

Understanding knowledge systems and effective strategies and viable options for the promotion of science, technology and innovation (STI) in Kenya, Rwanda and Tanzania

Understanding Knowledge Systems Project Brief JUNE 2018

Project Overview

The need to invest in Science, Technology and Innovation (STI) capability in low and middle-income (LMI) countries has long been recognised, but there has been limited action and investigation into how to do this and what works in the low and middle-income contexts. A number of countries in Africa are setting their agenda for Science, Technology and Innovation (STI) including commitments to African Union's *STI Strategy for Africa 2024 (STISA-2024)*, and to the *AU Agenda 2063*. However, these efforts are hampered by limited evidence on effective strategies driving the STI knowledge systems, and inadequate information on viable options likely to guarantee the sustainability of these systems within LMI countries.

Understanding knowledge systems provides insights into strategic sectors, capabilities and institutional arrangements necessary for building an effective

national STI system. This is because a Knowledge System reveals the interconnections between various actors and agencies including their capabilities in producing, transferring and utilizing information for various development objectives.

To this end, the UK Department for International Development (DFID), through the East Africa Research Hub, has commissioned a study on *Understanding knowledge systems and effective strategies and viable options for the promotion of science, technology and innovation (STI) in Kenya, Rwanda and Tanzania*. This project seeks to develop an understanding of knowledge systems and what works to promote science, technology and innovation in the three LMI countries. Specifically, the project will generate evidence on the setting, performance and dynamics of the knowledge systems in the countries, which will then inform what works and what doesn't in each country's context in the promotion of STI.

Approach and methods

The research will adopt a number of methods but will be underpinned throughout by extensive stakeholder engagement and country-specific political and economic analyses. The project will be implemented in four interlinked steps:

Step 1: Inception to create awareness about the project and engage country STI stakeholders in refining the project design and methodologies including robust review of existing literature,

evidence and development of the theoretical approach.

Step 2: The mapping and description of each of the three countries' knowledge systems through - engaging country teams in planning and designing the fieldwork processes; convening cross-sectoral focus group workshops and country round-tables in the countries in the fieldwork; in-depth interviews at regional and national levels and regional validation/dissemination workshops.

Step 3: An economic case for investing in STI in each country and the identification of practical actions to strengthen the knowledge economy.

Step 4: Uptake and stakeholder engagements including workshops, policy roundtables, media-implemented throughput. The project intends to link findings to policy development in each country and regionally.

Expected outcomes

- A clear sectoral/national scale of analyses of countries and possible knowledge links that exist either nationally or regionally.
- An options report of knowledge system interventions backed by analysis, evidence and stakeholder review and co-development.
- An outline of key institutional and governance arrangements, policy settings that will enable direct use of knowledge for innovation.
- Policy options for designing innovation policy as well as managing technological change across various knowledge systems.
- Capacity-building networks to enhance the capacity of policymakers and young researchers to take up ideas generated from the study.
- A number of engagement activities, led by ACTS, with the aim of enhancing uptake and implementation of the relevant research findings. These will include: workshops with stakeholders to disseminate and validate findings; utilizing communication channels such as social media and policy briefs to disseminate research evidence.

Project core partners

The project will be delivered through a North-South collaboration between Africa and the UK-based research and policy institutions with extensive expertise and experience in STI and sustainable development research. The project partners will work closely with in-country stakeholders to leverage expertise and lessons towards achieving outcomes in line with the country context and STI priorities.

Core-partners

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- Science Policy Research Unit (SPRU), at the University of Sussex- contact Professor Joanna Chataway; j.c.chataway@sussex.ac.uk
- The Commonwealth Scientific and Industrial Research Organisation (CSIRO) – contact Dr. Andy Hall; andrew.hall@csiro.au

In-country focal points

- Kenya – University of Nairobi, Institute for Climate Change and Adaptation (ICCA) – contact; Professor Shem Wandiga; wandigas@uonbi.ac.ke
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