and the private sector is key to the approach. This strong focus on multi-sectoral relationships both strengthens the capacities of communities to ultimately drive their own agendas and connects them to other value chain actors whose knowledge, perspective and resources can help

them grow and sustain their efforts over time. As this book illustrates, the CARP approach positions universities to contribute meaningfully towards meeting Africa's (and the world's) most pressing development challenges at the community level, including food and nutrition security, climate change adaptation, youth employment, rural livelihoods, resilience to drought and other areas of vulnerability. Positioning themselves as active and engaged facilitators of development, universities have an essential role to play in responding to virtually all the Sustainable Development Goals, particularly through their contributions towards promoting skills for adaptation to a rapidly changing world and capacities for job creation among youth – a full two-thirds of whom are either unemployed or in vulnerable employment (Nwokolo, 2022).

This book chronicles the extensive body of knowledge that has been developed through RUFORUM's long experience of nurturing student-centred, participatory and community-engaged approaches in African higher education. RUFORUM's own history and identity as an African-led university network is deeply intertwined with these ongoing efforts. RUFORUM developed out of a Rockefeller Foundation (1992–2003) initiative to support several universities to pilot small competitive graduate research grants (GRGs) for field-based experiential and participatory research with communities. Recognising the deep and transformative impacts of these limited interventions on their institutions and communities, RUFORUM's founders established the network in 2004. In 2010 RUFORUM added the CARPs to their competitive grants portfolio. The expanded scope and design included a new focus on value chains and multi-stakeholder innovation platforms. As the coordinating agency for the CARPs, the RUFORUM Secretariat played a key role in mentoring, supporting, training and backstopping researchers and universities as they tested and experimented with this novel approach. As described in Chapter 1, five early CARP projects were successfully piloted (2010–2016).

In 2016, RUFORUM launched a new iteration of the CARPs under its flagship programme, Transforming African Agricultural Universities to meaningfully contribute to Africa's growth and development (TAGDev), with support from the Mastercard Foundation. This initiative contained two parts. Firstly, it focused on two institutions: Egerton University in Kenya and Gulu University in Uganda, to develop new models of higher education that are more inclusive, build young peoples' skills as entrepreneurs and involve universities in multi-stakeholder collaborations and mutual learning across innovation systems (Lindow, 2022). The experiences of both institutions are highlighted in Chapter 6 of this book. Related to this, the TAGDev programme also provided for a new round of 16 CARP projects at different RUFORUM member universities in Benin, Botswana, Ghana, Kenya, Namibia, South Africa, Sudan, Uganda and Zimbabwe. These new CARP projects built further on the learnings already gleaned from RUFORUM's participatory, field-based approaches to training and research. They also brought a more explicit focus on stimulating entrepreneurship, strengthening relationships with the

TVETs and helping transform the lives of marginalised youth. While three of the early CARPs¹ are covered briefly in Chapter 1, the subsequent round of CARPs, operating under the TAGDev (2017–2024), are the main focus of this book.

The wider aim of the TAGDev investment by the Mastercard Foundation was to broaden access to education for the excluded and to promote new models of higher education that focused on key issues of institutional relevance and entrepreneurial education – transforming the universities into fulcrums for development. This formed part of the programme’s overarching aim of strengthening the capacities of young people to become entrepreneurs and job creators, and to drive the growth of small-scale agro-industrialisation, recognised as a key sector with the potential for lifting millions of rural people from poverty (Juma, 2012; Dorosh and Thurlow, 2018; Woldimichael et al., 2017). It was envisioned that students and researchers working in transdisciplinary and multi-stakeholder collaborations would gain critical skills in facilitation, leadership, creative problem-solving and entrepreneurship. These are lacking in traditional academic settings yet are critical for successful graduates and rural enterprise development. These multi-agency community action research platforms build relationships that evolve over time forming partnerships and building connectivity among different value chain stakeholders to support the commercialisation of smallholder farmers and strengthen the relevance of universities to their society. Through such approaches, this book will argue, universities are well placed to connect global research with the diversity of realities on the ground, testing relevant innovations in local settings and embedding useful outcomes in sustainable platforms of stakeholders. As shown in this book, investing in postgraduate education that connects all these different aspects has the potential to significantly improve farmer livelihoods and national productivity while building human capital.

This book covers the major learnings and experiences of CARPs in two parts. Part I (Chapters 1 to 6) provides a comprehensive yet general overview of the key themes and processes of the CARPs in an accessible story style. Part I draws lessons to highlight to policymakers, development and implementing agencies, and provides evidence of the results that can be achieved when universities are supported to produce relevant graduates, pro-actively engage communities and facilitate the transformation of their own institutions and their societies. The Part I chapters are as follows:

- **Chapter 1 Designing for relevance** describes how the CARP approach evolved and shares key lessons of early platforms.
- **Chapter 2 Building value chain innovation platform engagements with communities** outlines the processes of building participatory research engagements with farmer communities.
- **Chapter 3 Universities fit for purpose** highlights how the CARPs have influenced a wider appreciation and uptake of student-centred learning and community engagement within universities.

- **Chapter 4 Learning in motion** looks at how experiential learning in multi-stakeholder platforms has driven iterative cycles of action and transformation in the CARPs that continue to build.
- **Chapter 5 Change agents, spinoffs, wider impacts** illustrates some of the emergent and unplanned impacts the CARPs have had for students and in communities and institutions alike.
- **Chapter 6 Facilitating a student and community-centred, experiential approach to research and innovation** captures the experiences of Egerton and Gulu Universities where the CARPs formed part of wider institutional change processes under TAGDev.

Part II of this book is authored by the researchers themselves and explores the impact of the individual CARPs that have been implemented 2017–2024. Part I draws upon and refers to numerous stories and examples from these projects that are outlined in greater technical detail in Part II.

The Part II chapters are as follows:

- **Chapter 7 Enhancing agribusiness rice clusters and market linkages for food security and incomes in northern Uganda** (Gulu University, Uganda; ‘Uganda rice CARP’ in Part I).
- **Chapter 8 Enhancing safflower production and product development for food security and improving incomes of small-scale farmers in Botswana** (Botswana University of Agriculture and Natural Resources; ‘Botswana safflower CARP’ in Part I).
- **Chapter 9 Sustainable commercial pineapple value chain system for increased yield and income, and improved livelihood of smallholder farmers in Central Region, Ghana** (University of Cape Coast, Ghana; ‘Ghana pineapple CARP’ in Part I).
- **Chapter 10 Empowerment and poverty reduction in rural coastal Kenya through the cassava value chain** (University of Nairobi, Kenya; ‘Nairobi cassava CARP’ in Part I).
- **Chapter 11 Unlocking opportunities in the cassava CARP value chain in Nakuru County, Kenya** (Egerton University, Kenya; ‘Egerton cassava CARP’ in Part I).
- **Chapter 12 Seed potato production in Nakuru, Kenya: outcomes and implications of an active multi-stakeholder platform** (Egerton University, Kenya; ‘Egerton seed potato CARP’ in Part I).
- **Chapter 13 Inclusion of farmer communities in value chain development: a case of potato in southwestern Uganda** (Makerere University, Uganda; ‘Uganda potato CARP’ in Part I).
- **Chapter 14 Enhancing pig production and marketing for smallholder farmers in northern Uganda** (Gulu University, Uganda; ‘Uganda pig CARP’ in Part I).

- **Chapter 15 Building competitiveness for communal farmers through developing the wool value chain in the free state province of South Africa** (University of the Free State, South Africa; ‘South Africa wool CARP’ in Part I).
- **Chapter 16 Climate-smart agriculture: improving dryland crop yields and value addition through university-community partnership in Zimbabwe** (Bindura University of Science Education, Zimbabwe; ‘Zimbabwe CARP’ in Part I).
- **Chapter 17 Enhancing community adaptation through climate resilient agriculture: encroacher bushes value chains initiative in Otjozondjupa Region, Namibia** (University of Namibia; ‘Namibia bush CARP’ in Part I).
- **Chapter 18 The empowerment of women and youth: enhancing climate-smart productivity of vegetables and key livestock value chains, Sudan** (University of Gezira, Sudan; ‘Sudan women CARP’ in Part I).
- **Chapter 19 Strengthening the beekeeping value chain in Western Kordofan State, Sudan** (Peace University, Sudan; ‘Sudan beekeeping CARP’ in Part I).
- **Chapter 20 Improvement of indigenous coping strategies in famine-stricken Darfur, Sudan** (University of Khartoum, Sudan; ‘Sudan famine foods CARP’ in Part I).
- **Chapter 21 Scaling up African baobab food products valuation through enhancement of their safety and value chains for food and nutritional security in Benin, West Africa** (University of Abomey-Calavi, Benin; ‘Benin baobab CARP’ in Part I).

BOX 0.1 RUFORUM AND THE TAGDEV PROGRAMME THAT IMPLEMENTS THE COMMUNITY ACTION RESEARCH PLATFORMS

RUFORUM – the Regional Universities Forum for Capacity Building in Agriculture – is a network of over 160 universities in Africa. Its mission is to strengthen the capacities of universities to foster innovations responsive to the demands of smallholder farmers and value chains through the training of high-quality, relevant graduates, the output of impact-oriented research, and the maintenance of collaborative working relations among researchers, farmers, market actors, national agricultural research and advocacy institutions, and governments. The network, owned by the member universities, was established in 2004 by ten Vice-Chancellors building on a project that linked African universities to each other and supported faculty and students to improve their skills and engage in participatory research. RUFORUM is registered as an NGO in Uganda where the Secretariat is based. Every year members gather² at different venues across Africa sharing ideas, showcasing innovations and advocating for the transformation of higher education and agriculture.

Although their faculty and students compete for grants within their universities and across the network, the university members actively support each other and collaborate closely in research, training and advocacy.

Transforming agriculture in Africa requires innovative scientific research, student-centred, experiential learning and universities embedded within society using new technology and collaborative partnerships. Tertiary education needs to be more connected to the new challenges facing rural communities and build the skills and networks of young people to drive adaptation of innovations and establish businesses that advance transformation.

One of the RUFORUM Flagship Programmes is ‘Transforming agricultural universities to meaningfully contribute to Africa’s Growth and Development’ (TAGDev). It supports the RUFORUM commitment to inclusive and sustainable education and agriculture. It broadens access and enhances the relevance and quality of graduates and innovations in rural communities. The Community Action Research Platforms (CARPs) are one of the initiatives under this programme. They strengthen the facilitation role of universities using their neutral convening power to bring together stakeholders across a value chain to collaborate with the university and smallholder farmers to enhance rural agro-industrialisation.

The TAGDev programme is an initiative co-created with, and financially supported by, the Mastercard Foundation. It is implemented and shepherded by the RUFORUM Secretariat with the support of experts from member universities and the RUFORUM Technical Committee. This book presents some of the results and lessons from these CARPs. Part 1 provides an overview and uses some of the stories of different stakeholders. Part II outlines the processes and impacts of each CARP as told by their platform initiators.

Further information may be accessed here:

- www.ruforum.org
- www.ruforum.org/MCF/about-tagdev-0
- <https://ruforum.org/impact/>

Notes

- 1 Two other CARPs were initiated. One in 2014, Mekelle Ethiopia focused on wheat but the sustainability of its platform was stymied by ongoing conflict in the northern Tigray region of Ethiopia. The dairy CARP in Tanzania initiated in 2015 also had some early successes.
- 2 <https://ruforum.org/ruforum-conferences>.

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PART I

Lessons and voices from the CARPs



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1

DESIGNING FOR RELEVANCE

A new orientation for research

Anthony Egeru, Megan Lindow and Patrick Okori

Introduction

This chapter explores the evolution of an approach to building collaboration between African universities, smallholder farmer communities and a wide variety of other institutional, NGO and private sector partners to address deep rural development challenges and overhaul student training. Community action research platforms (CARPs) are innovation platforms designed to reposition African universities to catalyse sustainable and inclusive development in the agrifood sector.

Small-scale farmers are the backbone of African societies, yet over many decades institutions have ignored their needs, leaving them disproportionately impoverished and food insecure (Lynam et al., 2016; Fanzo et al., 2020; Mazungu-nye, 2020; Nkhono-Mvula et al., 2023). The CARP approach seeks to demonstrate the potential of collaboration, driven by the untapped brain power of the universities, to begin to reverse decades of underdevelopment and catalyse small-scale agro-industrialisation and development in rural areas. Essentially, this approach involves repositioning universities for greater relevance to, and impact within, their societies.

The CARP approach proposes a radical departure from the roles for which most traditional African universities were designed. Established from the early 1900s onwards, these institutions were often envisioned as ivory towers, created largely to serve colonial administrations and, later on, the bureaucracies of independent African nation states by providing suitable employees for civil administration. The mode of learning was to prepare functionaries for white-collar office jobs, not to fledge entrepreneurs to innovate, disrupt and drive change. So long as the civil services absorbed most university graduates, there was little incentive for the universities to change and little room for them to manoeuvre either (Kibwika, 2006).

As institutions faced worsening problems of underfunding and neglect, there was a need to think differently. Universities came under immense pressure from the public to demonstrate their relevance and governments started asking difficult questions associated with value for money and the impact of universities in development. African universities largely avoided such conversations over the last century and into the first quarter of the 21st century – even as their ranks of jobless graduates multiplied. Many universities today are still waking up to the public's demand that they prove their relevance. Sooner rather than later, they will need to answer.

By the turn of the 21st century, the magnitude and complexity of Africa's environmental, economic, population and development challenges had rapidly outstripped the universities' capacities to engage with them. The inherited ivory-tower design limited the scope of universities for community engagement and knowledge co-creation, and the universities found themselves increasingly on the margins of their rapidly changing societies. Structural adjustment and declining budgets together with massive expansion led to overcrowding and heavy workloads for faculty, reducing both time and financial resources for intensive engagement with rural communities. Economic growth and agricultural productivity stagnated for several decades (Juma, 2012; Myeki et al., 2022). The ranks of jobless university graduates proliferated, as studies and employer surveys revealed graduates' lack of the critical skills demanded by the labour market (Kibwika, 2006). Today, as nearly two-thirds of African youth find themselves either unemployed or in vulnerable employment, universities have done little to inculcate entrepreneurship. Yet as agricultural growth gains recognition for its unmatched potential to lift people out of poverty and the global Sustainable Development Goals focus efforts on ending poverty and hunger and creating dignified livelihoods within environmental limits, a new pathway to relevance for African universities has opened (Juma, 2012; Adipala et al., 2021; Adesina, 2018).

Developing an iterative, holistic and collaborative research approach

The CARPs are a product of an evolution in thinking and practice within RUFORUM, a pan-African network of universities focused on capacity building in agriculture and food systems. Since its inception in 2004, RUFORUM has employed small grants to provide opportunities for Participatory Action Research to train master's students and to support faculty to work with rural communities and engage with other stakeholders (Mapfomo et al., 2013). The PAR approach was adopted as part of RUFORUM's broader efforts to overhaul postgraduate training and empower young scientists as proactive change-makers focused on delivery and impact. With participatory change-making at its core, PAR was seen as an effective approach to engage researchers in understanding and addressing the complex and multi-faceted challenges faced by smallholder farmer communities (Kibwika, 2006; Kindon et al., 2007; Chevalier, 2019). Graduate research grants focused on