



MZUZU UNIVERSITY

**MZUZU UNIVERSITY RESEARCH
AGENDA (2021**



**March 2021
Malawi**

1. BACKGROUND

It is becoming increasingly apparent that well-targeted and good quality research which addresses sectoral challenges is needed to inform policy and decision-making processes for sustainable development. Recognizing the importance of research at Mzuzu University, the Research and Publications Committee (RPC) and Research Ethics Committee (REC) were constituted according to the requirements stipulated in the Policy.

The purpose of this research agenda is to guide the conduct of research by academic, academic related and non-academic staff working at MZUNI to ensure that research efforts are addressing national, regional and global needs and priorities and that the conduct of research promotes effective collaboration and networking. The idea is to create an atmosphere in which research leads to effective teaching and in the same way teaching should inform research.

2. INTRODUCTION

Research has the potential to address many challenges that affect developing countries such as poverty, health, food security, education. Research is important in the development and productivity growth of any nation. Unfortunately, in Africa there continues to be little investment in research. Insufficient research is a major impediment to growth and development in Africa. Africa produces less than 1% of global research output (Ngongalah, et al., 2018).

The conduct of research in Malawi dates back to pre-independence era. Since then, the need for research has been growing in order to inform policy makers and all stakeholders in various sectors. However, the conduct of research faces a number of challenges among which include, limited institutional support, lack of awareness among researchers on some research outputs done by others, poor resources and infrastructure, weak private sector participation (National Agriculture and Natural Science Research Agenda, 2017-2022), there is not enough investment in research (Kumwenda et al. 2017), weak intellectual property protection mechanisms (Ngongalah et al., 2018), ineffective ways of disseminating research results, and few opportunities for collaboration and networking (Sawyer 2004; Kumwenda et al. 2017).

3. RATIONALE FOR DEVELOPING RESEARCH AGENDA

Research is a prerequisite for the success and credibility of any academic institution around the globe. Most studies that are conducted in Malawi do not contribute towards addressing national priorities as defined in various public

policy frameworks, strategies etc., hence, very little research findings tend to inform policy and programming.

4. GOAL AND OBJECTIVES OF RESEARCH AGENDA

The overall goal of the Mzuzu University Research Agenda (MURA) is to guide the conduct of research by academic, academic related and non-academic staff working at MZUNI and other stakeholders in the implementation of research activities to ensure that research efforts are addressing national priorities and that there is effective collaboration and networking in the implementation of activities.

Specific Objectives

The specific objectives of the MURA are to:

- Promote research in departments and research units that is responsive to the priority needs of Malawi.
- Facilitate the mobilization of resources for research needs at Mzuni.
- Promote multidisciplinary research and collaboration at Mzuni and beyond.
- Promote capacity for conducting research at Mzuni.
- Facilitate the transfer of appropriate knowledge and technologies to the primary and other industries
- Facilitate translation of research findings into policy and practice .

5. GUIDING PRINCIPLES

The implementation of the MURA shall be guided by the following principles as also reflected in the National Health Research Agenda and National Agriculture and Natural Sciences Research Agenda

- **Political will and commitment:** Undertaking meaningful research that addresses priority needs of Malawi requires adequate resources available through political will at all levels.
- **Demand driven research:** Members shall be encouraged to conduct research responsive to priority needs of Malawi.
- **Ethics, Human Rights and Law:** The dignity and rights of all research participants including vulnerable populations shall be promoted and protected as enshrined in the bioethics principles, Constitution of the Republic of Malawi and all relevant Malawi laws, national policies, regulations and guidelines as well as in tandem with international law.

- **Networking, public and private partnerships and collaboration:** Concerted efforts and strategic partnerships with public and private research institutions and with a cross-section of other stakeholders shall be promoted.
- **Multidisciplinarity and complementarity:** Research studies that are multidisciplinary and/or complementary in nature shall be promoted to enhance skills transfer, optimal usage of resources, and translation of research findings into policy and programmes.
- **Sensitivity to gender issues and needs of vulnerable populations:** Encourage fair participation of both genders and vulnerable populations in research taking into account their special needs, so as to reduce disparity in health care provision based on individuals' attributes.
- **Intellectual Property Rights:** Shall enable innovators to reap the rewards of their innovation ideas and the associated intellectual property (IP).

6. THE PROCESS OF DEVELOPING THE AGENDA

The need for research agenda to guide the conduct of research at MZUNI started with internal stakeholder consultations at Research and Publication Committee (RPC) meeting. The process further consulted key external stakeholders.

7. PRIORITISED RESEARCH AREAS

The prioritised research areas are reflected according to faculties and research units. Each prioritised area is aligned to sectoral needs as reflected in various policy documents. A detailed matrix of research areas linked to sectoral priority areas is attached in annex 1.

7.1. Key thematic areas of research in Faculty of Education

7.1.1. Education and Teaching studies

- Educational leadership, governance and reforms
- Cognitive and socio-emotional competence development in kindergartens, schools, higher education and adult life
- Teacher education and professional development

7.1.2 Teaching, Learning and Curriculum Studies

- Curriculum and instruction in specific subject areas
- Subject-specific teacher preparation and development
- Learners and learning

7.1.3 Inclusive Education

- Quality of inclusive education
- Support arrangement

- Curriculum adaptations

7.2. Key thematic areas of research in Faculty of Environmental science

7.2.1. AgriScience

- Sustainable agriculture and improved agroecosystems
- Agricultural Innovation Systems
- Sustainable Agrifood and Value chains

7.2.2. Built Environment

- Urban & Regional Planning
- Estates Management
- Land Surveying

7.2.3. Geoscience

- Water resources and management
- Characterisation of industrial mineral materials
- Urban development, disasters and management.

7.2.4. Fisheries and Aquatic Science

- Capture fisheries
- Aquaculture development
- Fish quality and value addition

7.2.5. Forestry and Environmental Management

- Forest Science
- Social Forestry
- Forest Engineering

7.2.6. Water Resources Management and Development

- Water Resources and Irrigation Water Management
- Water and sanitation governance
- Water Quality and Pollution Control

7.3. Key thematic areas of research in Faculty of Health science

7.3.1 Nursing and Midwifery

- HIV / AIDS
- Maternal, Child Health and Reproductive Health
- Non-Communicable diseases
- Nursing Education

7.3.2 Optometry

- Eye Care and Public Eye Health

- Optometry subspecialties

7.3.3 Biomedical Science

- Microbial diseases
- Non-communicable diseases (NCDs)
- Medical laboratory quality assurance

7.4. Key thematic areas of research in Faculty of Humanities and Social Science

7.4.1 History and Heritage Studies

- The Dynamics of History and Heritage in Malawi since 1964
- Gender and Development
- Climate and Ecological Change in Post-Colonial Malawi

7.4.2. Communications

- Crisis Communication
- Vocational Communication
- Public Relations Education

7.4.3. Information Sciences

- Research data management
- Records management and good governance
- Cloud libraries and user centered information

7.4.4. Theology and Religious Studies

- Gender and Development
- Public Theology
- Religion and the Environment

7.4.5. Governance, Peace and Security Studies

- Conflict Management and Peacebuilding
- Urban Governance and Democratization
- Diplomacy and Foreign Policy Analysis

7.4.6. Language, Cultural and Creative Studies

- Language and Development
- Oral Literature
- Literature and Politics

7.5. Key thematic areas of research in Tourism, Hospitality and Management

7.5.1 Tourism

- Sustainability
- Tourism development
- Tourism and hospitality policy

7.5.2 Hospitality

- Sustainability
- Service Quality
- Hospitality management and marketing

7.6. Key thematic areas of research in Faculty of Science, Technology and Innovation

7.6.1 Parasitology and disease vector control programme

- Epidemiological studies on parasitic disease vectors
- Control strategies of parasitic disease vectors

7.6.2 Biodiversity conservation and Management

- Conservation and management of biodiversity for environmental and human wellbeing
- Sustainable utilization of biological diversity
- Conservation and sustainable utilization of plant and animal genetic resources (Agro-Biodiversity)

7.6.3 Energy Systems

- Solar, Biomass and energy technologies for rural communities
- Solar PV, Solar thermal and Bioenergy systems
- Energy efficiency and conservation

7.6.4 Chemistry

- Material Science
- Environmental/analytical chemistry
- Municipal water cycle, rural community development and solid waste management
- Herbal Medicine and Pest Management

7.6.5 Mathematics

- Codes and Cryptography
- In-host and population models
- Biostatistics

7.6.6 Physics and Electronics

- Solid state physics and material science;
- Nuclear, medical and energy Physics
- Electronics

7.7. Key thematic areas of research in Library and Learning Resource Center

- Use of ICTs and mobile applications in libraries
- Adoption and use of open source softwares and applications in libraries
- Skill and knowledge development for the 21st Century information users

7.8. Key thematic areas of research in Center for Open, Distance and e-learning

- Management of ODeL
- Students Support Services
- Technology in ODL
- Curriculum and Instruction

7.9 Key thematic areas of research in Water and Sanitation

- Water
- Sanitation
- Hygiene
- Food safety

8.0 IMPLEMENTATION FRAMEWORK

8.1. Coordination of research activities

Mzuzu University Research Policy provides that all research activities shall be coordinated by Directorate of Research while research activities are conducted by members of staff and students in various faculties and research units. In line with prioritisation of thematic areas, faculties/departments/research units will form research groups based on the themes and each group will be led by some senior researchers. The group should provide opportunity for upcoming researchers to learn from seniors (*mentorship*), seek research support from MZUNI Directorate of Research, write proposals for research funding and collaborate with other research teams within and outside Mzuni.

8.2. Dissemination of research activities

The dissemination of research outputs and technologies is part and parcel of the implementation process. It needs to be built in from the research proposal stage through to the budgeting system and implementation of any research programme. The Directorate of Research in conjunction with the

faculties/departments and research units will be responsible for arranging dissemination of research findings to the public. To ensure that this is achieved, the following guidelines shall be followed:

8.3 Monitoring and evaluation of the research agenda

Research requires an effective monitoring and evaluation (M&E) system that enables the assessment of performance, resource utilization, impact and effectiveness of a programme. It is, therefore, important that a proper M & E system be implemented to ensure proper accountability at institutional, sectoral, national, regional and global levels.

The Directorate of Research shall be responsible for monitoring and evaluating research activities at Mzuni. This will be done in order to strengthen the M & E system to be instituted by the various research groups. The following shall be the means by which the Directorate will achieve proper monitoring of research activities:

The MURA will be reviewed after every year in line with the Mzuzu University Research Policy. This will provide opportunity to adjust the focus and maintain a standing point for the research agenda at Mzuni. The review will take into consideration recommendations, deliberations and inputs from monitoring and evaluation reports. The methodology for identifying research priorities will also be reviewed and revised if necessary to ensure adequate representation from changes in stakeholder profile.

8.4. Financing of the Research Agenda

Financing of research in the identified priority areas is critical for the realisation of the goal and objectives of this Agenda. Stakeholders are, therefore, implored to support the financing of research geared towards addressing priorities outlined in this Agenda. The following mechanisms of financing this Agenda shall be pursued:

Institutional funding

Mzuni through Directorate of Research budget shall commit direct resources at various levels to support the undertaking of research in the identified priorities. This will be done through call for proposals (small grants) that will be approved by Research and Publication Committee (RPC).

Research Grant Scheme

Research groups intending to undertake research in the identified priorities shall be encouraged to take advantage of the existing national and international

research grant schemes which exist to seek support through proposals and other means.

Collaborations and Partnerships

Public and private partnerships shall be an important vehicle for nurturing resource mobilisation for research in the priority areas. Researchers in public and private sectors shall be encouraged to pursue a spirit of collaboration in undertaking research. Deliberate efforts in cultivating corporate social responsibility to support the financing of the Agenda shall be encouraged and sought after by researchers at various levels.

Research groups shall also be encouraged to foster partnerships with other institutions outside Malawi for collaborative research.