

South Sudan: Management of Research, Teaching and Innovation in Agricultural Sciences

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1. Introduction

- Agricultural Sciences encompasses:
 - Laboratory research
 - Teaching
 - Innovation
 - Field activities
 - Business and entrepreneurial skills

2. Expectations

- National aspirations
 - nations are reliant on the capacity of their society to find solutions to problems, improve knowledge and transfer this knowledge into innovations that provide economic and social benefit.
 - however, there is considerable variation in national capacity in these endeavors, especially in developing economies.

- Why variations in capacity?
 - War
 - Political history
 - Wealth

3. Building Capacity

- This is closely linked to:
 - National Policies
 - Higher Education
 - Research
 - Innovation

- To build capacity the following are needed;
 - Special Knowledge
 - Special Skills
- These are required at two main levels in a nation:
 - A) Government
 - B) Higher Education (or tertiary institutions)

- A) Government

- Wide knowledge and skills:

- in understanding the consequences of decisions on funding levels, the methods of determining the distribution of funding: whether by block allocation or through competition-based mechanisms
 - in awareness of the feasibility and applicability of regulatory and reporting requirements.
 - in the complexities of international financial and intellectual property environments.

- B) Higher Education:

- A need to know:

- national and international policy settings,
 - funding and collaborative opportunities,
 - general trends in research, teaching and innovation,
 - institutional capacity, capability and performance.

- Maintaining and supporting strong institutional governance and oversight.

- Planning for the development and future operations of the institution, with the support of the staff and the governing body.

- Implementing institutional change, while recognizing:
 - the workforce and infrastructure requirements
 - the alignment of these with the strategic plan.

- Instituting and maintaining a robust research culture and ethos that supports integrity in research.

- Communication with staff, stakeholders, benefactors, communities and governments.

4. The Challenges

- In Government
 - Need to clarify vision to guide policies on science (Agriculture included), technology and innovation
 - Inadequate funding for research and Higher Education in general. In South Sudan no figures; in Africa, only 0.4% GDP spent on research, in other continent, 2.4 % is the average
 - Lack of adequate funding is compounded by lack of diversification in funding: no competitive grants or private sector involvement.
 - Short-term approach in the provision of expertise for agricultural education and development
 - Lack of close partnership between policy makers and local Higher Education in prioritizing agricultural research and innovation agendas

- In Higher Education

- Universities suffer from weak internal governance and management
- Leaders have inadequate skills to embed knowledge, enterprise and innovation into strategic plans and research programs
- Unaware of trends (e.g. no current journals)
- Low stock of scientists and leaders in research
- Low capacity to innovate
- Unawareness of the role of intellectual property rights in research and development
- Inadequate research infrastructure
- Low quality research outcomes

5. Way Forward

- Leadership training to develop knowledge, skills and capacity for policy formulation, management of research and innovation at both levels
- Means to study trends
- Improve overall institutional governance in Higher Education
- Encourage well-coordinated international and transnational partnership to provide opportunities for quality research that will increase external funding, and improve research infrastructure (both levels)
- Encourage close coordination between the policy makers and those from Higher Education institutions
- Government to increase the level of funding for research and teaching and provide more nuanced distribution system to take in performance and competition (inter- and intra-institutional)

- Institute change in curricula and pedagogical processes in Higher Education
- Develop a vision and strategic plan that is prepared in a participatory mode as a consensus-building process
- Take advantage of transition to embrace change and escape from strictures of tradition and vested interests: “a crisis is an opportunity not to be wasted” (*President, University of Maryland, USA*) .

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THANK YOU