

UNIVERSITY OF DAR ES SALAAM



RESEARCH POLICY AND OPERATIONAL PROCEDURES

Third Edition

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Foreword

The University of Dar es Salaam (UDSM) has an obligation to contribute to the national social and economic development through research, teaching and other allied services to the community. UDSM is recognized as one of the most capable research institutions in Tanzania with relevant skills, requisite research and teaching facilities and the mandate to generate new knowledge through research. Despite its competent human and physical resources, UDSM is confronted with a number of challenges that have to be overcome. One such challenge relates to access to and availability of funding to its various programmes. UDSM is likely to continue to compete with other institutions for dwindling financial resources from the Government. Nevertheless, the University will continue to contend for its rightful budgetary share for research. The second major challenge is to effectively utilise the available human and physical resources to maximise research impact at national and international level.

It is fundamental that UDSM research contribution focuses on areas of national development priority in an effective manner. This task has to be performed in coordination with other stakeholders at national and regional level. The UDSM will continue to be proactive in the process of defining national development objectives, direction and processes.

Effective contribution in the national development initiatives calls for an increased internal efficiency in research management. This requires clear mechanisms for performing research coupled with transparent internal research administration processes. It is the objective of the Third Edition of the UDSM Research Policy and Operational Procedures to continue refining the existing benchmarks for doing research and other related research regulatory and management practices. The Policy addresses a number of issues including those related to the identification of research priorities and matching these with internal capabilities, funding sources and mechanisms, planning and management of the research process, quality assurance, research collaboration, interdisciplinary research, ethical issues in research, dissemination of research outputs, intellectual property on these outputs and monitoring of research effectiveness. This Third Edition has drawn lessons and experiences from previous editions and best research management practices as they are traceable in other institutions with mission similar to that of UDSM.

This document - Research Policy and Operational Procedures - Third Edition for the University of Dar es Salaam addresses internal and external customers' needs either as research collaborators, funding agencies or research clientele thereby enhancing research performance. By so doing, it is hoped that UDSM will significantly improve its research landscape and thereby play its role in ensuring that Tanzania keeps pace with the global revolution in knowledge production, exchange and utilization. Furthermore, the University will continue to retain its place as one of the most prestigious research institutions in Africa and an attractive site for research and development that provides enormous opportunities for researchers and innovators. Henceforth, UDSM will not only be a pace-setter in producing breakthrough knowledge, but also instrumental in disseminating new knowledge to the community, and provide training for the researchers of tomorrow.

Prof. Rwekaza S. Mukandala
Vice Chancellor

June 2015

Executive Summary

The Government of the United Republic of Tanzania published a Research and Development Policy in 2010. The document sets the general framework for the conduct of research in Tanzania. On the other hand, the University of Dar es Salaam developed a first edition of its Research Policy and Operational Procedures in 1998. Following the revision of the First Edition, a Second Edition was published in 2008 after being approved by the University Senate. The publication of the Third Edition of the University of Dar es Salaam Research Policy and Operational Procedures has been necessitated by a number of reasons. Firstly, to align the University's Research Policy with the National Research and Development Policy; secondly, to incorporate relevant new developments at national and international level; and thirdly, to accommodate changes in recent organisational set-up at the University which introduced a new office of the Deputy Vice Chancellor responsible for Research.

In line with the Tanzania's Vision 2025, the National Research and Development Policy, 2010 recognises the essential role of research in the national development. The Policy acknowledges that scientific advances and technological innovations are the driving forces for economic growth and sustainable development and that there is need for adopting multidisciplinary approaches, including social sciences or humanities, in research and development.

Further, capacity building in university research has been recognized as a fundamental element for continuing to revitalize African Universities. This is necessary to enable universities to generate new knowledge for themselves, produce a stream of academic staff necessary to sustain the university enterprise and teach students essential analytical and problem-solving skills. Neglecting the need to strengthen university research capacity within the university may undermine future economic and social growth at the individual, institutional and national levels. The government and universities have to make well-considered and highly strategic choices as to where and how best they invest the very limited resources available to foster research capability.

As stated at the outset, the University of Dar es Salaam, being one of the premier research institutions in Tanzania, has an obligation to enhance its research management and performance. Strengthening and improvement of research activity is necessary to continuously address the key measures of performance – quality, relevance, internal efficiency and effectiveness. The UDSM Research Policy aims at addressing these core strategic issues. However, there are numerous challenges to be addressed. These include:

- **Low Level of Research Funding:** Research funding level in Tanzania is still low, leading to weak research infrastructure and facilities. The level of funding is estimated at less than 1% of the GDP as opposed to the 3% of GNP for developed countries. The National Research and Development Policy 2010 sets a minimum target of 1% of the GDP accessible through the National Research Fund;
- **Inadequate human resource base** (both in quality and quantity) for the development and management of technological change. The critical minimum human resource capacity with relevant skills is still to be attained. It is necessary to dialogue with the government to provide strategic research scholarship support at postgraduate level to cater for this deficiency;
- **National research support environment and culture** is still weak despite the setting up of the National Research and Development Policy, 2010. Some public authorities tend to view research as 'academic' and too slow in producing results. It is necessary to aim at high and quick impact research projects.

The second edition of the UDSM Research Policy published in 2008 has been in use since then. Several limitations were observed in the course of its application. Some of the key areas that need further strengthening and have been emphasized in the current Edition of the UDSM Research Policy include the following.

- The need for the Research Policy to determine a formal mechanism of solicitation of research funds (e.g. from the Ministry of Education and Vocational Training (MoEVT), Tanzania Education Authority (TEA), Tanzania Commission for Science and Technology (COSTECH), private sources and international sources) hence necessitating the establishment of a unit responsible for identification of sources and facilitation of solicitation of such funds from these sources;
- Introduction of a separate research budget line for all academic units, from departmental level, coordinated, presented and administered by the Directorate of Research;
- Making a case for postgraduate research scholarships aimed at decreasing the critical shortage of research and development oriented human capital in the country;
- Establishment of a quality assurance system for the University of Dar es Salaam coupled with rewarding research performance for academic units as well as individuals. This would however require a clear framework for defining and measuring research output as well as rewarding performance for purposes of enhancing productivity; and
- Placing emphasis on fostering research centres that encourage mentorship, prioritises, and strengthens collaborative and multi-disciplinary research within the University and with external institutions. It is also necessary to enhance research skill of academic staff through research training programmes.

The development of the UDSM Research Policy has taken on board other related UDSM developments especially the establishment of the Office of DVC – Research. The research policy statements are presented in the following twenty areas:

- **University Research Priorities:** Sets guidelines with respect to the role of UDSM in defining and implementing the national research and development policy in collaboration with other national stakeholders.
- **Research Funding:** Provides a reference frame for sourcing of research funds. The main source of research funds shall still be the Government of Tanzania. The guiding research funding benchmark is at least 1% of GDP in line with the National Research and Development Policy, 2010.
- **Research Planning and Administrative Capacity Building:** Sets guiding philosophy in strengthening and facilitating the research process at individual level, research centres at individual academic unit level all the way to institutional level within UDSM.
- **Internal Procedures for Approval, Control and Monitoring of Research Process:** Create procedures that ensure that staff are aware of the national research agenda and that research proposals at their respective academic disciplines give priority to projects within the national research agenda when approving research funding. Further, the UDSM shall put in place operational procedures for the implementation of the research process.
- **Collaboration, Partnership and Networking in Research:** Promote collaboration, partnerships and networking in research where there are potential benefits to the University.
- **Research Training:** Research training represents one of the most significant areas of national investment in research and development, and that research students are a major resource, underpinning much of the leading edge research necessary for meaningful application in national development. The University shall make a case for increased

government funding of research degree programmes through specific budgetary allocation for scholarships at Masters and Doctoral degrees as well as post-doctoral levels to be conducted at the University of Dar es Salaam.

- **Research Quality Assurance:** It is necessary to develop and disseminate research quality guidelines. UDSM needs to ensure that these are used for application review, performance monitoring and evaluation. Further, the UDSM shall institute a peer review system for research performed at the UDSM at an interval of not more than five years.
- **Approval of Research Projects:** Internal procedures for approval, control and monitoring of research projects provides the guiding framework for the approval, control and monitoring of research process and outputs. Tools for internal research administrative process are also proposed. In principle, all research proposals are subjected to the UDSM approval process before being accepted for funding irrespective of the source of funding, and researchers are required to enter into a research contract with UDSM when the project has been approved irrespective of the source of funding.
- **Research Performance and Rewarding:** A transparent mechanism for research performance measurement shall be established. The mechanism shall be applied to evaluate research performance of individuals, academic units and multi-disciplinary and inter-disciplinary research teams on an annual basis. Rewarding of research performance at individual, academic unit and research teams each year shall be effected on the basis of set criteria.
- **Contributions to the Research Administrative Infrastructure:** In order to strengthen the research administrative capacity, research projects shall be required to contribute at least 12% of the total project research costs to the institutional overheads, which shall be shared at departmental, College, and University levels.
- **Sharing of Research Resources:** This is aimed at creating transparency in the allocation and utilization of research resources, and creating a mechanism of sharing research resources.
- **Staff Remuneration:** Remuneration shall aim at making research as attractive as consultancy as well as retaining quality staff through rewarding excellence; the need for research remuneration is recognized. Reward should foster teamwork and collaboration. The implementation of this shall be as provided for in the Human Resources Management (HRM) Policy.
- **Research Support Environment:** In order to enhance research performance, regional and international collaboration (global networking) shall be encouraged and facilitated. Internally, research administration skills shall be strengthened through specific actions.
- **Dissemination of Research Results:** In this respect, UDSM shall ensure that the dissemination of research results is done in the most effective way and shall always be in tandem with the ideals envisaged under the UDSM Intellectual Property Policy of 2008. In particular, local dissemination of research results shall be encouraged. Further, each college/school/institute/centre shall conduct at least one research workshop annually, which will review research plans, progress and outputs. Annual research workshops shall also include presentations of academic papers, in which case, subject to the availability of financial resources, key stakeholders shall also be invited to these workshops. Such dissemination shall be done in close collaboration with the Directorate responsible for commercialisation and knowledge exchange.
- **Research Ethics:** The University shall continue to strengthen Research Ethics Policy with the aim of enhancing awareness of ethical principles and issues in the conduct of

research throughout the University. It shall be expected that all the research management officials and participatory organs at all levels shall endeavour to ensure that researchers adhere to ethics.

- **Environmental Considerations:** The University has an obligation to ensure that research conducted complies with environmental laws and regulations in the country. It shall be expected that all the researchers, management officials and participatory organs at all levels shall endeavour to ensure that researchers adhere to environmental laws and regulations.
- **Proprietorship of Research Outputs:** Unless otherwise expressly stated, ownership of research results/outputs rests with UDSM. Provisions of the UDSM Intellectual Property Rights Policy (2008) shall apply.
- **Disposal/Redeployment of Research Project Resources:** In principle, all equipment purchased within a research project are the property of UDSM; the policies and procedures governing the disposal of University property (obsolete or otherwise) shall be applied. However, the unit/researcher that had these resources shall be given priority in reallocation of such research resources when the project is completed.
- **Effectiveness of Research:** It is important that UDSM has a feedback mechanism to assess research effectiveness as well as feed into the process of refining the research agenda.
- **Research Culture:** For the society to advance, UDSM shall contribute towards fostering and enhancement of research culture within and outside the University through training, and promoting research teamwork.
- **Application and Review:** The Research Policy shall apply to all members of UDSM, visiting scholars and researchers, graduate and undergraduate students who are involved in research on or off campus. Further, the UDSM Research Policy shall be subject to Review after every five years.

The policy statements are to guide the general conduct of research within UDSM. It is necessary for the specific policy intentions to be operationalised by relevant offices within the University. The strategies for the implementation of the policy and the core operational procedures are presented in Chapter 5. The key strategy is to strengthen the Directorate of Research. Specific tools for the implementation of the Research and Development Policy are presented in Annexes I-X. These shall be reviewed regularly to accommodate the operating environment.

UDSM is confident that the Research Policy will enable it to meet these broad objectives in order to address its mission in the short, medium as well as the long run.

Prof. Cuthbert Z. M. Kimambo
Deputy Vice Chancellor - Research

June 2015

1.0 Introduction

1.1 Background

University of Dar es Salaam (UDSM) is one of the premier research institutions in Tanzania. Its research objectives and activities have to be constantly reviewed with the aim of aligning them with national, regional and international development objectives. UDSM has a key national role to play in the advocating for a strong research and development system. UDSM also has to be a good role model with regard to the generation of useable knowledge for development of the country in addition to such research based knowledge contributing to scholarly debate and good teaching in support of national development plans.

The Tanzania Five Year Development Plan (2011) set and targeted five core priorities within its strategy, for releasing the latent growth potentials of the country to enable Tanzania achieve its Vision 2025 and other related national development plans. The priorities include:

- i. Infrastructure, particularly large investments in energy, transport infrastructure (port, railway, roads, air transport), water and sanitation and ICT;
- ii. Agriculture, focusing on the transformation of agriculture for food self-sufficiency and export, development of irrigation particularly in selected agricultural corridors, and high value crops including horticulture, floriculture, spices, vineyards etc.;
- iii. Industrial development, specifically targeting industries that use locally produced raw materials such as textiles, fertilizer, cement, coal, iron and steel, as well as development of special economic zones using public-private partnerships;
- iv. Human capital and skills development, with an emphasis on science, technology and innovation; and
- v. Tourism, trade and financial services.

Efficient and effective pursuit of the set priorities to generate solutions for growth and reduction of poverty is dependent on having in place and using well-trained and skilled human capital in all relevant fields. As envisaged in the National Research and Development Policy (2010), research has an important role of advancing and refining knowledge, providing solutions to problems facing the society and ensuring competitiveness not only in the local but also within the wider international context.

UDSM has an essential role for national capacity building and further development of Tanzania through training, research and consultancy. The recognition of this role led to the establishment of the Research and Publications Committee of the University College of Dar es Salaam in 1964 at the time when the College was part of the University of East Africa. The Committee then maintained good research that enriched the whole life of the College. Thus, one of the main responsibilities of the College Research and Publications Committee was to initiate fundamental research into East African and particularly Tanganyikan topics. The College then realized that subject syllabuses were not likely to be taught properly until the results of the research were made available; academicians were likely to be effective if they were allowed to conduct research into topics with direct relevance to what they were teaching. In addition, the College was not likely to attract new qualified staff if it did not offer them opportunities to conduct research.

The Committee resolved that research at the College was to be carried out by its own staff members, academic visitors, research fellows appointed by the College and who proposed their own research topics, and research fellows appointed to pursue a particular research

project sponsored by the College. Two academic units, Economic Research Bureau (ERB) and the Bureau of Resource Assessment and Land Use Planning (BRALUP), were established in the late nineteen sixties with the fundamental responsibility of conducting research.

In 1998, the University of Dar es Salaam established a Directorate for Research and Publications as part of the Institutional Transformation Programme (ITP) to administer and coordinate research including external linkages on all matters related to research. This establishment was in line with the First Edition of the UDSM Research Policy approved by University Council in the same year. Since its establishment, the Directorate has had a number of achievements based on the Research Strategic Plan prepared early after it was established. This document was widely circulated and it guided the preparation and management of research activity at the University of Dar es Salaam.

One of the key objectives of the Research Policy was to guide individual units on good research management practice including focusing their research effort and resources in areas of national and international priority and significance. The Research Directorate has published several research bulletins in line with the Research Policy. Furthermore, the Directorate has continued to play a central role in sourcing and managing of research funds.

Currently, research is carried out at departmental/institute/centre level. Research output is critical for the development of the relevant local content and advancing frontiers of knowledge. In the existing structure of UDSM, the Senate Research Committee has the responsibility of approving and monitoring all Research projects within UDSM. The Committee receives proposals and reports from respective colleges/schools, and institutes/departments/centres after being scrutinized by respective lower level organs and departments. Due to this long procedure, in some cases, a proposal (or report) takes a long time before it is tabled at the University level. There is need therefore to enhance efficiency in the approval mechanism.

1.2 Limitations of the UDSM Research Policy, 2008

The Revised (2nd Edition) UDSM Research Policy and Operational Procedures (2008) approved by the University Council has been in operation for nearly five years now. Since 2008, a number of changes and new developments at institutional and national levels have taken place necessitating a review of the Policy. There has also been a continued growth in numbers and types of research activities that are conducted by staff and postgraduate students at UDSM. This has meant that different UDSM units have had to operate differently in cases where the Research Policy was silent or otherwise inadequate. In addition, those responsible for administration of research at different levels have found themselves at the crossroads with respect to handling of matters such as intellectual property rights ownership, research ethics, establishment of the research centres, research associates, post-doctoral scholars and the organization structure of the UDSM. The Office of the Deputy Vice Chancellor responsible for Research as well as some of the structures at national and regional levels were not accommodated in the 2nd Edition of the Research Policy. The revised Research Policy has also to accommodate research provision in UDSM Vision 2061. Furthermore, National Research and Development Policy 2010, MKUKUTA-II, HEDEP, regional (East African) integration issues and other related developments, opportunities and challenges are some of the more recent developments. In the course of identifying areas that need further attention, the following aspects have been addressed in the Third Edition of the Research Policy:

- i. Setting up a formal mechanism for solicitation of research funds;

- ii. A philosophy and tool for lobbying from government for increased budgetary allocation in line with research output performance of academic units has to be included – for example, the more the publications, the more funds allocated for research.
- iii. Introduction of a separate research budget line for all academic units; from departmental level coordinated, presented and administered by the directorate responsible for research;
- iv. Establishment of a unit responsible for identification of sources and solicitation of funds for research from various sources;
- v. Conduct of annual research workshops at College/School/Institute level – the output of which shall be proceedings that will contain information on College/School/Institute/ research plans, on-going projects, completed projects and dissemination plans including publications for the year;
- vi. Development of a follow up mechanism for the implementation of research agenda;
- vii. Inclusion of the quality assurance system for research at the University of Dar es Salaam;
- viii. Decentralising research proposal approval process, articulating its merits and demerits;
- ix. Inclusion of a statement on research ethics;
- x. Setting up of a mechanism for rewarding research performance for academic units as well as individuals;
- xi. Inclusion of a generic framework for defining and measuring research output for the purpose of quantifying research output as well as rewarding performance for purposes of enhancing productivity;
- xii. Establishment of a website linked to relevant College/School/Institute/ academic unit websites dealing with research;
- xiii. Encouraging, prioritising and strengthening collaborative and multi-disciplinary research within the university and with external institutions;
- xiv. Enhancing research skills of academic staff through research training programmes; and
- xv. Enhancing efficiency and effectiveness of research administrators through regular training of research administrators.

2.0 Research within the Context of the UDSM Vision 2061 and Corporate Strategic Plan 2014–2023

2.1 Revisiting the Vision and Mission of UDSM

The formulation of a Research and Development Policy within UDSM should be within the context of its revised mission and relevant strategies to attain it. The University of Dar es Salaam was established in 1961 as a College of the University of London and remained so until 1963 when it was a constituent college of the University of East Africa. It advanced and became an independent University of Dar es Salaam (UDSM) in 1970. UDSM is currently guided by Vision 2061:

“To be a leading Centre of Intellectual Wealth spearheading the quest for sustainable and inclusive development.”

The Mission of the University is:

“To advance the economic, social and technological development of Tanzania and beyond through excellent teaching, research and public service using talented and motivated staff and students.”

The objects and functions of the University have been developed to address the vision and mission stated. Although the functions are all intertwined within the three core functions of education and training, research and public service, the specific functions that address research are as follows:

- i. To assume a leading role in the responsibility of the university education and make the provision for centres and places of learning, education, professional or vocational training and research;
- ii. To excel in knowledge and human resources capacity building by ensuring a balance between quality and quantity;
- iii. To stimulate and promote intellectual, cultural, scientific and technological development;
- iv. To promote economic, political, social, cultural, scientific and technological research with particular reference to the interest of mankind; and
- v. To establish mutually negotiated, beneficial and durable links within institutions of learning and research nationally, regionally and globally.

This Research Policy embraces these institutional ideals and functions. Furthermore, research has to be relevant to developmental responsibility addressing national or societal problems with immediate or long-term impacts. In this respect, UDSM research activities have to constantly be aligned with national, regional or even global development direction. The research agenda of UDSM has therefore to be in line with the national and regional development strategy.

2.2 Strategic Issues in Research

Potentially, UDSM is one of the most capable institutions in the country with a mandate to generate new understanding through research. The roles of UDSM in research, evaluation, transfer of knowledge, and technology development are therefore critical to national social progress and economic growth. The basic UDSM human resource potential for this is in place but needs to be strengthened and sustained to cope with emerging research opportunities

and challenges. In the academic year 2010/11¹, UDSM, including its schools and campus colleges and its constituent colleges (DUCE and MUCE), had over 1,484 academic staff with 522 in the rank of professors, associate professors, senior lecturers or lecturers. Over 543 of these had PhDs in various academic fields, with the majority of these at the main campus². This is a significant academic human resource potential of national significance.

In order to fully utilize the human resources potential, there is need for full involvement of staff during research planning and implementation. Staff should be required and facilitated³ to prepare research proposals. Further, there should be a comprehensive mechanism for appraisal and evaluation of research functions annually. To make research more relevant, the appraisal and evaluation should analyse the linkage between teaching, research and consultancy. A major challenge is how to make research nearly as attractive as consultancy. Research funding is still a major bottleneck. Ideally, the government ought to assume a central role in funding research. However, the truth of the matter is that a dismal budgetary allocation is made for research. While UDSM continues to seek other alternative (internal and external) funding sources, it is important to continue to dialogue with the government for increased research funding. This could as well be in form of research scholarships similar to those offered by COSTECH. The Ministry of Education and Vocational Training sub-master plan indicates that there will be established a unit at national level that will be responsible for mobilization and allocation of research funds to all research institutions as a measure to promote research in the country. UDSM will have to be proactive if it is to benefit from such an initiative.

Other issues of strategic importance include:

- i. Strategic involvement of UDSM in shaping national and regional development objectives;
- ii. Capacity building and expansion through capacity utilization;
- iii. Evaluating performance through quality assurance system;
- iv. Emphasizing, institutionalizing and facilitating dissemination / sharing of research results;
- v. Establishing research centres and gradually transforming these into research centres of excellence (RCEs);
- vi. Strengthening research methodology courses at both undergraduate and postgraduate levels;
- vii. Strengthening, upgrading and modernizing laboratories; and
- viii. Enhancing research dissemination through national and international research reports and journals.

Some of these strategic issues have also been taken on-board the revised UDSM Research Policy. It has to be stated however that the UDSM Five Year Rolling Strategic Plan (2014/15-2018/19) drew a clear separation between contracted and other research at operational level. Contracted research is to be run under commercial principles and policies within the division of knowledge exchange - contracted research, outreach, continuing education, consultancy and services currently under the DVC-Rs. This policy document does not therefore include operational policy and procedures for contracted research.

¹ Latest figures may differ.

² DUCE and MUCE had only nine staff members with PhD qualifications.

³ UDSM to encourage establishment and strengthening research centres and research centres of excellence in proposals writing. Also from time to time, UDSM may strategically identify groups of high profile senior and potential junior researchers, who do not belong to any RC, reward, facilitate and request them to produce fundable research proposal.

2.3 Research Quality Assurance

The theme for the UDSM Corporate Strategic Plan 2014–2023 emphasizes on quality outputs. Further, quality is not static; it is to be continuously improved through the adoption of best practices so as to continue meeting the ever-increasing demands of the stakeholders. Key stakeholders include those providing funds, researchers, research administrators, and users of research outputs.

The approach necessary to management of research has to ensure that all research related activities are planned and systematic actions are implemented to provide adequate confidence that a research output will satisfy the specified requirements for quality. QA relates to how UDSM satisfies itself that the structures and mechanisms for quality management are effective and that they promote the enhancement of the quality of research to a specified level of standard.

This is the essence of Research Quality Assurance System (ReQAS) for the University of Dar es Salaam. This conceptual framework is depicted in Figure 1 below. It is hypothesized here that the initial step in the process is increased research resources that will thereafter provide a meaningful impact on the other two. This assumes that the basic human resources and expertise exist, and that their continued utilization shall lead to human resources expansion as the research volume and quality improves.

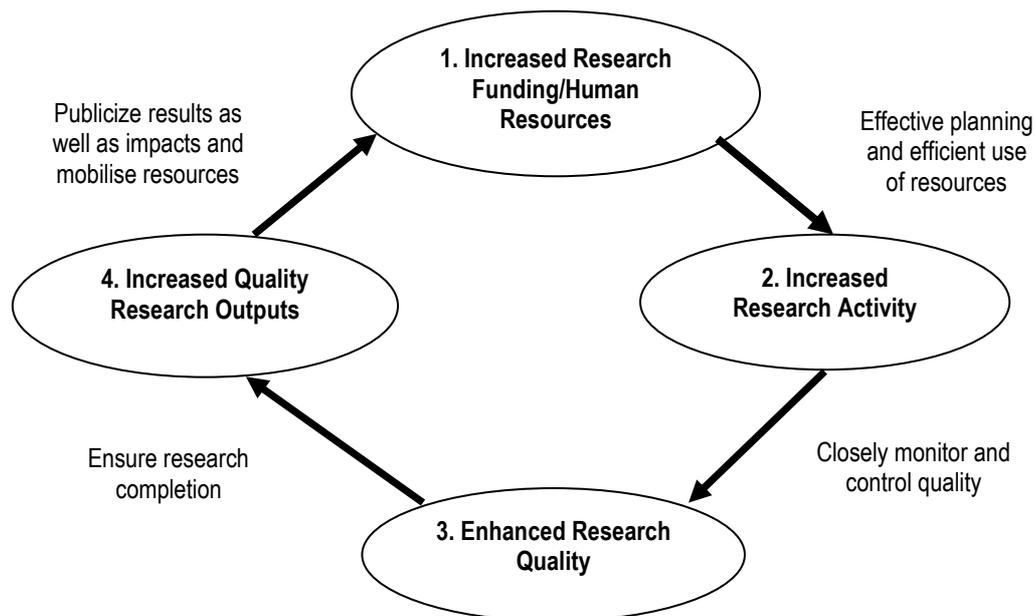


Figure 1: Research Quality Management Cycle

Based on what is depicted in Figure 1, it is therefore imperative that research funding coupled with enhanced recruitment / retention of key human resources is in place if the University of Dar es Salaam has to have any meaningful research impact.

3.0 The Objectives of the Research Policy

3.1 The Fundamental Goal

The fundamental urgency for standardization of procedures arose out of the need for coordinated decentralization leading to increased internal efficiency and effectiveness. For this matter, the UDSM Corporate Strategic Plan 2014–2023 continues to place emphasis on the need to have standardization of operations and procedures (i.e. clear policies and operational procedures) governing its inputs, processes and outputs. The Research Policy has to serve both internal and external stakeholders. Also, it has to serve members of UDSM staff as researchers as well as meet internal administrative requirements. Further, it has to be clear and acceptable to the external partners, either as research collaborators, funding agencies or target customers.

3.2 Objectives of Research Policy

The UDSM Research Policy is based on considerations made in the preceding sections and has attempted to cover the whole of the research process, from the need for prioritisation of research activity to evaluation of research effectiveness. The following are the major research policy objectives:

- i. To provide guidance on sound research management and good research practice with respect to issues such as adequate motivation and reward for conducting research, intellectual property ownership, research ethics and related issues.
- ii. To provide a mechanism of ensuring that the research programmes address the University Vision, Mission, Objectives and functions articulated in the UDSM Charter (2007) and other University documents, including any of their revised versions, as well as to address national development objectives and priorities;
- iii. To provide for modality of research coordination system at all levels (institutional, national, regional, as well as international level);
- iv. To introduce a research quality assurance mechanism;
- v. To ensure adequate budgetary allocation and/or funding for research activities and to set and strengthen mechanisms for increased funding share from other sources other than the government⁴;
- vi. To strengthen institutional capacity for strategic, technical and operational planning, budgeting and control for research;
- vii. To set up a mechanism to ensure that academic staffs attain the desired mix of output – research, teaching and consultancy – to achieve the level demanded by the University mission. In order to achieve this mix, it may be necessary to remunerate staff engaged in research, to make it as attractive as consultancy;
- viii. To encourage internal, national, regional and international collaboration – institutional, national, regional and international research networking;
- ix. To enhance marketing skills of the university and its academics so as to make full utilization of the research expertise to address the needs of both the public and private sectors. This is also in view of the increasing competition for the scarce research funds available;
- x. To minimize unfavourable environmental impact of research projects;
- xi. To ensure dissemination of research results through regular participation in relevant fora at national/regional and international levels; and

⁴Including collaborative research, research chairs, research centres/centres of excellence, research associates, postdoctoral awards etc.,

- xii. To commercialize research results, including intellectual property rights (IPR).

The achievement of these objectives relies on the successful implementation of the UDSM relevant policies.

4.0 The Research Policy

The **UDSM Research Policy** has been drawn in line with the key objectives as follows:

4.1 University Research Priorities

In order to address national and regional development needs as reflected in the National Research and Development Policy, 2010 and in line with UDSM Vision 2061 and the Draft of UDSM Five Year Rolling Strategic Plan 2014/2015–2018/2019 (see Extract in Annex I), it is necessary for UDSM to work closely with other stakeholders in order to influence both national and regional policies and priorities. In this regard, UDSM shall:

- i. Adopt a proactive role in influencing the national/regional development objectives and priorities and therefore the research agenda in relevant sectors in close collaboration with other stakeholders;
- ii. Define relevant research programme for the different Institutes, Schools and Colleges in consultation with staff at departmental level. These have to be in line with national development objectives and priorities, relevant international trends and available capacity at UDSM;
- iii. Require the research programme developed to be approved by the Senate Research Committee;
- iv. Introduce University annual research workshop that will receive and review progress made by each College/School/Institute/Centre in the implementation of the research programme;
- v. Seek to participate in relevant national and international fora for the implementation of the research programme;
- vi. Develop and review the research programme every five years with the objective of ensuring relevance of the research thrust;
- vii. Ensure that basic research receives an appropriate priority in the development of research agenda; and
- viii. Set up the institutional framework for the establishment and operation of research centres and centres of excellence within the University of Dar es Salaam.

4.2 Sources of Research Funding

Funding remains the most important factor in research performance. It is recognized that for sustainability and relevance, main source of research funds shall still be the Government of the United Republic of Tanzania. The guiding research funding benchmark is 1% of GDP in line with the provisions of the Article 3.6 of the National Research and Development Policy 2010. In this regard, UDSM shall:

- i. Contend, in collaboration with other research institutions, for an increased share of national financial resources allocated for research. One percent of the GDP shall form the target benchmark in line with the National Research and Development Policy 2010;
- ii. Advocate for performance-based research funding from the government. Such funding could take into account the success in attracting research students, in attracting research income from diversity of sources, and in the quality and output of its research publications;

- iii. Introduce a separate budget line for research funding for all academic units from departmental level coordinated and presented by the directorate responsible for research to higher organs within the University;
- iv. Continue to solicit research funds from sources other than public sources including international and local sources, both public and private. Solicitation of funding will be encouraged and facilitated at individual, centre, departmental, institute, school, college and university levels;
- v. Provide general information on possible sources and modes of research funding from within and outside the University on regular basis;
- vi. Review from time to time the appropriateness of the existing structure for the directorate responsible for research; and
- vii. Encourage and facilitate the establishment of professorial research chairs.

4.3 Research Planning, Management and Capacity Building

Research has to be performed within a framework, which defines among others, targets, responsibilities and indicators. A close coordination and monitoring of research activities should be done under established plans. UDSM shall therefore:

- i. Strengthen and equip a core office responsible for the overall research coordination at the University level;
- ii. Facilitate the establishment/strengthening of research administration infrastructure linking the Directorate of research with colleges, schools, institutes or departments. The administrative infrastructure shall aim at facilitating the research process and creating transparency in the whole research activities;
- iii. Ensure that staff are fully involved in the research planning process and maintain a good balance between teaching, research and consultancy;
- iv. Strengthen the capacity for research planning and management at all levels;
- v. Create a mechanism by which academic staff members are motivated to conduct research; and
- vi. Create research centres in each academic unit.

4.4 Internal Procedures for Approval, Control and Monitoring of Research Process

UDSM needs to put in place an operational mechanism of conducting research such that there is uniformity in the process. UDSM shall therefore:

- i. Ensure that staff members are aware of the national research agenda and participate in translating it into research agenda of their respective academic disciplines.
- ii. Give priority to projects within the main research agenda when approving research funding. Research proposals have to demonstrate that they are within the approved agenda.
- iii. Follow one general framework which guides the preparations and approval of research projects, as recommended in Annex II. The framework addresses the following issues/processes:
 - Initiation of a research project;
 - Formats of research proposals (a sample format is included in Annex III);
 - Scrutiny and approval process for research proposals. This shall focus on quality, relevance, need, soundness and resources requirements (including financial resources). This will clearly spell out the roles and powers of different units within

- the relevant University administrative hierarchy (a sample research proposal evaluation form is included in Annex IV);
 - Planning and budgeting guidelines, including applicable rates for cost estimates.(a budgeting format is included in Annex V);
 - Financial regulations governing financing of research;
 - Procurement of equipment and consumables; these have to be within relevant University procurement policies and procedures and, in principle, all equipment is the property of the University of Dar es Salaam;
 - Registration of research projects – whether internally or externally funded;
 - Standard contracts between the funding agency, the University and the researcher(s) (an example of a research contract is included in Annex VI);
 - Progress reporting requirements, control and monitoring (an example of a research progress report format is included in Annex VII);
 - Regulations regarding employment within research projects; these have to be within approved HRM policies; and
 - Formats for research reports (an example of such format is included in Annex VIII).
- iv. Ensure that research proposals are subjected to UDSM approval process before being accepted for funding;
 - v. Enter into a research contract with the researcher when the project has been approved. Where there is an interest of joint ownership of research results/output, the contract shall be between the researcher as one party and joint financiers as the other party;
 - vi. Scrutinize all contractual requirements before a proposal is submitted to a prospective agency for funding. Hence, all funds obtained through own initiative must be declared to UDSM; and
 - vii. As far as practically possible, financier proposed contract formats should only be signed where UDSM interests are safeguarded.

4.5 Collaborative Research

UDSM shall:

- i. Promote collaborative research where there are potential benefits to the University;
- ii. Recognize two forms of collaboration: external collaboration is one involving a university academic unit and an entity or entities outside the university, and an internal collaboration involving two or more academic units within the University;
- iii. Promote external collaboration that will include but not limited to other universities in and outside Tanzania, research institutions, industrial partners and non-governmental institutions;
- iv. Require that external collaborative projects clearly demonstrate the benefits that will accrue to the University or indicate deficiencies/gaps within the University that necessitate external collaboration;
- v. Require that a full-time employee of the University serve as the Principal Investigator. The University shall contend to be the lead institution in the proposal. Full-time employees of the University who serve as Co-Principal Investigators on collaborative grants led by other institutions shall design the proposal so that the University serves as a subcontractor. This policy applies even in cases in which the applicant does not receive compensation through the grant;
- vi. Insist on internal collaborative projects to be inter and multi-disciplinary in nature;

- vii. Ensure that inter and multi-disciplinary research projects are hosted in the academic unit⁵ where the principal researcher belongs;
- viii. Require that the hosting department also be the department where the majority of the research activities will be conducted;
- ix. Require that respective components of inter and multi-disciplinary research project be approved by the relevant unit, which is college, school, institute or department;
- x. Demand that if the implementing units are not in the same school or institute or college, approval at school or institute or college level shall only be necessary in the hosting college, school, institute, but shall be reported to the relevant organs in the non-hosting college, school or institute for noting;
- xi. Recommend that a representative from a department participating in the multi-disciplinary project be invited to the meeting that makes the decision in the host college/school/institute;
- xii. Insist that staff participating in the inter or multi-disciplinary collaborative research project have an obligation to report progress to their own department and shall have to report to the hosting department through the principal researcher;
- xiii. Ensure that the collaborating academic units make provisions for administrative costs; and
- xiv. Require that the Corporate Counsel vet collaborative research agreements.

4.6 Research Training

Training represents one of the most significant areas of national investment in research and development. In addition, research students are a major resource, underpinning much of the leading edge research necessary for meaningful application in national development, providing on-going renewal of the research and academic workforces. As a result, they aid in the transmission of knowledge and skills within and between the research and wider communities. Therefore, UDSM shall:

- i. Strengthen and emphasize on research training at both undergraduate and postgraduate levels through ensuring that there is a significant, relevant and quality research-training component in the curricula;
- ii. Create and promote opportunities for post-doctoral scholars and research associates within academic units and devise means to include research grant proposals as a component of training;
- iii. Emphasize that research training be one of the criteria in the approval of research proposals;
- iv. Facilitate staff in writing fundable proposals; hence, research methodology courses be integrated into continuing education;
- v. Make a case for increased government funding of research degree programmes through specific budgetary allocation for scholarships at masters and doctoral degree as well as post-doctoral levels to be conducted at the University of Dar es Salaam; and
- vi. Devise an allocation of research training scholarships to different academic units on the basis of performance and demand.

⁵An academic unit is the smallest unit that is responsible for a defined academic discipline within the University. In this respect, a school or college cannot be a host of a research project.

- vii. Encourage post-doctoral and research associate programmes.

4.7 Research Quality Assurance

Management of research has to ensure that it is well planned and systematic so as to provide adequate confidence that research output satisfies the specified requirements for quality in line with UDSM Quality Assurance Policy. In this regard, UDSM shall:

- i. Develop and disseminate research quality guidelines.
- ii. Ensure that research application is in line with the guidelines.
- iii. Ensure that approval of research applications takes into consideration research quality checklist.
- iv. Monitor quality and number of publications resulting from research done by staff of various ranks.
- v. Monitor the target group for dissemination of research results.
- vi. Conduct surveys to obtain feedback on quality and value of research results.
- vii. Develop and disseminate standard quality indicators for research resources solicitation.
- viii. Conduct peer review of research performed at UDSM at an interval of not more than five years.

4.8 Research Performance Rewarding

UDSM shall:

- i. Establish and operationalize a system with transparent criteria/indicators to measure research excellence.
- ii. Evaluate research performance of individuals, academic units and multi-disciplinary research teams on an annual basis.
- iii. Reward research performance at individual, academic unit and research teams each year. Rewards shall be those that encourage improved performance in research.

4.9 Contributions to the Research Administrative Infrastructure

UDSM shall:

- i. Require that research projects contribute at least 12% of the total project research costs to the institutional overheads.
- ii. Ensure that the research overhead contribution is shared amongst the research administrative units at the various administrative levels. Sharing of the administrative overheads shall ensure that priority is given to where research activity is taking place. In this respect, a minimum of 6% shall be contributed to the respective department (or academic unit), 4% to the respective college/school/institute/centre and 2% to the directorate responsible for research at constituent college or University level.
- iii. The sums accrued by the respective units shall be accounted for using University Financial Regulations and Procedures.

4.10 Sharing of Research Resources

UDSM shall:

- i. Ensure that Colleges, Schools, Institutes and Departments have transparent and objective criteria of making research opportunities known to members of staff and for allocating such opportunities;
- ii. Encourage sharing of research project resources in order to utilize fully the research resources available;
- iii. Encourage and coordinate sharing of information and information sources of academic value. Such sources shall include books, journals, electronic information and sources of such electronic information through the Internet (e.g. electronic databases); and
- iv. Set up mechanisms/ procedures for utilizing and sharing resources and facilities across colleges, schools, institutes and centres.

4.11 Staff Remuneration

UDSM shall:

- i. Develop and implement an attractive remuneration scheme for researchers including the provision of research management allowance; and
- ii. Review the remuneration scheme on a regular basis, preferably after every three years.

The implementation of a research remuneration scheme shall be part of the Human Resource Management (HRM) Policy.

4.12 Research Support Environment

UDSM shall:

- i. Provide research support services that include the provision and continuous improvement of modern management information systems and facilitate access to international literature and databases;
- ii. Work towards the creation of a stable internal conducive research environment. This shall include maintenance of equipment and accessories support for purchase of basic consumables; and
- iii. Provide basic financial management support and training to research coordinators as well as personnel in key research administrative units.

4.13 Dissemination of Research Results

Subject to the Intellectual Property (IP) Policy, UDSM shall:

- i. Require that all research proposals incorporate a component for dissemination of research findings activities as well as the organization of at least a local seminar/workshop/conferences/symposium to ensure local 'ownership' of research findings. The same mode shall be used for international for a;
- ii. Ensure that the research report shall follow a standard format as indicated in Annex VIII;
- iii. Direct that all research reports be submitted for peer-reviewing in line with the review guidelines indicated in Annex IX;
- iv. Require that each college/school conduct at least one research workshop annually which will review research plans, progress, and outputs. Annual research workshops shall also include presentations of academic papers;
- v. Prepare and submit research abstracts/research reports to potential policy makers/policy briefs for action;

- vi. Encourage and support the publication of research findings/publications in local media and accessible databases (electronic or otherwise) for wider accessibility;
- vii. Encourage the publication of research findings in the local media;
- viii. Consider dissemination of research findings in the national language, where necessary; and
- ix. Commercialize research results that have commercial value.

4.14 Ethical Considerations

UDSM Research Ethics Policy shall guide ethical considerations in all research projects.

4.15 Cross-cutting Issues

In the conduct of research, it is necessary to clearly articulate UDSM research policy on cross-cutting issues that include environment, gender and other factors of inequality. In this regard, UDSM shall:

- i. Ensure that research activities comply with relevant national laws, policies and regulations; and
- ii. Ensure equitable access to research resources and benefits from research results.

4.16 Ownership of Research Outputs

Ownership of research outputs shall be governed by the provisions of the UDSM Intellectual Property Rights Policy.

4.17 Disposal of Research Project Resources

UDSM shall:

- i. Ensure that all properties accumulated during the period of research remain the property of UDSM, except as otherwise provided in the research contract; and
- ii. Give priority to the units which hosted the research in reallocation of research properties when the project ends.

4.18 Impact of Research

For research that has direct impact on the society, UDSM shall:

- i. Establish a feedback mechanism to assess research impact in addressing issues in the community; and
- ii. Utilise the feedback mechanism to foster continued refinement of the research agenda.

4.19 Research Culture

Research culture is one of the critical components in contemporary research practices. It cuts across several variables, which may include motivation to do research, accountability in reporting, ethical issues and nurturing of the junior researchers within the institution. UDSM shall:

- i. Encourage and nurture a research culture in which the academic freedom of all researchers is respected and protected, and in which research work and results are safeguarded against any form of ideological expedience;

- ii. Instil a research culture through training of undergraduate and postgraduate students in research;
- iii. Contribute towards fostering and enhancement of research culture both within and outside the University;
- iv. Promote and encourage research teamwork through the creation of research groups, centres and centres of excellence;
- v. Encourage and promote research mentoring and nurturing amongst staff; and
- vi. Educate UDSM staff on the research policy and procedures.

4.20 Application and Review

UDSM shall:

- i. Enforce adoption of the UDSM Research Policy by all members of staff (including affiliates) and students involved in UDSM research within and/ or outside the UDSM;
- ii. Review the Policy after every five years;
- iii. Allow Constituent Colleges to adapt and customize this policy to suit their functions and organizational set-up; and
- iv. Revoke the 2nd Edition of the Research Policy and Operational Procedures upon coming into force of this Research Policy and Operational Procedures

5.0 Strategy for Implementing the Research Policy and Operational Procedures

5.1 Core Strategy

The key strategy in implementing the above policy lies in the strengthening of the directorate responsible for research. The strengthening of the research administrative infrastructure from department to University level shall follow. The Terms of Reference of the directorate have to reflect its role of implementing this Policy. The following actions are necessary for the successful implementation of the Research Policy:

- i. Strengthening the capacity of the directorate to administer and coordinate research. This will require staff, establishment of administrative units, equipment and some seed funds. The Directorate shall be availed a minimum of 2% contribution from all research funds flowing into the University. This includes annual government research grants;
- ii. The Directorate shall be the main outlet of institutional research information to external stakeholders;
- iii. The Directorate shall be responsible for coordinating internal and external linkages on all matters related to research;
- iv. Internally, the Directorate shall coordinate the process of implementation of the policy through setting up of internal administrative links with other relevant offices at the top University management level (horizontal linkages) and with researchers through colleges/schools/institutes and departments (vertical linkages). The Directorate shall focus on the following specific actions with respect to establishing horizontal linkages:
 - To be proactive in influencing university level policies to ensure that research interests are safeguarded;
 - To work closely with other relevant offices to implement the UDSM Corporate Strategic Plan or any other similar plan; and
 - To define excellence in research and coordinate the identification and rewarding of excellence within UDSM guided by the HRM policy.
- v. The Directorate shall focus on the following specific actions with respect to establishing vertical linkages:
 - Standardization of internal research administrative procedures;
 - Ensuring participation of UDSM researchers in evolving the national and regional research agenda;
 - Facilitating securing research funds from public, private and external sources;
 - Facilitating dialogue between researchers and research clients;
 - Forming research centres and centres of excellence, post-doctorate programmes and research associates and chairs;
 - Facilitating dissemination and commercialization of research results through the directorate of knowledge exchange, as appropriate;
 - Keeping as custodian of research output on behalf of the University; and
 - Establishing and publishing a regular Research Bulletin and Research Annual Report (as part of UDSM Annual Report) or any other similar publication indicating the status of research activity within UDSM.

The Directorate shall have the overall responsibility for the coordination of the implementation of the Research Policy including review of the same.

5.2 Strategy for Sourcing of Funds and Quality Assurance

Funding and quality outputs remain most critical issues that govern the success in the conduct of research at the UDSM. A key strategy to address this challenge is to aggressively seek for research funds. Instead of leaving this task to individual academic units, the Directorate shall actively seek information on potential research projects and disseminate the information on regular basis.

The Directorate shall include a Research Administration Unit (RAU) or a similar set up to work towards enhancing overall research performance. The performance shall be based on quantity and quality of the research outputs and efficiency of achieving them within the UDSM corporate strategy. The Directorate shall work closely with the Quality Assurance Bureau (QAB) to enhance research quality. Emphasis shall be placed on strategies for research resource mobilization, distribution and efficient utilization.

5.3 Research Management

There is need for UDSM to strengthen research management at all levels in order to address the following issues.

5.3.1 Identification of Sources and Management of Research Resources

- i. Identify possible sources of research funding resources – national and international - and strategies for mobilization/accessing the same;
- ii. Ensure that pertinent information relating to specific research opportunities is passed on to relevant University Unit(s);
- iii. Publicize general information on possible sources and modes of research funding on regular basis. This information shall be available in hard and web-based e-format. The e-format shall only be accessible by UDSM staff;
- iv. Organize regular research resources mobilization workshops in which new opportunities for research funding shall be presented and discussed;
- v. Facilitate the liaison process with research donors where such donors have been identified through the Directorate;
- vi. Establish liaison relationships with other national stakeholders to form pressure/lobbying groups to contend for an increased share of research funding from government, the private sector and the international donor community;
- vii. Work closely with potential researchers in preparing research proposals for submission to potential donors;
- viii. Compile relevant reports of various research projects for onward transmission to the donors by the Directorate;
- ix. Proposing specific operational modalities in line with UDSM Research Policy for the various research funding sources for approval of the Senate Research Committee (SRC);
- x. Ensure that a research budget sufficient to carry out planned priority research is submitted to the government and other sources and that adequate funds are actually allocated for such research activities and are effectively utilised for the purpose;
- xi. Where potential exists for multi-disciplinary research projects, initiate the formation of such teams which once formed, shall be left to operate under the approved modalities of multi-disciplinary research teams; and
- xii. Compile UDSM Annual Research Report that summarise annual activities performed under all research grants in a standard format to be approved by the UDSM SRC or similar organ.

5.3.2 Research Data Bank and Dissemination of Research Results

- i. Maintain and continuously update a UDSM research activity database. In this respect selected information shall be published on regular basis onto a UDSM Research Web Page;
- ii. Set up and maintaining an accessible electronic research output database that shall contain at least full abstracts of the research reports and other related publications;
- iii. Compile and organize for the printing of a hard copy of a research bulletin containing abstracts of research projects on annual basis;
- iv. The Directorate shall seek for and furnish information related to research funding to academic units on regular basis; and
- v. Produce and continuously update a good brochure to market UDSM research services.

5.3.3 Research Quality Management

The Directorate in collaboration with the Quality Assurance Bureau (QAB) shall develop and institute a process of evaluation, monitoring and reporting on research quality performance at UDSM based on the following indicators on an annual basis:

- i. Research planning;
- ii. Research training;
- iii. Research degree completion rates;
- iv. Research publications per FTE academic staff;
- v. Peer reviewed research reports;
- vi. Facilities and access to information resources;
- vii. Research students assessment of supervision;
- viii. Proportion of staff having published research output in the last three years;
- ix. Proportion of staff directly doing research;
- x. Duration of research degrees;
- xi. Indicators that measure society perceptions on the research that UDSM staff do;
- xii. Number of clients continuously using UDSM research services;
- xiii. Number of local/international research assignments that UDSM wins in a competitive environment;
- xiv. Collaboration with regional and international institutions – establishment of active research networks;
- xv. Number of patents and copyrights;
- xvi. Number of commercialized research results;
- xvii. Number of research results dissemination events; and
- xviii. Subsequent availability of funds for the research following completion and dissemination of a phase of the research.

The DVC-Rc shall advise the Senate Research Committee (SRC) or similar committee, on what the benchmarks should be for these indicators.

5.4 Development of Comprehensive Implementation Strategy – Way Forward

Various new policy statements have been incorporated in the revised UDSM Research and Development Policy. A review of Research Strategic Plan that has a wider University and external stakeholder participation shall be made. It will be necessary to invite government officials, potential funding agencies, and strategic users of research outputs.

5.5 Operational Procedures

In order to standardize and harmonize research process within UDSM, the Directorate shall provide clear guidelines in form of Research Operational Procedures. The basic documents that would constitute the Operational Procedures are included in Annexes I–X of the Research Policy.⁶

These are:

Annex I: Extract from the Draft UDSM Research Five Year Rolling Strategic Plan 2014/2015–2018/2019

Annex II: Guidelines for Approval of Research Proposals

Annex III: Format for Research Proposals

Annex IV: Guidelines and Format for Evaluation of Research Proposals

Annex V: Standard Research Budget Format

Annex VI: Sample Research Contract Format

Annex VII: Research Progress Reporting Form

Annex VIII: Format for the Final Research Report

Annex IX: Guidelines for Research Report Peer Review

Annex X: Guidelines for Research Rates

These operational guidelines and tools shall be reviewed on a regular/continuous basis to accommodate changes in the operating environment. The Directorate responsible for research within UDSM shall be the custodian of the Research Policy on behalf of the University, and shall therefore bear the responsibility of ensuring that it continuously meets both the internal and external stakeholders' requirements.

⁶ Additional tools may be necessary to accommodate the new attributes of the Third Edition of the Research Policy. These may further need to be customized in line with developments in the organization structure of the University of Dar es Salaam.

6.0 Concluding Remarks

The process of development and implementation of the Research Policy and Operational Procedures has, of necessity, to reflect and present a move towards more internal efficiency, effectiveness and external relevance of research output.

The Research Policy and Operational Procedures has therefore aimed at creating uniformity, transparency and internal efficiency in prioritizing, planning, implementing and monitoring the research process at UDSM thereby strengthening its research capacity. This is in line with the objectives of Draft UDSM Corporate Strategic Plan 201–2023, which places particular emphasis on standardization of operations and procedures (i.e. clear policies and operational procedures) governing its inputs, processes and outputs. The UDSM Research Policy maps the processes of identification of research needs and prioritization; research project identification and initiation; preparations and approval procedures for proposals, funding sources and modes; project control and monitoring; dissemination of research results and research effectiveness evaluation.

The Research Policy has to serve both internal and external customers; it is to serve members of UDSM staff as researchers as well as meet internal administrative requirements and it has to be clear and acceptable to external partners, as research collaborators, funding agencies or target stakeholders.

It is hoped that the Research Policy will enable UDSM to meet its broad research objectives in order to address its mission in both the short and long run.

List of Annexes

- Annex I:** Extract – Draft UDSM Five Year Rolling Strategic Plan 2014/2015–2018/2019
- Annex II:** Guidelines for Process of Approving Research Proposals
- Annex III:** Format for Application of Research Grants
- Annex IV:** Guidelines and Format for Evaluation of Research Proposals
- Annex V:** Standard Research Budget Format
- Annex VI:** Sample Research Contract Format
- Annex VII:** Research Progress Report Form
- Annex VIII:** Format for the Final Research Report
- Annex IX:** Guidelines for Research Report Peer Review
- Annex X:** Guidelines for Research Rates

Annex I: Extract from Draft UDSM Five Year Rolling Strategic Plan 2014/2015– 2018/2019

Vision: To be a leading Centre of Intellectual Wealth spearheading the quest for sustainable and inclusive development.

Mission: To advance the economic, social and technological development of Tanzania and beyond through excellent teaching and research using talented and motivated staff and students.

KRA 2: Research and Innovation Strengthened				
	Key Result Area	Strategic issues	Strategy	Target
2	Research and Development Strengthened	Need to develop UDSM research agenda	Support development of a UDSM research agenda	New UDSM research agenda developed by June 2017
		Need to create frameworks for strategic collaboration with key stakeholders	Create frameworks for strategic collaboration with key stakeholders	Frameworks for strategic collaboration with key stakeholders created by June 2015
		Need to create structures that foster multidisciplinary in research which will enable interdisciplinary collaboration	Create structures that foster multidisciplinary in research which will enable interdisciplinary collaboration	Structures that foster multidisciplinary in research established by June 2015
		Need for a critical mass of faculty with refined skills in developing research proposals	Build capacity of faculty to develop research proposals	At least 60 faculty members trained to develop research proposals every year
		Need to establish a stable fund to support research	Support establishment of a stable fund to support research	Fund to support research established by 2016
			Improve facilities for research	Provide research facilities to match student population by 2018
		Need to enhance the visibility of the University as a research and development partner	Support initiatives that enhance the visibility of the University as a research and development partner	Frameworks for strategic collaboration with key stakeholders created by June 2015
			Coordinate research database management	Research database updated annually
			Support dissemination of research findings	Research week to disseminate findings conducted every year from June 2015
		Need to create conducive environment for participation of faculty in University research	Create mechanisms for facilitating participation of faculty in research	Strategy to facilitate participation of faculty in research developed by June 2016
			Review policy to enforce staff doing research	Research policy reviewed by June 2016
		3	Innovation and Entrepreneurship Strengthened	Need to develop mechanisms for promoting innovations
	Review research policy to support innovations			Research policy to support innovations reviewed by June 2016
Need to create frameworks for	Create frameworks for strategic collaboration		Frameworks for strategic collaboration with key stakeholders	

	strategic collaboration with key stakeholders in innovation	with key stakeholders in innovation	in innovation created by June 2015
	Need to develop mechanisms for commercialization of innovations	Develop mechanisms for commercialization of innovations	Mechanisms for commercialization of innovations developed by June 2017
		Develop policy to support commercialization of research findings	At least one innovation commercialized annually starting from June 2017
	Need to create mechanisms to capture internally generated knowledge and ensure patentability	Create mechanisms to capture internally generated knowledge and ensure patentability	Mechanisms to capture internally generated knowledge and ensure patentability by June 2017
		Implement the research policy to support patent Intellectual Property Rights	Research policy to support patent Intellectual Property Rights implemented by June 2017
	Need to create strategic partnerships for funding innovation	Create strategic partnerships for funding innovation	Strategic partnerships for funding innovation created by December 2016
	Need to create platforms for testing the applicability of innovations (e.g. incubators)	Create and support platforms for testing the applicability of innovations (e.g. incubators)	Platforms for testing the applicability of innovations (e.g. incubators) created and supported by December 2016
		Establish multidisciplinary incubation centre	Multidisciplinary incubation centre established by June 2018
	Need to establish spin-off companies for undertaking business with strategic partners to realize benefit from University innovations	Facilitate establishment of spin-off companies for undertaking business with strategic partners to realize benefit from University innovations	<ul style="list-style-type: none"> • One spin-off company for undertaking business with strategic partners to realize benefit from innovations established by December 2018 • Frameworks for strategic collaboration with key stakeholders in innovation established by June 2015
	Need to enhance the visibility of innovations at the University	Supporting initiatives to enhance the visibility of innovations at the University	Initiatives to enhance the visibility of innovations at the University continuously supported
	Need to inculcate an organizational culture in research and development that mainstreams innovation and entrepreneurship as core values.	Promote an organizational culture in research and development that mainstreams innovation and entrepreneurship as core values.	Organizational culture in research and development that mainstreams innovation and entrepreneurship as a core value continuously promoted.
		Build capacity of staff and students in entrepreneurship skills	Capacity of staff and students in entrepreneurship skills continuously built

Annex II: Guidelines for Process of Approving Research Proposals

1.0 Initiation of a Research Project

A research proposal should be prepared by interested researchers in accordance with the format given in **Annex III**. The proposal should then be submitted to the Departmental Research Committee (DRC).

To ensure maximum efficiency and to minimize administrative problems, a researcher is normally recommended to limit the number of research projects undertaken at any one time. The number and sizes of research projects will be dependent upon the DR's assessment of the individual researcher's ability to handle several research projects at a time. In any case, consideration shall be given to ensure a reasonable balance between involvement in research, teaching and consultancy.

The approval of research proposals shall be based upon previous satisfactory performance. In general, collaborative and group research work will be given preference over individual ones. UDSM encourages international collaborative research and where funding is available, these should be given special preference.

2.0 Action by the Departmental Research Committee (DRC)

The proposal should be discussed by the DRC. Once the DRC is satisfied with the relevance, the need, soundness and the financial estimates of the submitted research proposal it will be forwarded through proper channels to the College/School/ Bureau or Institute Research Committee (CRC/ScRC)/(BRC⁷/IRC) with appropriate recommendations.⁸ However, if the departmental RC is not satisfied with the research proposal, there are three possible courses of action that it can take:

- To return the proposal to the researcher(s) for review and subsequent resubmission;
- To interview the researcher(s) and then either subject the proposal to the action above or approve it subject to minor revision. Another outcome of the interview could be approval of the proposal as it is;
- To reject it outright if the committee is sufficiently convinced that the proposal is of sub-standard nature in both the content and presentation.

In case a research proposal is rejected and the applicant is not entirely satisfied with the decision, one can appeal to the Head of Department who might choose to either return it to the DRC with recommendations or endorse the rejection. However, if the proposal is rejected by the DRC for the second time, no further appeals should be entertained. As a guideline, the DRC should limit its evaluation to a maximum of three months.

3.0 Action by the College/School/Institute/Bureaux Research Committee (CRC/ScRC/IRC/BRC)⁹

The CRC/SCRC will scrutinize the research proposal, especially the research objectives, research methodology, time schedule, phasing etc. The CRC/SCRC/IRC shall particularly scrutinize the cost estimates and can make other specific recommendations on the area coverage and resources required although academic responsibility and evaluation lies with the departments.

If the CRC/SCRC/IRC is not satisfied with the research proposal, it is proposed that the courses of action to be taken shall be similar to those taken by the DRKC. The only exception is that, in the case of an appeal after the first rejection by the CRC/SCRC/IRC, the proposal is forwarded to the Principal/Dean or Director of the College/School/Institute who shall make his/her recommendations to

⁷ Bureau of Educational Research (BERE)*

⁸ Under emergency or other special circumstances, the DRC can approve the proposal for onward forwarding to a potential funding agent without approval at College/School/Institute or University level. In any case, the department shall be required to submit a written justification for the action and submit for ratification

⁹ College/School/Institute Research Committee in the case of Campus College

the CRC/SCRC/IRC. As a guideline, the maximum evaluation period of a research proposal at College/School/Institute level should not exceed three months. For projects funded at College/School/Institute level, the CRC/SCRC/IRC has the final say on the approval of project (with room for appealing to the Principal/Dean/Director).

The projects shall be registered appropriately and both a copy of approved research proposal and the registration number forwarded to the Directorate of Research. For University funded research applications the CRC/SCRC/IRC shall make recommendations for funding to the appropriate University level committee (SRC).

4.0 Action by University Research Committee (SRC)

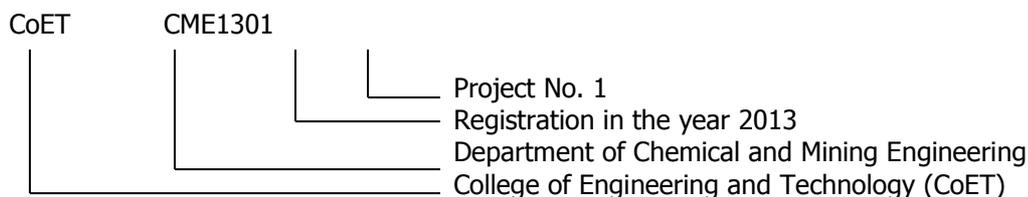
The SRC shall receive and consider any proposal for funding after being satisfied with the relevance, need, soundness and financial estimates. The SRC shall have the following alternative courses of action.

- To accept the proposal for funding when the committee is satisfied;
- To return the proposal to the CRC/SCRC/IRC for review and subsequent resubmission if the guidelines are not followed or if the procedures have not been adhered to;
- To approve it subject to minor revisions to be made by the applicant(s);
- To reject it outright if the committee is sufficiently convinced that the proposal is of sub-standard nature in both the content and the presentation.

In case a research proposal is rejected and the applicant is not entirely satisfied with the decision, one can appeal to the Chair of SRC who might choose to return it to the University SRC with recommendations.

5.0 Approval and Registration

All research projects shall be registered with the Directorate responsible for research whether they are funded at College/School/Institute or University level. A Research proposal shall be numbered serially proceeded with College/ School/Institute and Department and year codes as follows:



The Directorate of Research shall coordinate research project registration. The Directorate shall also maintain an up-to-date database of all research projects within the University.

6.0 Research Contract and Funding

An approved research proposal shall only be funded once the researcher(s) has signed a contract with appropriate offices. These shall be at College/School/Institute or University level depending on where funding is sourced. In any case, contracts signed at College/School/Institute level shall be deemed to be contracts with the University. The format for research contracts is included in Annex V.

7.0 Interim Progress Reports

At the end of each phase, the researchers are required to produce interim progress reports giving the up-to-date research findings through the DRC. The guidelines and format for such progress reports is given as Annex VI.

If, as a result of the progress report, there is a need to modify the contract (or schedule of payments), this request should be formally made through and recommended to the CRC/SCRC/IRC by the Departmental Research Coordinator.

In some cases, the DRC might wish to send the interim report(s) to an independent reviewer before approving the next phase. Such cases will involve research projects handling massive data that is not easy to interpret or research projects involved in very recent technological developments not well established in the department concerned. However, in any case, the funds for the next phase can only be released after the approval of the progress report by the CRC/SCKC/IRC for College/School/institute funded research projects and by the UDSM SRC for UDSM level funded projects.

8.0 Final Research Report

At the conclusion of the research, a final research report should be submitted in the format contained in Annex VIII. This should include all the data, results and findings obtained during the execution of the research project. The interim progress reports will normally form the basis for the final consolidation research report. The draft final research report should be sent to the DRC which shall appoint an independent reviewer who shall then submit the review report to the DRC together with their comments within one month after receipt of the researcher's report. The guidelines for reviewers are given in Annex IX.

The researcher(s) will be required to modify the draft report as much as possible according to the reviewer's recommendations if there are no major differences in their opinions. In the case of serious differences in the opinions, the DRC will have to appoint a second independent reviewer who will have to finish the review exercise within two weeks. In such a case, the DRC will have a final say on the required modifications to the draft report after receiving the second reviewer's report. No appeals will be encouraged at this stage.

These final research reports should have a standard front cover (see Annex VIII) and a unified printing format similar to the one demanded by international journals. All final research reports will have a unified code number e.g. CoET/CME/3*/2013 or CASS/EC/7*/2013. The numbers marked with an asterisk (*) should be in serial order.

At least six (6) copies of the final research report should be submitted to the CRC/ScRC/iIRc for final approval. After the approval, these copies will be distributed as follows: Directorate of Research, CRC/ScRC/IRC, Head of Department, Coordinator DRC, UDSM main library and the section library where this exists. The abstracts of the final reviewed research reports should be published periodically in the respective College/School/Institute/Research Abstracts.

9.0 Research Seminars

The researchers should be required to give a seminar/conference at the conclusion of their research work and should also be required to give periodic seminars during the research work in the annual College/School/Institute Workshop. In principle, the seminar/conference presentation will be the last item to be handled by the researcher(s) after completion of the exercise of reviewing the final draft report. This shall be a pre-condition for the release of the final payment to the researcher(s).

Annex III: Format for Application of Research Grants¹⁰

UDSM RESEARCH GRANT APPLICATION FORM

This form consists of four sections. Inspect the checklist to ensure all necessary documents are included prior to submission. When filling this application form please adhere to the following instructions:

- a) Write in the template provided observing word limits indicated;
- b) Unless otherwise indicated, acceptable text is Times New Roman, 12 font size, 1.5 spacing;
- c) Both hard and soft copies of the proposal must be submitted for endorsement by Departments, Colleges, Schools and Institutes;
- d) After endorsements, hard and soft copies shall be submitted under dispatch to the Directorate of Research before the set deadline;
- e) Soft copies of proposal should be saved in MsWord using the Principal Investigator's (PI) last name and Department as follows: <Rajabu Proposal Main Body-Physics Dept 2011.docx>;
- f) Submit a separate soft copy containing the budget summary and budget details in separate Ms-Excel worksheets saved as <Rajabu Proposal Budget-Physics Dept 2011.xlsx>; and
- g) Applicants are forewarned that giving false information will lead to disqualification and disciplinary measures as per UDSM research policy.

A softcopy of this form can be obtained from <http://www.dr.udsm.ac.tz>.

CHECKLIST

1	Complete bio-data, contact information and qualification of researchers	
2	Summary and main body of the research proposal	
3	Declarations and signatures of the principal investigator and collaborators	
4	Hard and soft copies (Ms Word and Excel) of proposal	
5	Endorsements by respective academic units, i.e., Departments, Colleges/Schools or Institutes	

FOR DR-UDSM USE ONLY

Proposal No.	Name, Signature and Dated Official Stamp of Receiver	Department	College/School/Institute

¹⁰ Other formats may be accepted depending on practice in the respective subject areas. In some cases, some sections may be ignored if the proposal is for basic research.

1: PERSONAL INFORMATION AND CONTACTS

1.1 BIO-DATA AND CONTACTS OF RESEARCHERS [Font 9 point]

DETAIL	PI	Researcher 2
Surname		
First and Middle name		
Sex [Male or Female]		
Date of Birth		
Academic Qualifications [PhD, MSc, MA, BSc, BA, Other]		
Position [L,SL, AP, P]		
Department		
College, Institute or School		
University or Institution		
Physical Location [Office Block & Room Number]		
Postal address		
E-mail		
Telephone (Office)		
Mobile Telephone		

1.2 BIO-DATA AND CONTACTS FOR RESEARCH COLLABORATORS

Collaborators	Researcher 3	Researcher 4
Surname		
First and Middle name		
Sex [Male or Female]		
Date of Birth		
Academic Qualifications [PhD, MPhil, MSc, MA, BSc, BA, Other]		
Position [Student, TA, AL, L,SL, AP, Prof]		
Department		
College or School		
Physical Address		
Postal Address		
E-mail		
Telephone: (Office)		
Mobile Telephone		

1.3 PROJECT BANK ACCOUNT DETAILS (where applicable)

Attribute	Details
Bank Name:	
Bank Address:	
Account Name:	
Account Number	
Swift Code (if applicable)	

PROJECT TITLE [The title must be short and precise, depicting the general objectives of the proposed research]
SUMMARY OF THE PROJECT [This must contain all important elements of the proposed study including the type/design of research study, the problem statement, justification and rationale, objectives, research question/hypothesis to be tested, methodology to be employed, expected findings and use, and the budget requirement. This must not be more than 1,000 words]
2. MAIN BODY OF RESEARCH PROPOSAL
2.1 INTRODUCTION [Give background of the proposed research explaining its importance with regard to advancement of knowledge and socio-economic or technical benefits. Explain the justification, relevance or rationale of the project including the success factors motivated by prevailing conditions, facts, or underlying frameworks like institutional research agenda, national priority sectors, or international (e.g., MDGs)] [≤550 words maximum]
2.2 RESEARCH PROBLEM [Give information about the research by defining the problem, outlining magnitude, effects, and extent of the problem supported by quantitative or qualitative data] [≤ 150 words]
2.3 RESEARCH OBJECTIVES [State the broad/overall objective that the proposed research shall contribute to and give the specific objectives which must be Specific, Measurable, Achievable, Realizable and Time bound (SMART) so as to facilitate monitoring and evaluation (M&E) of the research project. The specific objectives should conform with research methodology] [≤ 250 words]
2.4 LITERATURE REVIEW [Give more information about the research by outlining recent work addressing the problem, and scholarly knowledge and knowledge gaps in the field, and hint on your proposed approach or solution. Support your case by citing recent literature 5-10 years old] [≤ 1,000 words]
2.5 METHODOLOGY [Explain the type and scope of the research study, where and by whom the study will be carried out. Describe equipment, utilities, tools, instruments, prototypes, case studies, models, reagents, and statistical software to be used for, data logging and analysis. State clearly if the research infrastructure is available, to be borrowed or will be acquired by project. Methods of data collection must include laboratory analysis procedures or questionnaires depending on your specific field. Techniques of data analysis must be clearly specified] [1,000 words].
2.6 RESEARCH OUTPUT [Mention the tangible outputs envisaged from the research project like prototypes, products, maps and non-tangible ones like processes, procedures, new knowledge, checklists or vocabulary] [≤ 250 words]

2.7 PLAN OF ACTION

[Use a Gantt chart below to describe how the study will proceed in phases or yearly quarters after receipt of research funds. Your plan should outline major milestones and activities guided by research objectives and methodology, including: pre-testing (if any); data collection and analysis; report preparation; and dissemination of research findings]

2.7.1 Gantt Chart [Use font 9 to fill the Gantt chart]

A Gant Chart Showing Schedule of Activities in Phases

No	Objectives	Activity	Phase I				Phase II				Phase III				
			Month	1	2	3	4	5	6	7	8	9	10	11	12
1.	Objective 1	1													
		2													
		3													
2.	Objective 2	1													
		2													
		3													
		4													
3.	Objective 3	1													
		2													
		3													
		4													

2.7.2 Constraints and risks [Point out any constraints or risks that may affect your project and suggest ways to mitigate them], [150 words]

2.7.3 Roles of collaborators and research assistants [List all actors in the project, their expertise and specific roles in the research project]

	Name	Signature	Title	Institution	Role
1			PI		
2			R2		
3			R3		
4			R4		
5			RA		

Key to Titles: PI = Principal Investigator; R1...R4 = Researcher 1...4; RA= Research Assistant

2.8 BUDGET (Sample only)

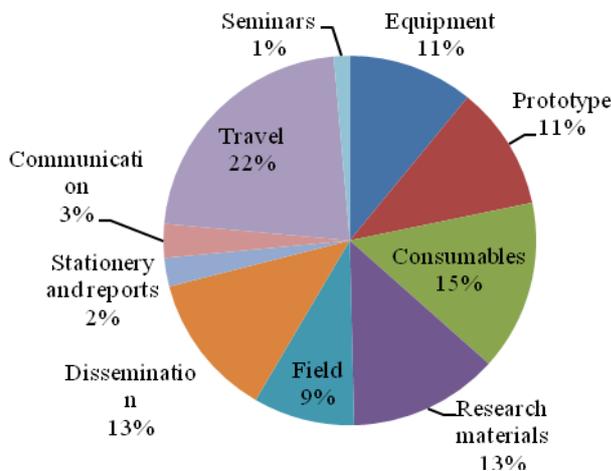
[While adhering to approved research rates, give a budget that clearly indicates distribution of funds in three (3) project phase.] [Present a budget summary here, and a detailed budget in the Appendix] [Use Microsoft Excel spreadsheet templates provided]

2.8.1 Budget Summary

DESCRIPTION		PHASES			Total
		Ph 1	Ph 2	Ph 3	
A	DIRECT COSTS				
A.1	Equipment and instruments	1,655,000	-	-	
A.2	Prototypes, models and software	1,155,650	485,650	5,000	
A.3	Consumables (reagents, films, tapes)	906,000	1,335,180	24,200	
A.4	Research materials (samples, data, maps)	780,000	1,100,000	100,000	
A.5	Field expenses (RAs, labour, tools)	160,000	906,000	271,000	
A.6	Dissemination (fliers, documentary)	-	130,000	1,780,000	
A.7	Stationery and report writing	84,000	101,000	195,000	
A.8	Communication	150,000	150,000	150,000	
B	TRAVEL				
B.1	Local travel and per diems	2,450,000	120,000	800,980	
B.2	Seminars and conferences*	-	-	210,000	
	Sub-total	7,340,650	4,327,830	3,536,180	
C	INSTITUTIONAL FEES [8%]	587,252	346,226	282,894	
	Total	7,927,902	4,674,056	3,819,074	

*International seminars and conferences shall be handled (administratively) separate from this budget.

2.8.2 Budget Distribution [Cut and paste here the pie chart generated from the Microsoft Excel budget spreadsheet provided]



2.8.3 Budget Justification [Based on the pie chart (from Excel) give justification for major cost items (>20%) in your budget] [≤ 150 words]

2.8.4 Co-funding and related work

[State if the research work has or will be funded from other sources. If so, give co-sponsors details, and explain why further support is required to complement. Give details of any on-going work at your institution related to the research project. Disinformation or false information shall lead to disqualification and/or disciplinary measures as per UDSM research policy], [≤ 150 words]

2.9 ETHICAL CONSIDERATIONS
 [Describe pertinent ethical issues which by design or otherwise may occur by undertaking the research. Explain how you will address them, including protection of human or animal subjects, clients rights, confidentiality, intellectual property rights and environmental protection. Please refer to the UDSM Research Ethics Policy on ethical conduct of research] [≤ 150 words]

2.10 REFERENCES
 [Alphabetically give only those references cited in the proposal]

APPENDICES

A1: CURRICULUM VITAE OF RESEACHERS [Since bio-data of PI is given earlier, list up to a total of 15 recent publications by researcher(s) in the research area] [400 words]

A2: DETAILED BUDGET [Use the MsExcel template given for generating project budget then paste only the detailed budget below, and the summary budget should go to its respective position in the main body of the proposal] [Each phase to have separate detailed budget sheet]

A2.1 DETAILED BUDGET FOR PHASE 1 (sample only)

		Description	Qty	Units	Price [TZS]	Total [TZS]
A	DIRECT COSTS					
	A1	Equipment and Instruments				
	A1.1	Desktop computer, DELL, 2.0GB, dual-core, HDD 160 GB	1	pcs	1,500,000	1,500,000
	A1.2		15	kgs	2,000	30,000
	A1.3	Printer cartridge	1	pcs	125,000	125,000
		Sub-total equipment				1,655,000
	A2	Prototypes, models and software				
	A2.1	SPSS software	1	License	670,000	670,000
	A2.2		10	pages	65	650
	A2.3	Development of prototype model	1	pcs	485,000	485,000
	A2.4	Sub-total prototypes				1,155,650
	A3	Consumables (reagents, films, tapes)				
	A3.1	HPLC and GC columns and guards	2	pcs	1,500	3,000
	A3.2	Documentary	2	films	450,000	900,000

A3.3		1		1,100	3,000
	Sub-total consumables				906,000
A4	Research materials (samples, data, maps)				-
A4.1	Cartographic maps	0	maps	24,500	-
A4.2	Satellite data	0	sets	550,000	-
A4.3		24		32,500	780,000
	Sub-total research materials				780,000
A5	Field expenses				
A5.1	Research assistant	2	Months	25,000	50,000
A5.2	Casual labourers	10	man-days	7,000	70,000
A5.3	Generator hire	10	days	3,000	30,000
A5.4	Gum boots	2	pairs	5000	10,000
	Sub-total field expenses				160,000
A6	Dissemination of research results				
A6.1	Preparation of fliers	0	pcs	300	-
A6.2	Preparation of posters	0	pcs	40,000	-
A6.3	Recording of dissemination video	0	pcs	1,500,000	-
A6.4	Exhibition of prototype at Saba Saba exhibitions	0	pcs	50,000	-
	Sub-total dissemination				-
A7	Stationery and report writing				-
A7.1	Box files	10	pcs	5000	50,000
A7.2	Writing pads	2	pcs	500	1,000
A7.3	Photocopy and binding	1	Reports	30,000	30,000
A7.4	Staples	2	boxes	1,500	3,000
	Sub-total stationery				84,000
A8	Communication	1	Lumpsum	150,000	150,000
B	TRAVEL				
B1	Local travel				
B1.1	Car hire to Mbeya, 2 trips, return leg approx. 1,500 km.	3,000	Km	550	1,650,000
B1.2	Per-diems in Mbeya, 2 people for 5 days	10	man-days	80,000	800,000
B1.3	Travel to Mwanza, return air tickets for 3 people	0	tickets	369,000	-
B1.4	Taxi in Mwanza for 3 days including airport services	0	days	40,000	-
B1.5	Per-diems in Mwanza, 3 people for 3 days	0	man-days	80,000	-
	Sub-total local travel				2,450,000
B2	Seminars and conferences				
B2.1	Attending professional conference in Arusha, 1 person, return bus ticket	0	ticket	50,000	-
B2.2	Per-diem in Arusha, one person for 2 days	0	man-days	80,000	-
	Sub-total seminars				-

A2.2 DETAILED BUDGET FOR PHASE 2 (sample only)

	Description	Qty	Units	Price [TZS]	Total [TZS]
A	DIRECT COSTS				
A1	Equipment and Instruments				
A1.1	Desktop computer, DELL, 2.0GB, dual-core, HDD 160 GB	-	pcs	1,500,000	-
A1.2	Viscometer	-	pcs	300,000	-
A1.3	Printer cartridge	-	pcs	125,000	-
A1.4					-
	Sub-total equipment				-
A2	Prototypes, models and software				
A2.1	SPSS software	0	License	670,000	-
A2.2		10	pages	65	650
A2.3	Development of prototype model	1	pcs	485,000	485,000
A2.4					
	Sub-total prototypes				485,650
A3	Consumables (reagents, films, tapes)				
A3.1	HPLC and GC columns and guards	0	pcs	1,500	-
A3.2	Documentary	0	films	500,000	-
A3.3		20		66,759	1,335,180
A3.4					-
	Sub-total consumables				1,335,180
A4	Research materials (samples, data, maps)				-
A4.1	Cartographic maps	0	maps	24,500	-
A4.2	Satellite data	2	sets	550,000	1,100,000
A4.3					-
	Sub-total research materials				1,100,000
A5	Field expenses				
A5.1	Research assistant	3	months	250,000	750,000
A5.2	Casual labourers	20	man-days	7,000	140,000
A5.3	Generator hire	2	days	3,000	6,000
A5.4	Gum boots	2	pairs	5000	10,000
	Sub-total field expenses				906,000
A6	Dissemination of research results				
A6.1	Preparation of fliers	0	pcs	300	-
A6.2	Preparation of posters	2	pcs	40,000	80,000
A6.3	Recording of dissemination video	0	pcs	1,500,000	-
A6.4	Exhibition of prototype at Nane Nane exhibitions	1	pcs	50,000	50,000
	Sub-total dissemination				130,000
A7	Stationery and report writing				-
A7.1	Box files	2	pcs	5000	10,000
A7.2	Writing pads	2	pcs	500	1,000
A7.3	Photocopy and binding	3	Reports	30,000	90,000
A7.4					

		Sub-total stationery				101,000
	A8	Communication	1	Lump sum	150,000	150,000
B	TRAVEL					
	B1	Local travel				
	B1.1	Car hire to Mbeya, 1 trip, return leg approx 1,500 km.	0	km	980	-
	B1.2	Per-diems in Mbeya, 2 people for 5 days	0	man-days	80,000	-
	B1.3	Travel to Mwanza, return air tickets for 1 person	0	tickets	369,000	-
	B1.4	Taxi in Mwanza for 3 days including airport services	3	days	40,000	120,000
	B1.5	Per-diems in Mwanza, 3 people for 3 days	0	man-days	80,000	-
		Sub-total local travel				120,000
	B2	Seminars and conferences				
	B2.1	Attending professional conference in Arusha, 1 person, return bus ticket	0	ticket	50,000	-
	B2.2	Per-diem in Arusha, one person for 2 days	0	man-days	80,000	-
		Sub-total seminars				-

A2.3 DETAILED BUDGET FOR PHASE 3 (sample only)

	Description	Qty	Units	Price [TZS]	Total [TZS]	
A	DIRECT COSTS					
A1	Equipment and Instruments					
A1.1	Desktop computer, DELL, 2.0GB, dual-core, HDD 160 GB	-	pcs	1,500,000	-	
A1.2	Viscometer	-	pcs	600,000	-	
A1.3	Printer cartridge	-	pcs	125,000	-	
A1.4					-	
	Sub-total equipment				-	
A2	Prototypes, models and software					
A2.1	SPSS software	0	License	670,000	-	
A2.2		10	pages	500	5,000	
A2.3	Development of prototype model	0	pcs	485,000	-	
A2.4						
	Sub-total prototypes				5,000	
A3	Consumables (reagents, films, tapes)					
A3.1	HPLC and GC columns and guards	0	pcs	1,500	-	
A3.2	Documentary	0	films	500,000	-	
A3.3		22		1,100	24,200	
A3.4					-	
	Sub-total consumables				24,200	
A4	Research materials (samples, data, maps)					-
A4.1	Cartographic maps	0	maps	24,500	-	
A4.2	Satellite data	0	sets	550,000	-	
A4.3		20		5,000	100,000	
	Sub-total research materials				100,000	
A5	Field expenses					
A5.1	Research assistant	1	months	250,000	250,000	
A5.2	Casual labourers	3	man-days	7,000	21,000	
A5.3	Generator hire	0	days	3,000	-	
A5.4	Gum boots	0	pairs	5000	-	
	Sub-total field expenses				271,000	
A6	Dissemination of research results					
A6.1	Preparation of fliers	500	pcs	300	150,000	
A6.2	Preparation of posters	2	pcs	40,000	80,000	
A6.3	Recording of dissemination video	1	pcs	1,500,000	1,500,000	
A6.4	Exhibition of prototype at Nane Nane exhibitions	1	pcs	50,000	50,000	
	Sub-total dissemination				1,780,000	
A7	Stationery and report writing					-
A7.1	Box files	0	pcs	5000	-	
A7.2	Writing pads	0	pcs	500	-	
A7.3	Photocopy and binding	3	Reports	30,000	90,000	
A7.4	Photocopy paper	10	rims	10,500	105,000	
	Sub-total stationery				195,000	

	A8	Communication	1	Lump sum	150,000	150,000	
B	TRAVEL						
	B1	Local travel					
	B1.1	Car hire to Mbeya, 1 trip, return leg approx. 1,500 km.	1	km	980	980	
	B1.2	Per-diems in Mbeya, 2 people for 5 days	10	man-days	80,000	800,000	
	B1.3	Travel to Mwanza, return air tickets for 1 person	0	tickets	369,000	-	
	B1.4	Taxi in Mwanza for 3 days including airport services	0	days	40,000	-	
	B1.5	Per-diems in Mwanza, 3 people for 3 days	0	man-days	80,000	-	
		Sub-total local travel					800,980
	B2	Seminars and conferences					
	B2.1	Attending professional conference in Arusha, 1 person, return bus ticket	1	ticket	50,000	50,000	
	B2.2	Per-diem in Arusha, one person for 2 days	2	man-days	80,000	160,000	
		Sub-total seminars					210,000

A3: SUPPORTING MATERIALS [Insert any other illustrations (graphics, photos, testimonials, equations, etc), which support your proposal but could not be inserted in the main body of the proposal. Any illustrations must be clearly labelled and referenced from the main body of the proposal] [one page maximum]

3. DECLARATIONS, SIGNATURES AND ENDORSEMENTS

3.1 DECLARATION AND SIGNATURES OF APPLICANTS

We, the undersigned have read and understood the guidelines and hereby declare that the information given is true to the best of our understanding.

	Title	Name	Signature	Date
1	Principal Investigator			
2	Co-PI			
3	Collaborator			
4	Collaborator			

3.2 DECLARATION AND ENDORSEMENTS BY THE HOST INSTITUTION

3.2.1 Departmental Endorsement

I Head of the Department of
..... declare that the proposal has been scrutinized
by the Departmental Research Committee and has been approved for submission to higher University levels.

.....
Signature and Stamp
Head of Department

.....
Date

3.2.2 College/School/Institute Endorsement

I Principal/Dean/Director of
..... declare that this proposal has been approved by College/School/
/Faculty/Institute level committee for onward transmission to the Directorate of Research, University of Dar es
Salaam.

Furthermore, if researchers receive the grant, the College/School/ /Faculty/Institute will fully support the research
to make it successful.

.....
Signature and Stamp
Principal/Dean/Director

.....
Date

Annex IV: Format for Evaluation of Research Proposals

Format 1: Guideline and Format for Evaluation of Research Proposals

Title and Investigator (s)					
S/N	Attribute/criteria	Criteria	Weighted Grade (%)	Score	Comments
1	Summary if any (7 pts)	- Short introduction	1		
		- Goals/objectives	1		
		- Brief Problem area	1		
		- Brief methods	1		
		- Expected output	1		
		- Who (researchers), where (place of research) & when (duration)	1		
		- Budget	1		
2	Literature review: Is it comprehensive, relevant and up-to- date (15 pts)	- Adequacy (# of literature cited)	5		
		- Recent Literature Review	5		
		- Identification of research gap(s)	5		
3	Goals and objectives: Are these clearly stated and are they achievable? (10 pts)	- General objective/Specific	2		
		Clarity of the objectives	4		
		- Realistic/Achievable within 1 year?	4		
4	Statement of the problem and rationale: Are these clearly stated? Is the proposal well-reasoned? (14 pts)	- Is the problem clear	7		
		- Is the problem significant to knowledge, society, etc.	7		
5	Methodology: Is this properly designed, and is it related to all the objectives stated? (20 pts)	- Is it related to objectives	8		
		- Is it properly designed to achieve the objectives	8		
		-Are Physical Resources available to accomplish the research outputs?	4		
6	Are the applicants capable of accomplishing the research? (14 pts)	- Capability (CVs)	4		
		-Team work (Junior/ Senior) collaboration	5		
		- Interdisciplinary	5		
7	Research Outputs (10 pts)	- Tangible results (e.g. prototype product, maps etc.)	10		
		- Non Tangible results (e.g. process, procedure, checklist, vocabulary, etc.)			
		New body of knowledge			
8	Budget and justification: Is the budget realistic? (10 pts)	- Realistic, well justified with Time Frame	7		
		Compliance with the approved rates?	3		
9	Total Score (%)		100		
	Conclusion: Do you recommend approval of this proposal? (<i>tick the appropriate box</i>)	Approved	Not approved		

Additional comments__

Format 2: SCORING MATRIX FOR EVALUATING UDSM RESEARCH GRANTS

UD-PR.....		Development of new method for			Value (TZS)		
No	Attribute	%	Sub-criteria	Weight	Score [%]	Points	Comment
1	Title	3	Is the title compact, precise and reflecting general research objectives?				
2	Summary	6	Is the summary brief and capturing salient features of the research?				
3	Introduction	12	Is the research important, rational, and justified in line with UDSM, national, and international agenda or frameworks?				
4	Problem statement	12	Is the problem clearly defined?				
			Is the solution to problem likely to contribute knowledge in the field and is broadly significant to society, nation, etc?				
5	Objectives	12	Clarity of general and specific objective.				
			Are the objectives SMART (<i>Specific, Measurable, Achievable, Realizable and Time bound</i>) given a budget of US\$ in one year period?				
6	Literature review	12	Is the literature cited adequate and relevant?				
			Is the literature up-to-date, 5-10 years?				
			Are research gap(s) identified and authors' approach to the problem clear?				
7	Methodology	15	Is the methodology properly designed and in-line with objectives?				
			Are the research scope, geographical limits and other boundaries clearly outlined?				
			Are physical resources available to accomplish the research outputs?				
			Are data collection tools, lab procedures, and techniques for data analysis clearly explained?				
8	Research Output	7	Will the research produce: (i) tangible results (e.g. prototype product, maps, etc.); or (ii) non-tangible results (e.g. process, procedure, checklist, vocabulary, etc.); or (iii) new body of knowledge?				
9	Budget	8	Is the budget realistically distributed by phases within the time frame shown in the plan of action?				
			Is the budget mostly allocated to core-work rather than travel, meetings and seminars?				
			Are large portions (>20%) of the budget justified including co-funding?				
			Do the budget elements comply with UDSM/Government approved rates?				
10	Capability	13	Researcher's publication(s) in the research area				
			Team work, gender mix, junior-senior mix.				
			Reflection of interdisciplinary work in composition of team and/or role of researchers				
Total		100					

Researchers: Dept./College:

Grade

Annex V: Standard Research Budget Format

1. Cost Estimates

Cost estimates for research Project proposals should be given under various subheadings such as:

- i) Equipment, books, tools costs (if any)
- ii) Prototype, models and software
- iii) Consumables/materials
- iv) Research materials (samples, data, maps);
- v) Field expenses
- vi) Dissemination of research results
- vii) Stationery/Report writing costs
- viii) Communication
- ix) Seminars and conferences
- x) Payments to supporting staff
- xi) Travel and accommodation costs
- xii) Labour costs
- xiii) Honoraria; mention names of recipients, applicable rates and duration
- xiv) Contingencies; usually 10 - 15% should be allowed for
- xv) Research administrative costs - at least 12% of all costs

The cost estimates should conform to approved rates.

- Indicate which cadre of supporting staff, for how long and state the basis of payment i.e. either a fixed rate per hour or lump sum payment(s).
- For consumables/materials, indicate the local/foreign cost component.
- Here state the applicable per diem or the estimated ticket cost, duration of stay, accommodation charges per night, food cost/allowance, if traveling by road in a College/School/personal vehicle indicate the total distance to be travelled and the applicable rates. Allow for the driver's expenses.

2. Budget Format and Payment Schedule (see next page).

UNIVERSITY OF DAR ES SALAAM
SAMPLE SUMMARY OF RESEARCH PROJECT BUDGET

College/School/Institute: _____

Research Title: _____ Principal Researcher: _____

DESCRIPTION		PHASES			Total
		Phase 1	Phase 2	Phase 3	
A	DIRECT COSTS				
A.1	Equipment and instruments				
A.2	Prototypes, models and software				
A.3	Consumables (reagents, films, tapes)				
A.4	Research materials (samples, data, maps)				
A.5	Field expenses (RAs, labour, tools)				
A.6	Dissemination (fliers, documentaries)				
A.7	Stationery and report writing				
A.8	Communication				
B	TRAVEL				
B.1	Local travel and per diems				
B.2	Seminars and conferences*				
	Sub-total				
C	INSTITUTIONAL FEES [12%]				
	Total				

**International seminars and conferences shall be handled (administratively) separate from this budget.*

NOTES

1. This worksheet is protected thus cannot be altered. Its inputs come automatically from detailed budget in worksheets of Phase 1 to Phase 3, which can be altered.
2. The 'Budget Summary' and the 'Budget Distribution' pie chart should be inserted in the respective position of the main body of the research proposal.

Annex VI: Sample Research Contract Format

UNIVERSITY OF DAR ES SALAAM
CONTRACT FOR RESEARCH

- 1. Name of the Researcher(s)

- (Principal Researcher)
- 2.
- 3.
- 4.

The Researcher agrees to undertake research under the following terms and conditions:

- 1. I, the Principal Researcher mentioned above, undertake to carry out the research project, titled..... the details of which are contained in the attached approved proposal.
- 2. The duration of doing the research will be..... Months/Years.
- 3. The University of Dar es Salaam (UDSM) undertakes to provide funding for the proposal project for the total amount of TZS..... subject to availability of funds.
- 4. The researcher(s) undertakes to abide with all applicable UDSM policies on finance, research, intellectual property rights and other guidelines in the conduct of research, reporting and collaboration with external researchers and or institutions.
- 5. The payment will be in accordance with the approved schedule that is attached to this contract.
- 6. All supporting staff, e.g. secretarial, technical and auxiliary will be from among the UDSM staff/students. Permission to employ staff from outside UDSM, if for an extended period of time and/or on regular basis, should be obtained from the Director of Research before the appointment is made.
- 7. UDSM reserves the right to withhold payment partially or fully, if it is not satisfied with the progress of the project and upon failure of the researcher to rectify the anomaly within the agreed timelines. UDSM shall also have the right to recover unaccounted and unretired funds from the research staff salary and may bar such researcher from applying for similar research support.
- 8. In case of non-performance, except in cases of force majeure and other justifiable causes, the researcher(s) shall be required to fully or in *quantum meruit* refund the UDSM payments received for the purposes of research.
- 9. The Principal researcher acknowledges that he/she is aware of the University of Dar es Salaam Research and Intellectual Property Rights Policy which are to the effect that UDSM shall own all intellectual property rights arising out of the research.
- 10. The research project has been assigned a unified UDSM Code No.....

We the undersigned accept the above- mentioned terms and conditions.

Principal Researcher
Witness

Principal/Dean/Director, College/School/Institute of.....

Date

Copy: Director of Research

Annex VII: Research Progress Report Format

1.0 PROJECT DESCRIPTION

SECTION A: SUMMARY OF ADMINISTRATIVE INFORMATION

- 1.1 Project Number & Title:
- 1.2 Principal Researcher
Name: _____ Department: _____
- 1.3 Period (month/year) covered by this report
From _____ to _____
- 1.4 Period (month/year) covered by previous progress report:
From _____ to _____
- 1.5 Starting date of Project:
- 1.6 Estimated duration of Project Date of estimated completion
Initial:
Latest:
- 1.7 Estimated cost of Project (in TZS):
- 1.8 Funds allocated to project (in TZS):

Phase 1	Phase 2	Phase 3	Phase 4	Total

2.0 PROJECT OBJECTIVES

Briefly state the project objectives, indicate which (if any) are changed or new, and give the reason for any revision (1) since the start of the project, and (2) since the latest progress report.

3.0 PROGRESS SINCE LAST REPORT

A: SCIENTIFIC PROGRESS

Include sufficiently detailed summaries of work carried out and results obtained to permit an *informed* critical scientific assessment of the work by the respective committees and per reviewers. If possible, results should be presented in tabular or graphic form. Summaries should be complete in themselves and as brief as possible, consistent with clarity (a maximum of two pages is required).

SECTION B: PROGRESS TOWARDS ACHIEVING PROJECT OBJECTIVES

Describe advances and/or problems encountered towards the completion of the Plan of Work for this reporting period. Interpret new findings (both positive and negative) in terms of the objectives of the project and state if they are expected to increase (or decrease) the duration, total cost, and/or likelihood of success of the project. If findings indicate potentially fruitful alternative and/or additional lines of research, indicate so with sufficient explanatory information to ensure understanding by reviewers.

4.0 FINANCIAL STATEMENT OF INCOME AND EXPENDITURE DURING THE PERIOD COVERED BY THE REPORT*

PERIOD COVERED (DATE) FROM _____ TO _____.					
		Amount ¹ Brought Forward	Fund ² Received	Funds ³ Expended	Balance ⁴
1.	Direct Expenditures				
2.	Travel and Transport				
3	Per Diem				
4.	Honoraria				
GRAND TOTAL					

1. Amount should be shown in TZS.
2. The breakdown should be as shown in the budget approved for the reporting period.
3. Includes as funds expended and those for which commitments have been made.
4. This amount is the sum of amounts in the first two columns, less the amount in the third. The balance should be reconciled with approved budget indicated in Annex IV.

Annex VIII: Format for the Final Research Report

1.0 Research Report Content

A research report should include the following headings:

- Abstract
- Acknowledgments
- Table of contents
- List of figures
- List of symbols
- Introduction
- Objectives
- Literature review
- Methodology
- Experimental details
- Results
- Analysis and Discussion of the results
- Conclusions and Recommendations
- References/Bibliography
- Tables
- Plates
- Figures
- Appendices

2.0 Report Format

- All headings should be left justified.
- Line spacing should be single and fonts should be 12 cpi.
- Left margin should be 1.5 in and 1 in on all other sides.
- Typing should be on both sides of the A4 page.
- Format for quoting reference numbers in the text and references should be standard. British Citation Standard BS 5605:1990 is recommended. Any other standard that is recommended for certain professions could also be used.
- Report cover shall be as shown in the attached format.

Examples:

(i) Technical articles

Lembu, T. R., 2005 Informal Construction Sector Performance in Tanzania. *Tanzania Engineer, IET*, 10(3), pp. 37 - 43.

(ii) Books

Masatu, C. K., 2004. *Implementing Total Quality Management in Higher Education*. Dar es Salaam Higher Education Press, Dar es Salaam. 156 pp.

(iii) Reports

Construction Industry Development Board, 2004. *Construction Industry Sector Development Strategy - A Summary of Needs*. CIDB, Dar es Salaam. 142 pp.

- Tables, Plates and Figures should either be included in the text at the appropriate places or they should be at the end of the text, after references.

3.0 Electronic Format

For purposes of inclusion in the UDSM electronic database, an electronic format of the report based on commonly used software shall also be submitted.

UNIVERSITY OF DAR ES SALAAM
(Name of College/School, Institute or Bureau)



FINAL RESEARCH REPORT

(TITLE OF THE RESEARCH PROJECT)

Research Report No: _____

Authors:

1. _____

2. _____

3. _____

4. _____

(Date –Month, Year)

Annex IX: Guidelines for Research Report Peer Review

1. General Evaluation

Editorial quality

Comments:

Layout

Comments:

Length

Comments:

Quality of References

Comments:

Adherence to general requirements (fonts, line spacing, margins etc.).

Comments:

2. Detailed Evaluation

Abstract: Does the abstract adequately summarise the report?

Yes

No

Comments:

Introduction: Is the introduction sufficiently detailed for this form of research?

Yes

No

Comments:

Objectives: Are the research objectives clear and do they reflect what has been achieved in the research?

Yes

No

Comments:

Literature review: Is the literature review relevant, sufficient and up to date?

Yes

No

Comments:

Research methodology: Is the research methodology sufficiently described?

Yes

No

Comments:

Experimental details: Are the experimental details well described and can they be repeated?

Yes

No

Comments:

Results: Are the results expected accurate and well presented?

Yes

No

Comments:

Analysis and discussion of the results: Is the analysis accurate and exhaustive?

Yes

No

Comments:

Is the discussion of the results accurate, exhaustive and conclusive?

Yes

No

Comments:

Conclusions and recommendations: Are the conclusions and recommendations relevant and consistent with analysis?

Yes

No

Comments:

Do the conclusions and recommendations match the research objectives?

Yes

No

Comments:

Are the references/bibliography relevant, exhaustive and up-to- date?

Yes

No

Comments:

3. Recommendations

Would you recommend that the report be published?

Without changes

With minor changes

With major revisions

Not to be published due to poor quality

Reasons: 1.
2.
3.
4.

Reviewer's Name: _____

Reviewer's Signature: _____ Date: _____

Annex X: Guidelines for Research Rates

THE DIRECTORATE OF RESEARCH			
SUMMARY OF PROPOSED RESEARCH RATES			
SN	ITEM	OLD RESEARCH RATES (TZS)	PROPOSED RESEARCH RATES BY THE TEAM IN TZS
1	Typing	600 Per Page	1,250
2	Lunch allowance	5000 Per Day	10,350
3	Photocopy	40 Per Page	80
4	Public Transport-Shuttle Service	5000 Per Day	10,350
5	Mileage Allowance	456 Per KM	950
6	Payment to Research assistants		
A	Non-graduates	6000 Per Day	12,450
B	Undergraduates	8000 Per Day	16,600
C	Graduates	15000 Per Day	31,100
7	Stationaries/Equipment and Research materials	As per applicable rates obtained at the supplies office	As per applicable rates obtained at the supplies office
12	Data entry charges	1000 Per Questionnaire	2,100
	Data Analysis	1500 Per Questionnaire	3,100
13	Translation	15000 Per Page	31,100
	Transcription	15000 Per Page	