INVESTIGATING TECHNOLOGICAL RISKS IN DEVELOPMENT AND FOOD SECURITY

Locations Kenya

Dates 01/04/2020 - 31/03/2023

Summary

Food insecurity, caused by increases in the global population and the loss of arable land due to climate change and conflicts, pose a major risk to human lives and well-being, especially in the Global South. While technologies have been introduced to tackle food insecurity, it is understood that unintended risks, such as loss of biodiversity and environmental pollution, have surfaced for local communities as a result. To maintain and improve food security, it is necessary to ensure that agricultural production is effective, efficient and sustainable. This project seeks to investigate how technologies that have been introduced as solutions to food insecurity have contributed to the creation of new technological risks, and how these technologies should be governed.

The problem

In the Global South, food insecurity is rising and increases in the global population and the loss of arable land because of ever-growing problems such as climate change and conflicts are large accelerators of this.

These negative factors pose significant risks to human lives, livelihoods and well-being, of which, mitigation through effective, efficient and sustainable agricultural production is key.

Technologies, such as Genetically Modified (GM) crops and the use of antibiotics in livestock farming, have been introduced as solutions to food insecurity. However, these technologies have brought with them unintended risks for local

communities and their environment which include the loss of biodiversity, poor food quality and food safety. In order to simultaneously pursue the new technological innovations' anticipated benefits while safeguarding against potential risks, technology governance is required.

What we are doing

This project, Technological Risks in Development: Food Security, Super-Wicked Problems and the Decolonization of Technological Governance, will investigate how technologies have contributed to the creation of new technological risks and how these technologies should be managed.

The project will investigate the following questions:

1. How can such technological risks be conceptualized to identify their characteristics and root causes, therefore facilitating efforts to minimize their impact?
2. How should their implementation be governed to maximize benefit whilst minimizing the creation of further unintended risks?

The project will explore these questions through case studies of two technological risks – GM crops and the use of antibiotics in livestock farming – in the context of Kenya.

The project provides a timely contribution to the urgent development challenge of ensuring global and local food security in ways that avoid creating further socioeconomic and ecological risks among vulnerable communities and respect their rights to sovereignty and self-governance. This could be in aspects of proper introduction, handling and application of the technologies.

Key activities include:

- Designing and conducting quantitative and qualitative empirical research in Kenya to collect data on technological risks in the context of food security
- Generating a variety of products such as journal articles, blogs and news items aimed at reaching an interdisciplinary audience including academics, practitioners and public stakeholders.

Results so far

The CABI project team has, to-date, finalized the study design and tools. Data from 319 farm households has been collected and interviews with 20 key informants have been held.

Approval for a relevant research license from the National Commission for Science, Technology and Innovation (NACOSTI) and ethical clearances from the University of Warwick (project lead) were obtained prior to conducting data collection. VSF Suisse provided technical support for data collection.

A feedback meeting was held involving representation from government ministries, county governments, parastatals and NGOs. The issue of awareness on the key technologies investigated – Genetically modified organisms and Antibiotics use in livestock – was underscored, and the need to enhance policy implementation, monitoring and surveillance to ensure technology uptake has no risks to food safety.

Donors

The British Academy

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The University of Warwick (Project Lead), University of Nairobi

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