RISA
Research and Innovation Systems for Africa

UK International Development
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Country Deep Dive: Strengthening Ethiopia's Research & Innovation Ecosystem

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List of Abbreviations

EIAR	Ethiopian Institute of Agricultural Research
ER2C	Ethiopian Research to Commercialisation
GDP	Gross domestic product
GESI	Gender equity and social inclusion
GII	Global Innovation Index
HEIs	Higher Education Institutions
IT	Information Technology
JU	Jimma University
MoE	Ministry of Education
RISA	Research and Innovation Systems for Africa
R&D	Research and development
R&I	Research and innovation
STEM	Science, technology, engineering and mathematics
STI	Science, Technology and Innovation
UoG	University of Gondar

I. Executive Summary

The purpose of this report is to share insights following the implementation of ecosystem strengthening activities in Ethiopia. The RISA Fund partnered with three Ethiopian organisations to bridge the gap between research and commercialisation in agriculture; and laid a foundation for university incubation. Implementation of the activities was made possible by cooperation between various stakeholders, including government, researchers, innovators, cooperatives, and civil society.

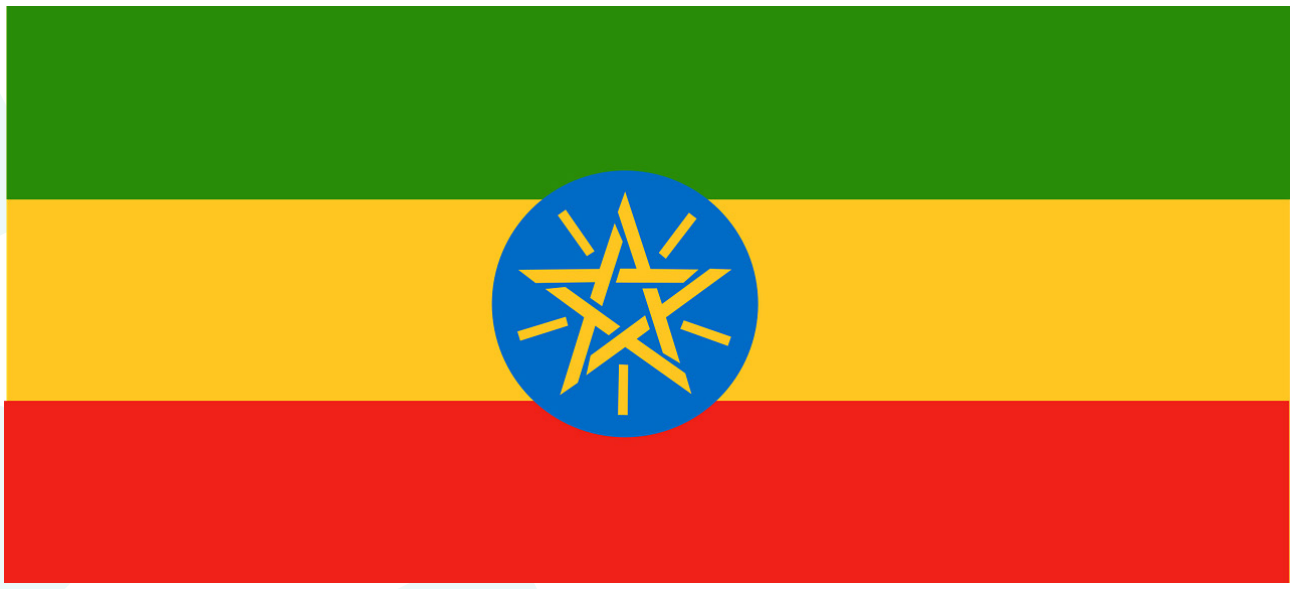
Ethiopia's Science, Technology and Innovation (STI) Policy emphasises research as a driver of growth, yet the ecosystem is constrained by underinvestment of 0.27% of GDP in R&D, weak coordination among stakeholders, low private sector participation, and gender disparities. These challenges have contributed to Ethiopia's low ranking in the 2024 Global Innovation Index (130/133).

RISA partnered with Jimma University, the University of Gondar (UoG), and Aybar Engineering to strengthen Ethiopia's research and innovation ecosystem through three approaches: Entrepreneurial Ecosystem that supported individual innovators and start-ups, *Innovation-Oriented Ecosystem* that built institutional incubation frameworks, and *Mission-Driven Ecosystem* that mobilised stakeholders in agriculture.

RISA's interventions in Ethiopia delivered transformative results. At Jimma University, the first incubation hub, with shared facilities, mentoring, and makerspaces, attracted innovators nationwide, while Aybar Engineering validated three affordable farm implements, enabling scale-up and procurement. Over 40 universities endorsed Ethiopia's first national incubation framework, complemented by a Research-to-Commercialisation curriculum drawing lessons from Kenya, South Africa, and Ghana, forming the basis of a five-year roadmap to strengthen university incubation systems. In agriculture, the University of Gondar's multi-stakeholder platform supported over 300 farmers, of which 74% were women and 13% persons with disabilities, in adopting improved seeds, irrigation, and post-harvest practices, enhancing yields, incomes, and food security.

Mainstreaming GESI in the implementation yielded strong results. At UoG, female principal investigators increased from 4% to 38% in two years, with four women promoted to leadership. The agriculture project in UoG targeted widows, single women, and persons with disabilities, broadening equity in technology access. Jimma University launched *EmpowerHer* and *EdTech* program to recruit women and youth innovators respectively.

Key lessons highlight that inclusion requires intentional design, incubation hubs are catalytic for innovation, validation and proof-of-concept funding are critical to bridging the gap and peer learning among countries accelerates progress. Next steps priorities in the Ethiopia R&I ecosystem include scaling incubation hubs nationwide using new standards, securing financing for early-stage innovations, institutionalising GESI guidelines across higher education institutions, and deepening university–private sector partnerships to drive inclusive and sustainable growth.



II. Introduction

Background and context

Ethiopia's strategy for research and innovation is driven by its Science, Technology and Innovation (STI) Policy, which aims to foster a knowledge-based economy and promote sustainable growth. The policy focuses on building human capital, strengthening research infrastructure, and encouraging industry-academia collaboration. A key aspect is aligning research and innovation with national priorities and addressing societal challenges. The STI strategy identifies key areas for research and innovation, including agriculture, manufacturing, IT-based services and tourism. The policy emphasises building a skilled workforce through education and training programs; and encourages partnerships between research institutions and businesses to facilitate technology transfer and commercialisation. Research and innovation are poised as key drivers for economic development, job creation and poverty reduction.

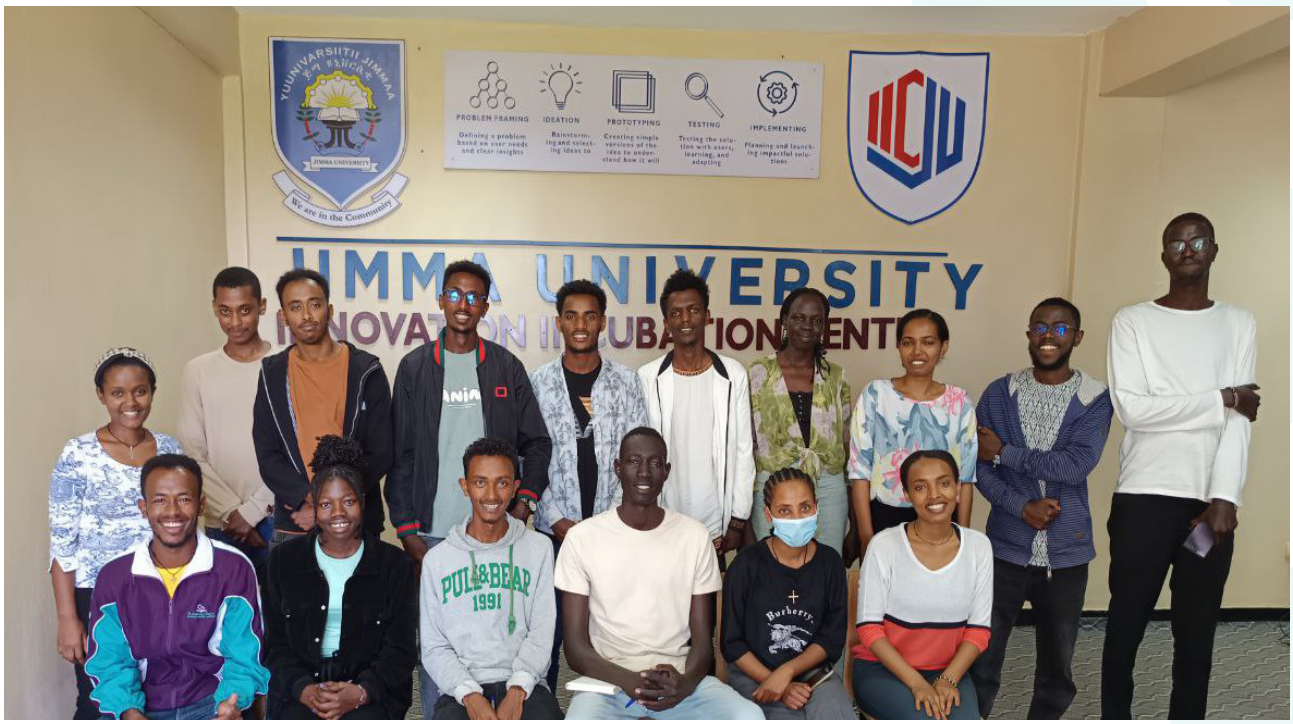
The STI strategy faces several challenges in its implementation, including inadequate funding, weak coordination among stakeholders, and a lack of skilled human resources. These factors hinder the country's ability to translate research into practical applications and drive sustainable development.

Funding: Ethiopia invests a relatively small percentage of its GDP in research and development (R&D), which can hinder progress. Ethiopia faces challenges in attracting sufficient private sector investment in R&D, developing robust innovation infrastructure, and addressing skill gaps in the workforce. The government is the primary funder of R&D in Ethiopia, contributing a significant portion of the total R&D expenditure. In 2022, Ethiopia allocated 0.27% of its GDP to R&D which has remained consistent since 2020. In the Global Innovation Index (GII) 2024, Ethiopia is ranked 130th out of 133 economies. It is also ranked 8th among the 10 low-income economies and 24th among the 27 economies in Sub-Saharan Africa. The GII ranks economies based on their innovation capabilities, considering both innovation inputs and outputs. Ethiopia's low ranking on the GII is due to a combination of factors, including weak innovation inputs, particularly in areas like market and business sophistication, indicating challenges in creating an environment that fosters and supports innovation and challenges in translating innovation investments into tangible outputs. While Ethiopia shows some strengths in knowledge and technology outputs, its overall performance lags behind its level of development. The new STI Policy is heralded as a driver that will bring about systemic change in the country's innovation ecosystem.

Ethiopia has benefitted from partnerships with several countries and development partners with efforts to shift the country toward a more inclusive and sustainable economy. In July 2025, the World Bank approved $1 billion fund to support Ethiopia's transition toward a more inclusive and private sector-led growth model. Funding bodies and development partners are increasing their investment in the Ethiopian research and innovation ecosystem as well as other sectors with the aim of strengthening the economy. Examples of investments in R&I include the Innovation Fund for Ethiopian Agriculture, which was set up to support innovative initiatives in the agricultural sector, specifically in promoting enterprise development and increase livelihood. The ENTAG Innovation Fund supports innovations in various agricultural sub-sectors. The Grand Challenges Ethiopia support health innovations that are aligned with the Health Sector Transformation Plan and addresses challenges that fall within the identified priority areas. Partners such as the World Bank and Mastercard Foundation play cross-cutting roles in advancing Ethiopia's digital economy goals, supporting the country's positioning as a key player in global value chains through enhanced digital competitiveness and innovation-driven growth.

Ethiopian researchers are increasingly being awarded research grants from international organisations and institutions outside of Africa. These grants support a wide range of research areas, including climate science, public health, and plant science, and often involve collaborations with institutions in countries like the USA, UK, and Europe.

Capacity building: There is a need to strengthen research capacity across different sectors in Ethiopia. A significant portion of academic staff in Ethiopian universities are not actively involved in research. There is a shortage of skilled researchers and technicians to support research and innovation activities. Furthermore, research budgets in many universities in Ethiopia are less than 1% of their total budgets, limiting research activities and outputs (Abibo et al., 2023). This is also reflective of the low percentage of academic staff with PhD degrees. On average, only 14% of staff at universities in Ethiopia are PhD holders. In addition to these challenges, women remain significantly underrepresented in Ethiopian academia, particularly those in STEM fields. While there has been a gradual increase in female academic staff in Ethiopian institutions, they



remain underrepresented in leadership positions and certain disciplines mainly contributed by gender bias, work-life balance and lack of strong professional networks. This human resources and institutional capacity gaps hinders Ethiopia's ability to foster a vibrant and inclusive research and innovation landscape.

Coordination: The innovation ecosystem in Ethiopia is not well-orchestrated. Improving coordination between different stakeholders is crucial for effective implementation of the STI policy. While the policy aims to foster collaboration between government, academia and industry; coordination remains weak in practice. There's a lack of synergy between different stakeholders, hindering the effective transfer of knowledge and technology.

Private Sector Participation: Limited private sector involvement in research and innovation slow down commercialisation of research outputs and reduces collaboration between academia and industry. Therefore, encouraging greater involvement of the private sector in research and innovation is essential to bridge these gaps.

Ecosystem Overview

The Ethiopian research and innovation ecosystem is on an upward trajectory, though still in infancy. The ecosystem is led by government and includes a mix of actors – universities, research institutions and businesses. Leading government actors and instruments that contribute to the Ethiopian National Innovation System include the Ministry of Innovation and Technology, Ministry of Education, Ministry of Labour and skills, Ministry of Trade and Industry and the Ethiopian Investment Commission.

Ethiopia has 52 public universities and a growing number of private universities. Public universities are classified into four broad areas based on their focus; research intensive, science & technology, applied and comprehensive universities. Ethiopia also hosts several prominent research centres, with agriculture and health being the main focus areas. However, emerging fields such as information and communication technology (ICT) and renewable energy are emerging. Some of the leading research institutions include the Ethiopian Institute of Agricultural Research (EIAR), Bio and Emerging Technology Institute (formerly Ethiopian Biotechnology Institute) and the Armauer Hansen Research Institute. As indicated, research is mainly financed through the Federal Government, regional States and foreign donors. Private-sector financing for research activities is generally small and has been confined to certain enterprises such as pharmaceutical companies that have small R&D units to formulate generic medicines.

While Ethiopia has shown progress in its innovation ecosystem, particularly in recent years, the flow of innovation is not yet considered efficient. There are challenges in translating research into practical applications and fostering effective collaboration between stakeholders. However, initiatives and policies are being implemented to address these issues and strengthen the overall innovation landscape.

III. Objectives of the ecosystem strengthening initiative

The Research and Innovation Systems for Africa (RISA) Fund is a multi-country project, funded by UK International Development from the UK government, to support research and innovation systems strengthening in six countries: Ethiopia, Ghana, Kenya, Nigeria, Rwanda and South Africa. The programme has three objectives: research institution and system strengthening; innovation system strengthening and strengthening synergies between research and innovation systems.

A study of the Ethiopian R&I ecosystem revealed opportunities for ecosystem support in the following areas:

- Building research and innovation connectivity

- Convening events/ spaces where different R&I actors can come together to normalise and mainstream GESI within the ecosystem

- Addressing GESI barriers

- Support intra-Africa collaborations

IV. Strategies for Strengthening

The International Development Innovation Alliance describes an innovation ecosystem as an environment with *enabling policies and regulations, accessibility of finance, informed human capital, supportive research markets, energy, transport and communications infrastructure, a culture supportive of innovation and entrepreneurship, and networking assets, which together support productive relationships between different actors and other parts of the ecosystem.* IDIA further differentiates three ecosystems which differ in terms of focus. An entrepreneurial ecosystem places the innovator at the centre, whereas the innovation-oriented ecosystem focuses on the innovation process. The mission-driven ecosystem, on the other hand, focuses on a particular development challenge.

In its implementation in Ethiopia, the RISA Fund supported to varying degrees, all three innovation ecosystems. Two entrepreneurial ecosystems were supported, one focused on an individual innovator, and the other was set up to support many innovators. With the innovation-oriented ecosystem, the main aim was to create an enabling environment, where innovative ideas can be translated to products or services, until they reach scale. The mission driven approach was piloted with agriculture at the centre, creating a shared sense of purpose in contributing to agricultural technology transfer among a wide variety of ecosystem actors and mobilising them to address a shared mission of enhancing primary agriculture through the adoption of improved technologies.

Training on beekeeping

V. Implementation

The RISA Fund made a call in 2022, inviting organisations that support research and innovation strengthening in Africa to apply. A total of 23 applications were received from Ethiopian organisations; mainly universities. The proposed areas of focus were predominantly in agriculture, setting up makerspaces and incubation centres in universities. There was also a common thread for capacity building for women, particularly early-stage career researchers and innovators. Three projects were selected, as they were strongly aligned with RISA objectives for Ethiopia, i.e., building collaborations between different players in the research and innovation ecosystem, inclusive and equitable research in innovation ecosystems and increasing partnerships and collaboration between Ethiopia and other African research organisations. Additionally, the selected projects aimed to address gender disparities that hinder women's participation in research and innovation, contributing to a more inclusive and resilient ecosystem.

Building collaborations between different players in the research and innovation ecosystem (researchers, advocacy groups, policy makers, private sector stakeholders, etc.

Inclusive and Equitable Research and Innovation dystems.

Increasing partnerships and collaboration between Ethiopia and other African research organisations would be important to support African-led research that responds to African priorities.

A total of £1.4 million was allocated to the three partners in Ethiopia for the period spanning 2022 – 2025. The partners were; Aybar Engineering, Jimma University and the University of Gondar.

RISA Partner	Focus Area
Aybar Engineering	Agriculture
Jimma University	Incubation
University of Gondar	Agriculture

Strengthening Entrepreneurial Ecosystems

An entrepreneurial ecosystem is one where an innovator/ entrepreneur is at the centre. To strengthen this ecosystem, efforts are focused on making available resources to enable an entrepreneur to thrive. Two entrepreneurial ecosystems were supported, i.e., one that focused on enabling an innovator, and another that aimed to create an enabling environment for innovators. Many universities and research institutions in Ethiopia lack adequate laboratory facilities, equipment and access to necessary research materials. This lack can significantly hinder innovation by limiting research capabilities, slow down the pace of discovery, hinder prototyping efforts and discourage researchers and innovators from pursuing certain lines of inquiry. Jimma University established an incubation hub, equipping it with dedicated spaces and infrastructure to foster creativity and innovation. The spaces include shared offices for the innovators to connect, meeting rooms, high-speed internet,

Incubation Centre Workshops

and equipment in the makerspaces for developing prototypes. Additionally, it enabled researchers and innovators access to skills (technical, legal and business) and support including funding for innovations. Following a showcase of the Jimma incubation centre, The RISA Fund received numerous requests for the establishment of additional incubation hubs across the country. However, within the scope, funding, and timelines of the project, support was limited to the Jimma incubation centre. For organisations, development partners, and investors looking to contribute effectively to the Ethiopian research and innovation ecosystem, the establishment and strengthening of university incubation centres remains a critical area of need.

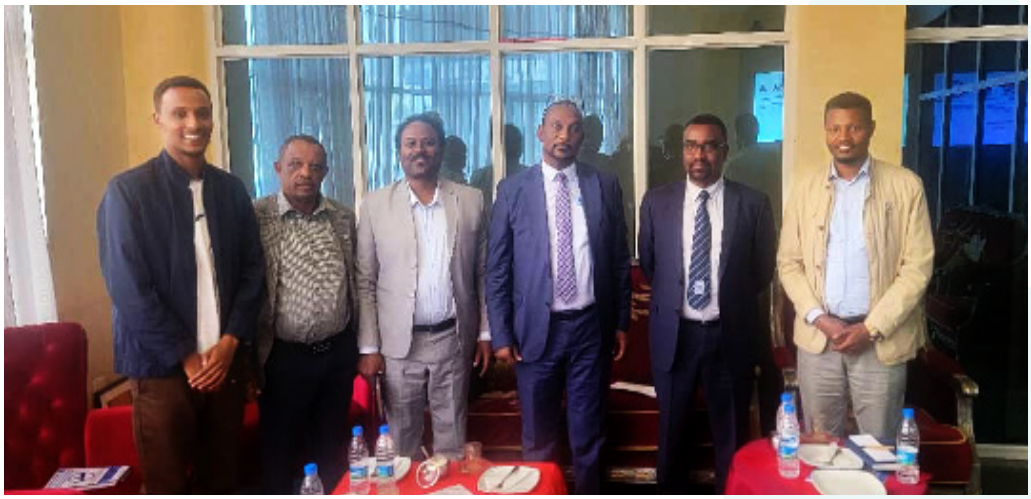
Innovators often lack the necessary support during the developmental stages, starting with ideas to final market ready products. The struggle is compounded by a failure to enter supply chains. The second entrepreneurial ecosystem that was supported in Ethiopia focused on a single innovator. Aybar Engineering has over a dozen innovations that can be used to enhance traditional agricultural practices. However, due to a lack of independent scientific evaluations, the innovator is excluded from mass procurement by government for farmer support. These innovations include affordable implements for digging, tilling the soil, planting, weeding, crop threshing, etc. to complement existing traditional farming equipment. Moreover, the implements assist women and people with disabilities and ease the load for oxen during ploughing and cultivation.

Innovators would typically struggle to finance independent scientific evaluations, which are a prerequisite before innovations can be authorised for widespread use. Aybar Engineering used over $100,000 for scientific evaluation and demonstration of three implements over one season. This is a costly exercise that contributes to low translation of ideas to final products; often leading to shelving of incomplete innovations.
Jimma University and Aybar Engineering were allocated similar budgets for their ecosystem strengthening activities in the first year. The former channelled funds towards establishing an incubation centre with spaces, equipment and support programmes that benefit many innovators. Aybar Engineering on the other hand, required funds to navigate the pre-commercialisation phase. The independent scientific evaluation is commensurate with clinical trials in drug discovery or a flight test, without which innovations cannot be certified for use. There are other innovators like Aybar Engineering with impactful innovations that require a bridge over the proverbial valley of death.

Strengthening an Innovation-Oriented Ecosystem

The Ethiopian Growth and Transformation Plan focuses on promoting economic diversification and sustainable growth, and highlights innovation as a driving force for the country's development. Policies aimed at fostering entrepreneurship and encouraging foreign investment are central to this strategy (Ministry of Finance, 2022; Ethiopian Investment Commission, 2022). Ethiopia recently passed the Startup Proclamation to foster an innovation-driven economy; an important landmark in Ethiopia's innovation ecosystem. Academic and research institutions are viewed as vital in effecting the advent of an innovation-driven economy as they are centre of research, development and innovation.

They provide trained professionals, transfer research outputs and knowledge to the private sector through licensing, start-ups and research contracts. Universities can also play a vital role in nurturing startups through incubators, accelerators and mentorship programs. The growth of industries around universities is fuelled by strong



Project Steering Committee led by HE Mr Kora Tushune (State Minister of Education)

university-industry collaborations, which fosters innovation, drive economic growth and addresses societal challenges. This has in fact become the hallmark in entrepreneurial ecosystems (e.g., Silicon Valley).

Frameworks and Standards

The Ethiopian government is positioning Higher Education Institutions (HEIs) to become entrepreneurial hubs where innovation and business creation can thrive. However, among the 52 public universities, only a few currently host functional incubation centres with adequate infrastructure and capacity development programmes. Incubation models also vary widely: there is no uniformity in governance structures, infrastructure, financial resources, incubation processes, or training curricula. Each university defines its own standards, often working in isolation from businesses and government. This fragmented approach limits opportunities for collaboration and weakens the potential for scaling innovations.

To address this gap, a project steering committee led by the State Minister of Education, HE Mr Kora Tushune provided high-level oversight and guidance on the project, with two main tasks been development of legal frameworks for HEIs incubation in Ethiopia; and developing a curriculum for research to commercialisation. Technical teams were appointed for each of the tasks. The development of standards for incubation centres at HEIs was led by experts from Bahir Dar University, Dire Dawa University, Debre Markos University, Hawassa University, Jimma University, Addis Ababa University and Addis Ababa Science & Technology University. The team also included experts from private incubators i.e. Nuna Ethiopian Incubation Centre and Abugida Robotics and Technology Centre. Experts for development of Ethiopian research to commercialisation (ER2C) training programme were from Adama Science & Technology University, Haramaya University, Hawassa Institute of Technology, Jimma University, University of Gondar, Wolaita Sodo University, Wollo University and Bio and Emerging Technology Institute. Part of developing legal frameworks for HEI incubation included a benchmarking exercise where the technical team engaged virtually and physically with incubators in Ghana and South Africa.

Strengthening the Ethiopian innovation-oriented ecosystem resulted in standardised incubation frameworks, enhancing commercialisation pathways, and fostering strong stakeholder collaboration. Through developing a National Standard for BTICs in HEIs, engaging and incorporating feedback from stakeholders, the project laid the foundation for a harmonised and sustainable incubation system. This framework will provide HEIs with a structured approach to incubation, leading to more effective support for research commercialisation and startup creation ***- Teshome Daniels.***

Through this collaborative effort, Ethiopia achieved significant milestones in strengthening its innovation-oriented ecosystem. A national standard for Business and Technology Incubation Centres (BTICs) was developed and R2C training curriculum was also formalised, creating structured pathways for research commercialisation. These outputs have laid a foundation for harmonised incubation systems in universities, providing researchers and students with more effective support to transition innovations into viable businesses.

For co-creation purposes, these outputs from both the Frameworks and ER2C teams were shared with over 40 public universities for feedback. Through a series of iterative engagements, the frameworks were formally adopted by 40 university vice presidents, each committing to support incubation centres within their institutions by allocating dedicated budgets.

A delegation from Ethiopia visiting the Technology Innovation Agency in South Africa. The delegation is accompanied by in-country FCDO representative, official from the DSTI, RISA Fund and TIA officials.

The initial focus in strengthening the Ethiopian innovation-oriented ecosystem was on policy and institutional foundation to support research commercialisation and business incubation in universities. This activity was the first step in the implementation of a 5-year roadmap to systematically strengthen university-led innovation ecosystems in Ethiopia. Ethiopia's innovation ecosystem is at a critical growth stage and requires significant financial and technical investments.

There is a call to action for support to:

- Establish world-class business incubation centres in universities
- Fund university-based startups and commercialisation efforts
- Build entrepreneurial capacity for researchers, students and faculty
- Scale successful research-to-market innovations
- Strengthen university-private sector linkages for sustainable impact

A delegation from Ethiopia visiting the iSpace in Ghana.

Strengthening a Mission Driven Ecosystem

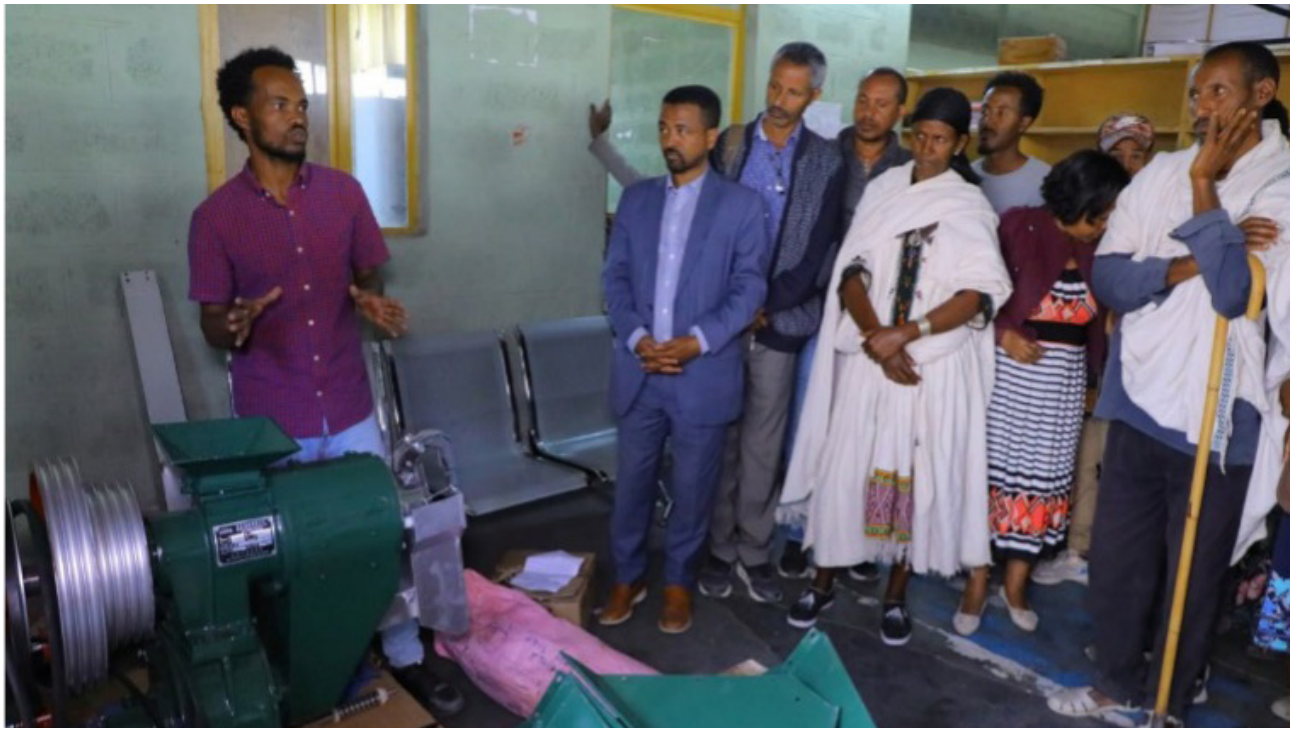
Agriculture is one of the key sectors where innovation is poised to have an impact in Ethiopia. The EIAR has over 20 research centres across the country with key areas of research that include improved crop varieties, climate-smart agriculture and precision farming. Agriculture in Ethiopia is a vital sector that is sustaining the economy. Close to 80% of employment stems from agriculture, and smallholder farmers contribute over 70% of agricultural production. However, farmers in Ethiopia still utilise traditional farming methods and rely on traditional tools like the *maresha* (ox-drawn plough), traditional irrigation and harvesting methods pointing to an unfilled gap.

Key research outputs from the EIAR research centres such as improved crop varieties and farming methods remain shelved, and do not reach their intended markets, i.e., farmers. One major barrier to effective technology transfer is limited collaboration between researchers and innovators with extension officers, who act as a bridge between researchers and farmers, and farmers who are the end user of the technology. There is a clear need for a coordinated network and partnership scheme that will strengthen collaboration among actors and thereby facilitate the adoption of research verified agricultural technologies.

The University of Gondar led the establishment of a multistakeholder platform (MSP) that had a common mission of enhancing technology uptake to augment primary agriculture and agro-processing. The MSP consisted of 27 members from academia, research institutions, private sector, and cooperatives. Selection of target beneficiaries (PWD and female farmers) who played pivotal role in the technology transfer. The platform has facilitated flow of innovations from research institutes to the field, with increased support from extension officers, who serve as the bridge between research institutions and farmers. This collaboration has led to the adoption of improved crop varieties and farming methods, resulting in higher earnings for farmers and ultimately improved livelihoods. Establishment of this multi-stakeholder innovation platform has proved to be an effective model for strengthening partnerships and accelerating the uptake of research verified agricultural technologies.

Ecosystem-level change

The extent to which Ethiopia will grow its economy and catapult to a knowledge-based economy is proportional to the investments that will be made towards building a stronger research and innovation ecosystem. The RISA Fund aimed to be catalytic in the six focus countries. The RISA Fund acted as a catalyst, bringing ecosystem components together and accelerating the development of research outputs into market-ready innovations. These products in Ethiopia are the direct outputs/ outcomes from strengthening of entrepreneurial, innovation-oriented and mission-driven ecosystems. The incubation centre at Jimma University is the first of its kind in Ethiopia, it was designed to serve innovators from the university and serve as national hub supporting innovators across the country requiring access to the facility and equipment for



prototyping. It will also serve as a sandbox or model HEI incubator for the Ministry of Education.

The developed and adopted standards, frameworks and training curriculum for research to commercialisation are a firm foundation for bolstering incubation capacity across the country. These tools are instrumental in guiding innovators through the journey from idea to access to market, ensuring consistency and quality in incubation efforts nationwide.

University of Gondar also developed and officially endorsed a Gender Equality and Social Inclusion (GESI) guideline aimed at fostering an inclusive enabling environment that strengthen its research and innovation ecosystem. As part of this initiative, the University allocated funds exclusive for female researchers to participate in research, innovation and start-up projects. This targeted approach ensures that women are actively engaged in STEM initiatives within the institution.

Intra-Africa collaborations: South Africa, Kenya, Ghana, Rwanda

The African proverb, it takes a village to raise a child, is applicable to the Ethiopian R&I ecosystem. There is much to be emulated from more established ecosystems on the African continent. Throughout implementation, Ethiopian partners engaged players in Ghana, Kenya and South Africa. The developed ER2C curriculum was adapted from Kenya. Jimma University collaborated with Mintek, an institution in South Africa in one of their activities. The partnership enabled two-way cross learning, with both institutions benefiting from shared experiences and insights.

Furthermore, technical team working on the development of legal frameworks for incubation in HEIs, as well as those designing the ER2C curriculum engaged with various incubators in Ghana and South Africa, gathering insights into how Ethiopian HEIs can be positioned optimally.

Enablers

When reflecting on the implementation of supported projects in Ethiopia, there are elements that enabled success and will contribute to the sustainability of the foundational work.

A key driver was the immense support received from government departments and agencies including Ministry of Education, Ministry of Innovation and Technology (MiNT), Ministry of Labour and Skills (MoLS) and Ministry of Health (MoH). These institutions provided strategic direction in developing the frameworks and ensured policy alignment, anchoring the project to Ethiopia's national priorities and positioning its focus areas within the country's broader development agenda.

The university management at both Jimma and University of Gondar played a key role in providing a strong institutional support and allocating resources to ensure effective implementation. Sustainability was embedded within the projects, for example, the University of Gondar established a seed multiplication site that will continue to propagate improved seed varieties for distribution to farmers.

University of Gondar established a multistakeholder platform that enabled collaboration, cross-learning and essential linkages with various partners in the implementation of their project. This inclusive approach ensured that different actors contributed to the success, building an ecosystem of shared responsibility.

RISA partners in Ethiopia adopted a comprehensive approach to partnership-building and networking. This not only opened opportunities for researchers and innovators but also enabled access to financial resources, an essential factor in advancing research outputs into viable innovations. In addition, the nationwide research-to-commercialisation curriculum, developed with guidance from the Ministry of Education and MiNT, provides a toolkit that will support HEI incubation efforts across the country.

Learnings

Through implementation of the RISA Fund in Ethiopia, some of the projects incorporated programmes for capacity development for women in the initial design, others did this retrospectively.

Target beneficiaries for agricultural technology transfer were women as well as people with disabilities (both men and women). University of Gondar was deliberate in including women that were single, i.e., unmarried/divorced or widowed. This demographic faces systematic exclusion from resource allocation and decision-making processes, as traditional support mechanisms often prioritise male farmers. 74% of target farmers were female. Similarly, persons with disabilities are frequently excluded from agricultural development initiatives, despite the economic empowerment and dignity that self-reliance provides. 13% of farmers on the project had some form of physical disability.

The University of Gondar also implemented a capacity development programme for early career stage female researchers. This intervention was borne from the low participation of women in academia and research at UoG, which is a nationwide phenomenon. At the end of the capacity building programme, the women reported increased levels of confidence that motivated them to pursue opportunities previously seen as male-dominated. The RISA Fund also received reports of increased grant applications with women as principal investigators/lead researchers, as well as increased applications for PhD studies (nationally and internationally) and for institutional promotions. The percentage of female principal (lead) investigators at UoG increased from 4% to 38% and four of the women from the cohort were promoted to higher positions in the university during 2024/2025 academic year.

At Jimma University, women were underrepresented in responses to an initial call for innovators interested in receiving support from the incubation programme. As a result, Jimma University developed a programme called EmpowerHer, which specifically focused on supporting and capacitating female innovators and researchers. Like UoG, the targeted female intervention resulted in increased participation of women in innovation activities. For both UoG and JU, the inclusion of women in innovation had to be deliberately incorporated into the design.

Jimma University was supported to establish an incubation centre. This entailed the refurbishment of a building that the university made available, developing guidelines, designing incubation training programmes, establishing capacity building programmes, forging partnerships and recruiting and supporting innovators to develop ideas to prototypes, with some scaling and currently being piloted. At the end of the first year of RISA support, Jimma University held a showcase event, where different stakeholders such as government, development agencies, industry and other universities were invited. This resulted in numerous requests to the RISA Fund from Ethiopian universities for support to establish similar incubation centres. This indicated that the Ethiopian R&I ecosystem is ready to develop, expand and flourish, with innovative researchers and students needing conducive environment to develop ideas to marketable products. With the establishment of national standards, frameworks, The MoE is poised to implement a roadmap towards strengthening BTICs across the country.

VI. Opportunities and Alignment of Ecosystem Strengthening Initiatives with SDGs

In September 2021 at the United Nations Food Systems Summit, Ethiopia committed to transforming the national food systems to achieve the Sustainable Development Goals (SDGs) by 2030. The UoG led the coordination of a multistakeholder platform that contributed to food systems in the Ahmara and Tigray regions. The selected technologies by UoG are but a fraction of domestically available research outputs from the various research centres of the EIAR that are at risk of being shelved if proper technology transfer pathways are not established. With a limited cohort of 300 farmers, the project could demonstrate how utilising improved seed varieties and employing good agricultural practices can result in higher crop yields.

Under Production and Expansion plan in the National Development Plan 2030, Ethiopia prioritises increasing the production of crops like wheat, soybean and rice by adopting modern inputs, irrigation systems and mechanisation. UoG provided 200 farmers in the Mitriha kebele with two improved seed varieties, Selam and Shaga, introduced the use of solar irrigation pumps so as to reduce reliance on rain-fed agriculture through increased irrigation using a locally developed solar-powered pump. Introduced post-harvest technologies including rice milling and parboiling. Both enhance the quality of the rice, thus increasing market value. Integrated farming was also introduced to farmers. This form of farming offers numerous benefits, including increased sustainability, improved resource utilisation, and enhanced profitability. 100 farmers in the Sendeba Kebele adopted integrated avocado cultivation and beekeeping; and five farmers were supported to adopt integrated rice-fish farming.

To sustain the initiated efforts, UoG secured land which will serve the purpose of seed multiplication. Pre-basic rice seeds from the Fogera National Rice Research and Training Centre will be propagated and through the university community outreach programme, distributed to more farmers. With the correct partnerships, agricultural technology transfer can be scaled to include other researched technologies across Ethiopia to contribute meaningfully to the national food systems. UoG bridged the gap that existed between research and commercialisation by connecting researchers to farmers. The connection was extended to include cooperatives and unions where agricultural produce can be sold through established chains. These actions contribute to achievement of SDGs 1, 2, 5, 7, 10, 12, i.e., no poverty, zero hunger, gender equality, affordable and clean energy and reduced inequalities. Furthermore, the outcomes are aligned with Ethiopia's development plan 2030 and the Ten development initiative of the Ministry of Agriculture that aims to enhance the income and livelihoods of farmers.

The transition to a knowledge-based economy is fundamentally driven by the creation, dissemination and utilisation of knowledge as the primary driver of economic growth and development. It emphasises the importance of human capital, information technology and innovation in producing goods and services. This type of economy relies heavily on high-skilled labour, access to information and the ability to adapt to rapid technological advancements.

Universities in Ethiopia are well placed to contribute to economic growth and development by producing skilled human capital, fostering innovation and driving economic activity. Incubation centres at universities can further contribute by fostering entrepreneurship and innovation, leading to establishment of new businesses, jobs and technologies. Opportunities exist for development partners to support the implementation of a roadmap for establishment of Business, Technology and Innovation Incubation Centres (BTIICs) across Ethiopia. The support will build on initiated work and contribute to achievement on SDGs 1, 4, 5, 8, 9 and 10, i.e., no poverty, quality education, gender equality, decent work and economic growth, industry, innovation and infrastructure and reduced inequalities respectively.

Farmers in the Sendeba Kebele adopting the the practice of beekeeping, to expand agricultural production.

VII. Conclusions and Recommendations

The Ethiopian Science, Technology, and Innovation strategy continues to face significant challenges, including limited funding, weak stakeholder coordination, and a shortage of skilled human resources. These constraints hinder the country's ability to convert research into practical solutions and advance sustainable development. This report highlights how the RISA Fund has contributed to strengthening three critical ecosystems in Ethiopia: entrepreneurial, innovation-oriented, and mission-driven, thereby fostering a more resilient and dynamic environment for science and technology.

The Ministry of Education and Ministry of Innovation and Technology have priority areas for growing the Ethiopian R&I ecosystem. It is recommended that development partners, organisations and investors first align with appropriate line ministries on their priorities when conceptualising support for Ethiopia.

About the RISA Fund

The RISA Fund (2021-2025) is a multi-country initiative funded by UK International Development from the UK government designed to strengthen research and innovation systems across Africa. It brings together two complementary programmes under the Foreign, Commonwealth and Development Office's (FCDO) Research and Evidence Division—Strengthening Research Institutions in Africa (SRIA) and African Technology and Innovation Partnerships (ATIP)—to harness synergies and drive systemic change. Managed by a consortium comprising Chemonics UK, Results for Development, and SOAS University of London, RISA collaborates with a wide range of implementing partners including universities, innovation hubs, government agencies, private sector actors, and international development firms. The programme operates in six countries: Kenya, Ghana, Nigeria, Rwanda, Ethiopia, and South Africa, supporting locally driven solutions and fostering cross-sectoral learning and impact.

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