ARDHI UNIVERSITY

ARU RESEARCH OPERATIONAL POLICY AND PROCEDURES

March, 2011
PREFACE

Ardhi University Research Operational Policy and Procedures is a policy guiding document for research endeavors at the University.

This document has been prepared to address internal and external customers’ needs of the researchers at ARU, partners and funding agencies for enhancing research performance at Ardhi University.

The Research Operational Policy and Procedure document is divided into five main parts. Part one gives the introduction largely the background and rationale of the policy. Part two gives the objectives of the research policy and part three is all about the research policy context. All issues regarding sourcing research funds, research culture, ethics, intellectual property rights as well as research and public policy are presented in part four. Part five of this document provides the operational procedures of the research at ARU.

It is our sincere hope that ARU Research Policy and Operational Procedures will provide information that will be useful in guiding research endeavours within and outside Ardhi University as well as other interested organization and partners.

Prof. I.B. Mshoro

Vice Chancellor
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<td>AAU</td>
<td>Association of African Universities</td>
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<td>APC</td>
<td>Ardhi University Publishing Centre</td>
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<tr>
<td>ARI</td>
<td>Ardhi Institute</td>
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<td>ARU</td>
<td>Ardhi University</td>
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<tr>
<td>COSTECH</td>
<td>Commission for Science and Technology</td>
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<td>DANIDA</td>
<td>Danish international development agency</td>
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<td>DPSRP</td>
<td>Directorate of Postgraduate Studies, Research and Publication</td>
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<td>EAC</td>
<td>East African Community</td>
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<td>ERB</td>
<td>Engineers Registration Board</td>
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<td>GIS</td>
<td>Geographic Information Systems</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<td>IHSS</td>
<td>Institute for Human Settlements Studies</td>
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<td>IUCEA</td>
<td>Inter-University Council of East Africa</td>
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<td>MDG:s</td>
<td>Millennium Development Goals</td>
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<td>MKUKUTA</td>
<td>Mkakati wa Kuinua Uchumi na Kutokeza Umasikini Tanzania (National strategy for economic growth and poverty reduction)</td>
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<tr>
<td>MSTHE</td>
<td>Ministry of Science, Technology and Higher Education</td>
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<tr>
<td>NEPAD</td>
<td>The New Partnership for Africa’s Development</td>
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<tr>
<td>NORAD</td>
<td>Norwegian Agency for Development Cooperation</td>
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<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
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<td>RS</td>
<td>Remote Sensing</td>
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<td>SADC</td>
<td>Southern African Development Cooperation</td>
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<td>SIDA/Sarec</td>
<td>Swedish International Development Agency/Department of Research Cooperation</td>
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<td>SHDRPC</td>
<td>Senate Higher Degrees, Research and Publication</td>
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<td>UCLAS</td>
<td>University College of Lands and Architectural Studies</td>
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<td>UDSM</td>
<td>University of Dar es Salaam</td>
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<td>VicRes</td>
<td>The Lake Victoria Research</td>
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1.0 INTRODUCTION

1.1 Background
Ardhi University (ARU) is a Public University formed following the transformation programme of the then University Collage of Lands and Architectural Studies (UCLAS) into a full, fledged University. Like other higher learning institutions, ARU primary business areas are teaching, research and public services for improved quality of life of Tanzanians. ARU research activities cover a wide range of subjects the mainstay of which are the broad disciplinary areas of the University’s Institute(s) and Schools. Based on the disciplinary coverage, of ARU’s research areas are issues pertinent to housing and human settlements studies, urban and regional planning, environmental science and technology, geospatial science and technology, real estate studies, land policy studies, construction economics and management, rural and urban development and architecture and design. In terms of research ARU’s vision is to become a reputable Centre for Excellence for advanced scientific knowledge through research and publications, with a mission of enhancement of research activities, outputs and dissemination through recognised electronic and print publications; seminars and workshops and organization of public debates and other discussion fora.

Like other core functions of the University, the research and publication activities at ARU are guided by the ARU Corporate Strategic Plan. The research policy and operational procedures provide the general regulatory framework for conducting research activities at the University. The operational procedures include research projects initiation, format for writing research proposals, scrutiny and approval of research proposals, planning and budgeting guidelines. Others are regulations governing financing of research activities, procurement and handling of equipment and consumables pertinent to research, registration of research projects, and research reporting requirements. The role of the various control and monitoring organs of the University are also stipulated. The stipulations encompass matters pertaining to regulations regarding employment within research projects, and contractual issues between the researcher and the University. In addition to the University level broad research foci, School and Institute research agenda, spell out the main research areas and priorities for the various specialised academic units of the University. As noted earlier, these essentially reflect on the disciplinary areas of the Institute(s) and Schools.
1.2 Rationale for the Policy

According to the Corporate Strategic Plan of the University the main activities that directly concern research activities at ARU include strengthening of research administration, developing and implementing research agenda, mobilizing funds for research activities, improving the capacity of Ardhi Publishing Centre (APC), establishing specialized centres for specialized research areas, improving dissemination of research findings, creating a database for research activities, developing and implementing ARU Intellectual Property Rights and Policy. This research policy, *inter alia*, aims to address and facilitate realization of these aspirations. The recent decision and commitment made by the Government to devote one per cent of the national annual budget to research activities put much pressure on ARU to prepare and develop a competitive research environment so as to be able to effectively tap funding and other opportunities that are likely to spring from the affirmative government position.

The need for this research policy also stems from the fact that at the moment ARU does not have its own research policy and operational procedures. The 1998 University of Dar es Salaam Research Policy and Operational procedures have guided research activities since the University was established. This is however, undesirable because the UDSM policy does not fully meet the specific contexts and needs of ARU. In addition, the existing research agenda for the Schools and the Institute which were developed during the UCLA era, are out of date and therefore do not encompass challenges related to contemporary issues such as climate change and the strategic role land continues to play in the on-going socio-economic transformations and civil tranquillity in the country.

The Directorate of Postgraduate Studies, Research and Publication (DPSRP) is responsible for the overall administration of research activities at University level. Through the Senate Higher Degrees Research and Publication Committee (SHDRPC), it provides guidelines for research activities and the enforcement of the same at the University. The directorate needs to be strengthened both in terms of human resources and facilities in order to cope with the current and future research demands. The Departmental, School, and Institute Research and Publication Units are the key organs that closely work with SHDRPC to manage and ensure the quality of research activities at the University.
Regarding the strength of human resource capacity for research, it is noteworthy that there has been a dramatic increase in the number of staff members with the PhD degree since 1996. The increase has paralleled the transformation of the University from Ardhi Institute (ARI) into the University College of Lands and Architectural Studies (UCLAS) in 1996 and from UCLAS to Ardhi University (ARU) in 2006.

In addition to the increasing proportion of staff members who already have PhDs, at present over 24 members of academic staff are engaged in PhD studies. In recent years, the research activities, including facilities for research management have improved significantly. This includes well equipped environmental engineering laboratories, GIS and other specialised ICT facilities, laboratory and equipments for geomatics and a resource centre for disaster management. Also funding (both local and external) to support research and outreach activities undertaken by the various academic units (the Institute (IHSS) and Schools) have not only been diversified but have also increased.
2.0 OBJECTIVES OF THE RESEARCH POLICY

The overall goal of this research policy is to guide and regulate basic and applied research activities at Ardhi University. The ultimate aim is to protect and strengthen the integrity, image and reputation of ARU as a centre of excellence. This research policy takes the cue from objectives of research policy outlined in the ARU Corporate Strategic Plan. These are to:

i. Provide a mechanism of ensuring that the research agenda addresses the national development objectives and priorities as well as follow up of implementation of research agenda;

ii. Provide for modality of research coordination at all levels (institutional, national and regional level);

iii. Introduce a research quality assurance mechanism;

iv. Ensure adequate funding for research;

v. Strengthen institutional capacity for strategic, technical and operational planning, budgeting and control for research;

vi. Set up the mechanism to ensure that ARU academic staff members attain the desired mix of output - research, teaching and consultancy - so as 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;

vii. Encourage internal, national, regional and international collaboration – institutional, national, regional and international research networking;

viii. Enhance marketing skills of the University and 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;
ix. Minimize unfavourable environmental impact of research projects; and

x. Ensure dissemination of research results through regular participation in relevant fora at national/regional and international levels.

Whilst this policy aims to facilitate realisation of the aforementioned objectives, the thrust of the policy is to undertake credible research that makes a difference to the lives of all Tanzanians. Therefore, at the centre of research activities undertaken at ARU, must lie our commitment to address challenges facing our society to include sustainable development and alleviation of poverty.

The specific objectives of this research policy are:

i. To facilitate stimulation and promotion of intellectual, cultural, scientific and technical knowledge development;

ii. To provide for incentives for encouraging academic staff to undertake research and develop research capacities;

iii. To define a mechanism for approval/coordination, monitoring research projects, sharing and disseminating research outputs;

iv. To provide a tools for strengthening research management infrastructure;

v. To provide for a system for rewarding research excellence among academic units and individuals;

vi. To set up a mechanism for mobilizing and sharing research resources;

vii. To define structures and a system for enhancing transparency and quality assurance for research activities;

viii. To provide for a mechanisms to link research with and enrich teaching; and

ix. To define mechanisms for preserving the constitutional rights of researches as scientists and private citizen, while protecting the image of the ARU as independent and non-partisan public institution.

x. To provide a framework for the dissemination of research findings.

xi. To build capacity to do research within the upcoming members of staff.

xii. To encourage the establishment of linkages with other research institutions within and without Tanzania.
3.0 RESEARCH POLICY CONTEXT

3.1 Background

The ARU Corporate Strategic Plan – 2009/10 to 2018/19 puts emphasis on capacity development for enhanced teaching, research and public service; quality assurance; outreach; and transforming the University into a dynamic regional centre of excellence in the rapidly expanding professional and academic disciplines.

3.2 The Vision and Mission of Ardhi University

The vision and mission on which this research policy document is founded are transforming ARU as a centre of excellence in seeking and disseminating knowledge to a wide spectrum of beneficiaries at national, regional and global levels”. The mission is “to provide integrated teaching, research and public services that are geared towards achieving sustainable socio-economic development of Tanzania and the world at large”.

The formulation of this Research Policy has been undertaken within the context of the University’s wider mission and goals.

ARU’s pursuit for research vision, mission and functions shall observe and be guided by following basic principles:

(i) To uphold values that enhance ARU as an academic and professional tertiary institution;
(ii) To direct ARU research efforts and activities towards supporting socio-economic transformation and sustainable development;
(iii) To cherish high ethical values – credibility and reliability;
(iv) To promote an intellectually free University environment guided by enquiry, and search for knowledge and non-violation of academic freedom;
(v) To enhance and promote ARU’s good standing and exemplary image among its peers, relevant national and international organisations, and other stakeholders;
(vi) To boldly embrace new ideas as well as keep abreast with cutting edge science and technology while also holding on to the tried-tested ideas and methods; and

(vii) Strive to play a visibly significant role in the advancement of the frontiers of knowledge especially in ARU’s core disciplinary areas.

This Research Policy adequately embraces these principles. At the centre of the policy also lies the commitment to ensure that research activities are relevant to and support developmental responsibility by addressing national or societal problems with immediate or long-term impacts. In this respect, ARU’s research activities have to constantly be aligned with national, regional or even global development directions.

3.3 Research and the National Development Policies

The major policy framework that defines Tanzania’s aspirations and development agenda include the Tanzania Development Vision (2025) that advocates a national development that is people centred, based on sustainable and shared growth and free from abject poverty. Vision (2025) complements the National Strategy for Economic Growth and Poverty Reduction popularly known by its Kiswahili acronym MKUKUTA. MKUKUTA focuses on reducing income poverty, improving quality of life and social wellbeing and on governance and accountability. The Millennium Development Goals (MDGs) protocol to which Tanzania is a signatory provides a macro-policy framework that sets global targets to reduce poverty, hunger, disease, illiteracy, environmental degradation and gender disparities by 2015.

Capacity building of research and teaching institutions has been demonstrated as an indispensable component of the efforts on the achievement of MKUKUTA goals, as well as those of the MDGs. Unfortunately, Tanzania’s research support environment and culture are still weak. This situation tends to marginalize research activities in the country. It is commendable that this trend has started changing in recent years. Commendably, the Government has recognised the indispensable role research plays in national development.

In spite of past deficiencies, the present as well as future challenges and needs, a critical minimum level of research capacity in the country is necessary for socio-economic development. In line with this, the former Ministry of Science Technology and Higher
Education (MSTHE) prepared a national sub-master plan for science and technology which underscored the role of research in areas related to land, environment and human settlements development.

In view of the above, higher learning institutions like ARU are challenged to be more aggressive and to play a more active role in promoting applied research in the fields relevant to their core mission objectives. ARU will direct its Research Policy, agenda and thematic issues to allow her to play a leading role in the production of relevant R&D results as well as the development of appropriate and sustainable solutions to the critical national and regional development problems.

3.4 Research, Regionalization and Harmonization

Regionalisation of East Africa as well as the on-going consolidation of the functions of the regional bodies such as the EAC, SADC, the Great Lakes/authorities; NEPAD bring with it opportunities for research collaborations, funding as well as sharing research resources (expertise, materials and equipments). It also avails a conducive environment for engendering research partnership especially for multi-disciplinary teams formed specifically to solve common problems facing the regional states. Typically, this refers to trans-boundary environmental problems such as climate change and degradation of shared water resources, which cannot effectively be solved separately by individual countries. The VicRes project is a good and recent example of how East Africa regionalization has availed an opportunity for research funding, collaboration and resource sharing.

Regionalisation also widens the arena for competition for research opportunities and funding since regional and multinational funding agencies as well as development partners may avail research funding opportunities on a competitive basis. The ARU Research Policy should therefore aim at enhancing and improving the research environment to enable the University to be competitive not only at the national but also at the regional and international levels. This is more so if we consider that fact that regionalisation will also facilitate free movement of the labour force and business and as such the University may lose competent staff unless strategies for staff retention are put in place. On the other hand, the University may attract competent staff provided attractive incentive packages are offered.
The Association of African Universities (AAU), the Inter-University Council of East Africa (IUCEA) and regional professional registration bodies such as the East African Architects and Quantity Surveyors Registration Board are also influential in so far as quality assurance and control in teaching, learning, research and professional recognition are concerned. ARU therefore has to strive to attain the standards pertaining to teaching, learning and research set by the association of universities and regional professional registration bodies to ensure that it wins recognition for academic excellence.

3.5 Research and Quality Assurance

The ARU Corporate Plan puts emphasis on quality outputs. In order to ensure the ARU will continue with the efforts to develop a Quality Assurance System (QAS) and put in place systems that will enable ARU to be competitive at all times. Therefore, ARU will put in place the requisite capacity for assuring and controlling the quality of research outputs through providing structures and systems that will enable ARU to compete in the knowledge-based world economy. Key stakeholders of the QAS system include research funding bodies, and researchers, research administering units and authorities, and users of research outputs.

3.6 Research and Research Culture

The current policy of the University that obliges all academic members of staff to train up to the level of PhD coupled with the establishment of postgraduate programmes in all academic units have greatly helped increase the volume of applied and basic research activities at the University. The number of on-going research projects including contracted research undertaken during 2007/08 was about 80. However, the number of research projects and the volume of peer reviewed publications are not commensurate with the number of academic staff members with PhDs or research projects undertaken. Furthermore, at times the available funding opportunities for research have not been fully utilized. Given the low incentives and remuneration among academic staff, development of research and publication culture will continue to be a gradual process that has to be punctuated by the necessity for research incentives and research quality assurance.
The apparent competition between consultancy and research is another area of concern. Consultancy is preferred by most academic staff members as it provides more direct and tangible incentives to respective academic members than research, particularly in view of the “meagre” salaries. Efforts will be taken to provide more incentives, raise awareness and promote research activities across all academic units. These are important policy and action areas.

Senior staff will be encouraged and facilitated to undertake research for the general enhancement of knowledge; and to build research capacity within the younger generation of academic staff.

3.7 Research and the Emerging/Contemporary Issues

Research undertakings at ARU must keep abreast with emerging and contemporary social, economic and environmental issues for ARU to be able to be effective in responding to new challenges facing the country from time to time. Contemporary issues, which need to take on board by ARU in formulating the Research Policy and preparation of research agenda and themes are highlighted hereunder:

3.7.1 Global Warning, Climate Change and Adaptation

Across the globe, the reality of climate change and its effects is becoming more apparent and as a result droughts, hurricanes, floods and storms have become both more frequent and severe; land-based production systems have become quite unreliable due to possible shifts in weather patterns adversely affecting livelihoods. In Tanzania, the main sectors impacted by climate change include agriculture, forestry and fisheries, which are the main means of livelihoods providing food, energy and income. To this list may also be added issues pertinent to depletion and degradation of water and other environmental resources and an escalation in frequencies as well as severity of disasters. It is therefore becoming apparent that the country will need to adapt to climate change at various levels in order to cope with emanating challenges. Research undertakings at ARU should be focused on investigation of strategies for mitigation and adaption to climate change in areas, which are relevant to the disciplines offered at the University. Research areas, which ARU is competent to pursue, include Adaptation of Human Settlements to Climate Change, Vulnerability Assessment for Climate Change, Adaptation and
Mitigation and Adaptation Strategies in Water Management for Irrigation and Livestock. Adaptation at the building and household level Additional research areas that are within the pur view of ARU are assessment and monitoring of climate change effects on availability and quality of environmental resources, assessment and monitoring of environmental health implications of climate change, and development and adaptation of environmental technology to climate change needs.

At the moment, there are several sources of funds, which are offered by multinational organizations and development partners (such as NORAD, DANIDA, CIDA, Sida, DFID, EU) for conducting research projects pertinent to Climate Change Mitigation and Adaptation. Most if not all the research funds are offered on a competitive basis. Therefore, ARU should facilitate her members of staff to prepare research proposals, which are competitive and hence fundable.

### 3.7.2 Gender and Disadvantaged Groups

ARU being a public University must engage in research undertakings whose results are able to benefit the entire population spectrum. In view of this, research agenda and themes should address and be responsive to issues pertinent to the needs of physically, socially, culturally and economically disadvantaged groups, including children, disabled, minority groups, and other groups of people whose needs have not been considered or properly addressed in the past.

The Research Policy shall be gender sensitive and aim to address/reduce gender inequalities in availing opportunities to members of staff for engaging in research. It should also be recognized that the Research Policy may impact female and male staff members differently hence the need to ensure that the needs of both are taken on board during its development and implementation.

In order to promote the national agenda on gender ARU shall strive for research on balance and equity, gender issues. Specifically, research agendas and themes should take on board gender issues for ensuring that research results benefit both genders equitably.
3.7.3 Research and HIV/AIDS Pandemic

AIDS has the potential to create severe social and economic impacts in many countries. It is different from most other diseases because it strikes people in the most productive age groups and is essentially fatal. The effects will vary according to the severity of the AIDS epidemic and the structure of the national economies. The two major economic effects are a reduction in the labour supply and increased costs. The social impact of HIV/AIDS is most evident in the orphans’ crisis. These children are overwhelmingly taken care of by relatives, especially grandmothers, but the capacity of the extended family to cope with this burden is stretched very thin and is, in places, collapsing. In view of this, research undertakings must as much as possible be geared towards addressing HIV/AIDS intervention issues.

ARU Research Policy in principle focuses on creating an enabling environment for engaging in research areas relevant to the disciplines offered at the University, which will among other things; contribute in arresting the HIV/AIDS pandemic. Disciplines offered at ARU may play a role in arresting the HIV/AIDS pandemic in the country. For example, unplanned and uncontrolled urban development is responsible for the overcrowded and unserviced informal settlements. Poor or lack of basic infrastructure services especially potable water supply and sanitation complicates management of HIV related opportunitistic diseases.

Since one of the main objectives of the Research Policy is to enhance and build the capacity in managing and conducting research, these efforts should integrate the campaigns against the spread of the HIV/AIDS pandemic for minimizing its adverse impact on human resources development.

3.7.4 Biofuels, food security and environmental concerns

ARU research policy needs to address the impact of the energy and food crises, how there are being addressed by dedication of tracts of land to produce bio-fuels and food for external consumption

3.7.5 Land for Investment and the impact of Foreign Direct Investment

Many countries are now struggling to attract private investment in the agricultural, natural resources and mining sectors. ARU’s research policy must be geared towards establishing the impacts of these on land rights and environmental degradation
4.0  RESEARCH POLICY

4.1  Sourcing Research Funding

4.1.1  Policy Issues

Potential research funding sources for ARU can be identified as: ARU’s own sources, government bursary, industry through contracted research, development partners such as Sida/Sarec and Danish International Development Agency (DANIDA), national research foundations and institutions such as the Commission for Science and Technology (COSTECH), and other national, regional, and international agencies such as VicRes. Currently the main sources of research funding actually accessible to the majority of researchers at ARU are government bursary and development partners, mainly Sida/Sarec.

Although the sources of research funding that can be accessed by ARU staff are apparently limited, the available research funds are not always exhausted because the demand for research funding (based on successful applications) often falls short of supply. This, however, does not imply that ARU does not need additional research funding or additional funding sources. While current trends may indicate that the available research funds exceed the corresponding demand at the University, the demand is likely to progressively grow as more ARU academic staff members earn PhDs or are promoted to senior positions. In turn, the latter would lead to increased engagement in research activities.

The current ceiling per research project however, seems too low for a meaningful ground-breaking research activity. Also raising operational costs including fuel, labour (including research assistants), stationery, chemicals etc. further limits the types and size of research activities that may be undertaken. At the same time, administrative procedures especially with regard to processing of research funds in cases where a researcher has more than one on-going research project, is another bottleneck. Besides, there is a tendency among some academics and researchers alike to hide their research and publication activities. These concerns have to be addressed so as to entice more ARU staff will engage in research activities.

It is also necessary for ARU to explore many research funding sources as possible because: 1) the few available funding sources are likely to be exhausted as more staff members acquire PhDs, gain more experience and improve their research skills, 2) even where there are many research funding sources, many custodians of funding sources have restrictions on the kind of
research the funding can be spent on, which makes their grants only selectively accessible, and
3) several sources of research funding, especially non-restrictive ones, are needed so as to
increase alternative funding channels, especially for prolific researchers who are bound to
exhaust research grants made available by the University. This is necessary to enable prolific
researchers to carry out as many parallel research projects as they practically can handle. In
this regard, it is important that senior academic staff at ARU especially professors are required
to, apart from mentoring and teaching, show their competence and contribution to the
University through the amount of research funds they have been able to marshal.

The main policy issues pertinent to the preceding discussion can be identified as:

i. Restrictive funding conditions and lengthy procedures currently in force, which
discourage engagement in research.

ii. Inadequate research funding sources and the need for widening the research source
spectrum beyond the conventional.

iii. Low budget ceiling currently applicable to individual short-term (small) grants which
favour small grants and price out high budget research ideas.

iv. The need for a system to prioritise research thematic areas and topics funded by the
university to reflect more on and respond to needs of the focal discipline areas of ARU
and individual researchers’ areas of expertise.

v. Inadequate transparency and exposure/knowledge on potential funding opportunities
and paper publication outlets.

vi. The need to put in place mechanisms for demanding and auditing the contribution of
senior academics in mobilising research funding.

4.1.2 Policy Statements

i. ARU shall put in place funding mechanisms and procedures that both ensure financial
accountability and encourage ARU staff to engage in research.

ii. ARU shall strengthen its own research funding capacity, explore external research
funding sources, and urge academic staff members marshal funding for research and
postgraduate training.
iii. ARU shall ensure that, when research funds are limited, priority is given to ARU’s focal discipline areas and research themes that are in line with the areas of competence, training needs and critical public concerns.

4.1.3 Strategies

i. Ease restrictions and cumbersome conditions and lengthy procedures applicable to research funding to encourage both prolific and non-prolific researchers to engage in research.

ii. Schools/Institute and Departments to identify and disseminate information on alternative funding sources (nationally, regionally, and internationally) and on potential paper publication outlets including journals.

iii. Make it possible for ARU staff to carry out more than one research project at a time and lift the funding ceiling for individual grants.

iv. Encourage and reward individual efforts to bring research funding to and carry out research projects under the auspices of ARU.

v. Encourage and reward individual efforts to bring to ARU research-oriented consultancy projects and consultancy projects that have large research components.

vi. Recognize and treat research-oriented consultancy projects and consultancy projects that have large research components in the same way as research projects per se.

vii. Institute criteria, in the promotion guidelines that require academic staff members aspiring to be promoted to rank of associate professor or above to show their strength and competence resources mobilisation and training of post graduates.

viii. Require that when funding is limited, priority is given to research topics that address needs of ARU’s focal discipline areas and researchers whose research would culminate in contributing to knowledge and enhance teaching rather than just satisfy academic interests.

ix. Build in a research component in consultancy undertakings.

x. Enhance the capacity of SHDRPC to search for and disseminating information on potential research funding sources.
4.2 Sharing Research Resources

4.2.1 Policy Issues

Since research resources are scarce the available ones may be optimally used if a proper mechanism for sharing them is put in place. It is also prudent that all special purpose equipment be shared by investigators to the maximum extent possible, although this shared use must not, of course, interfere with regulations of the sponsors (for sponsored research projects), the terms under which the equipment was acquired, or the work on a project for which the equipment was acquired.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need to optimally share research resources available within ARU.

ii. The need to make availability of ARU research resources known to all ARU staff.

iii. The need to make sure that sharing of research resources does not impede research execution or derail individual research efforts.

iv. The need to ensure that sharing of research resources does not impede other functions of the University, especially teaching.

4.2.2 Policy Statements

i. ARU shall require that Schools, Institutes and Departments have transparent and objective criteria of making research resources and opportunities known to members of staff and for allocating such resources and opportunities.

ii. ARU shall encourage and coordinate sharing of information and information sources of academic value. Such source shall include books, journals, electronic information, (e.g. CD-ROMS) and sources of such electronic information through the Internet (e.g. electronic databases).
4.2.3 Strategies

i. Conduct an inventory of research resources for identifying those which can be shared among academic units and individual researchers.

ii. Set up mechanisms and procedures for utilizing and sharing resources and facilities across Schools/Departments/Institutes.

4.3 Research Infrastructure

4.3.1 Policy Issues

The research infrastructure at ARU has not matched with an increase in number of academic units and researchers. For example, the academic units have increased from three Faculties and one Institute under UCLAS to six schools. The number of academic staff members who have PhDs has dramatically increased as well. As a result, most of the research equipment is controlled or managed at the school level. At the university level there is no inventory that shows the type of equipment available in the academic units and their working status. The University has not put in place a master plan for research infrastructure needs and acquisition either. Some equipment and instruments especially in SEST are underutilized because of lack of funds to buy the chemicals and other consumable materials required to run them. In some cases procedures for utilization of equipments is not transparent or not followed.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need for ARU to have research infrastructure that is commensurate with its needs.

ii. The need for ARU to manage its research infrastructure better, including providing for proper operation and maintenance needs of the infrastructure.

iii. The need to ensure that efforts to improve use of university infrastructure in research across academic units does not disrupt teaching and learning as well as other functions of the academic unit that host the infrastructure.
4.3.2 Policy Statements

i. ARU shall put in place and implement a plan for short and long term research infrastructure needs, and the acquisition and maintenance of the same.

ii. ARU shall ensure that its academic units have adequate research infrastructure that are fully utilized in a transparent manner and are properly maintained.

4.3.3 Strategies

i. Each academic unit to prepare research infrastructure needs, an acquisition plan, which includes funding options. The Directorate of Postgraduate, and Research and Publication to prepare the overall University research infrastructure plan based on academic units plans. The University to set aside funds for acquisition of research infrastructure as per plan requirements.

ii. The schools, institutes and centres to set up a mechanism/ procedures for utilizing and sharing infrastructure resources with the academic units across the university and beyond the university.

iii. The academic units to have a budget line for buying inputs for research infrastructure and maintenance of the same.

4.4 Procedures for Approval and Control of Research

4.4.1 Policy Issues

The approval of research proposals and research reports is accomplished by using a number of participatory organs from the departmental level to the SHDRPC. The research proposals are normally approved by the SHDRPC while the research proposals are endorsed at the School or Institute level. One of the main challenges is poor adherence to procedures for approval and low capacity in either reviewing the research proposals or reports at the Department or School/Institute.

The main policy issues pertinent to the preceding discussion can be identified as:
i. Slow approval of research proposals and weak control of the research process and research outputs.

ii. The need to improve the capacity of academic units to review research proposals and vet research outputs.

### 4.4.2 Policy Statements

i. ARU shall put in place enforceable mechanisms for approval of research proposals, controlling the research process, and vetting research outputs.

ii. ARU shall ensure that the capacity of the academic staff to review research proposals and reports at the Departmental and School/Institute levels is improved.

### 4.4.3 Strategies

i. Design enforceable mechanisms for approval of research proposals, control of the research process, and vetting of research outputs.

ii. Develop the capacity to enforce the research approval and control mechanisms.

iii. Provide guidelines for establishing and operationalising a multi-professional committee and expedite review of research proposals by SHDRPC.

### 4.5 Research Culture

#### 4.5.1 Policy Issues

Whilst the core functions of ARU like other Universities in the country are trifocal, comprising teaching, research and public service, weak research culture has undermined research productivity as well as the quality of teaching and public service. The state of research activities at ARU leaves much to be desired particularly terms of attitudes, quantity, thrust and contribution to national development.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need to enhance the research culture at ARU as well as improve its projection to the outside.
ii. The need for ARU to create an enabling environment for its academic staff to better balance engagement in research with teaching and provision of public service.

iii. The need to encourage senior staff to spearhead research, and to build capacity within the younger generation.

4.5.2 Policy Statements

i. ARU shall put in place and implement mechanisms that shall demand that Schools, Institute and Departments instil and maintain a ‘vibrant research culture’ that enables support academic staff and postgraduate students to build intellectual capacity.

ii. ARU shall require Schools, Institute and Departments to set annual targets that illustrate accounts of research activities and outputs of academic staff members.

iii. ARU shall develop research performance monitoring indicators that shall be applied by academic units to audit quantity and quality of research productivity.

4.5.3 Strategies

i. Involve academic staff from cross-disciplinary areas in developing research agenda for academic units.

ii. Explore and put in place mechanisms for automatic renewal or extension of contracts awarded to senior academic retirees.

iii. Attach research/teaching assistants to senior researchers/professors to promote mentoring and role modelling.

iv. Schools/Institute to prepare and implement local sabbatical programs that give academics opportunities to take time off their teaching and public service workload so as to concentrate on research activities.

v. All academic units to explore opportunities and invite visiting scholars.

vi. All academic units to prepare and popularize policy briefs for all completed research studies.
4.6 Research Training and Capacity (Human Resources)

4.6.1 Policy Issues

It is a recognised fact that research training represents one of the most significant areas of national investment in research and development. Furthermore, research students are a major resource, underpinning much of the leading edge in research necessary for meaningful application in national development, providing on-going renewal of the research and academic workforces and aiding in the transmission of knowledge and skills within and between the research and wider communities as a result of interpersonal networks.

At present, about 24% of the academic members of staff hold PhDs and about 15% are on PhD training. The University policy requires academic members of staff to train up to the level of PhD so that they can be effective trainer of professionals and researchers. Besides training at PhD level, another approach for enhancing the research capacity is encourage senior members of academic staff to team up with their junior counterparts in research undertakings. It is also critical to promote gender balance in research activities.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The importance of research capacity development as a strategy for enhancing research at ARU.

ii. The need for a multi-faceted approach to research capacity development, including mentoring.

4.6.2 Policy Statements

i. ARU shall strengthen and emphasize on research training both at undergraduate and postgraduate levels through ensuring that there are a significant, relevant and quality research training component in the curricula.

ii. ARU shall strive for increased government funding of research degree programmes through budgetary allocation for scholarships at master’s and doctoral degree as well as post-doctoral levels at the University.
iii. Apart from encouraging and supporting research applications and teams which bring together senior and junior academics, ARU shall require each senior staff to mentor younger colleagues as well as enhance gender balance in research activities.

4.6.3 Strategies

i. Devise a suitable allocation plan of research training scholarships to different academic units on the basis of performance, demand driven criteria gender balance enhancement.

ii. Assign the responsibility for compiling and submission of such budgetary requirements to the Directorate of Postgraduate Studies, Research and Publications.

iii. ARU to regularly train and facilitate academic staff to write fundable proposals.

iv. Require Schools, Institute(s) and Departments to prepare and ensure implementation of mentoring plans.

4.7 Research Remunerations and Incentives

4.7.1 Policy Issues

Poor remuneration and incentives in respect of research engagements are key factors that have created weak interest in research activities among academic staff. ARU is therefore challenged to put in place operational mechanisms of improving remuneration and providing incentives to those engaged and committed to engagements in research activities.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need for providing remuneration for carrying out research and incentives for engaging in research.

ii. The need to ensure that the remunerations and incentives are availed fairly as well as justly and really enhance research.

iii. The need for academic units at ARU to provide for and allow academic staff members to take time off their teaching and consultancy routines so as to concentrate on research engagements.

iv. The need to support research findings disseminations part of the incentive package.
4.7.2 Policy Statements

i. ARU shall develop an attractive remuneration package and ensure regular review so as to make research activities financially attractive.

ii. ARU shall set guidelines for rewarding and recognizing staff who excel or performed exemplarily in terms of attracting research funding building human resource capacity and enhancing research productivity outputs.

iii. ARU shall prepare guidelines for Schools/Institute and Departments to grant academic staff members short time research leave.

4.7.3 Strategies

i. Reward best researchers in each School/Institute during graduation or other suitable occasions.

ii. Set attractive institutional fee charges for externally sought or funded/contracted research projects.

iii. Formulate and implement objective and fair criteria and transparent procedure for identifying best research.

iv. Assist research staff with rapid publications of their findings.

4.8 Dissemination of Research Results

4.8.1 Policy Issues

Use and application of research results by relevant academic and professional communities as well as policy and decision makers is the ultimate goal of carrying out academic research. To ensure that research results are seen and get an opportunity to be used by relevant academic and professional community members, they must be made conveniently available as well as easily accessible and given the highest visibility possible. As such, deliberately extensive and user - targeted dissemination of research results is the surest way to achieve the ultimate goal of carrying out research.
The methods and media available and currently used by ARU researchers to disseminate their research results are: research reports, conference, seminar or workshop presentations, papers in conference proceedings, journal papers, and books and book chapters. Evidently, these methods and media of disseminating research results are practically the same as the ones used all over the world. Nonetheless, presumably because they are the main required output of any research funded by the university, research reports are currently the preferred means for disseminating research results for many ARU researchers. Since most research reports are finally produced and circulated in the hard copy format, their availability is limited to ARU’s libraries, the researchers themselves, and funding agencies of the relevant research projects. Most of research works carried out at ARU is not as highly visible, conveniently available, or easily accessible as it ought to be. Among other effects, this hurts ARU’s standing among its peers by not projecting its true image regarding research productivity and hurts individual researchers by not providing an appropriate forum for recognition and appreciation of their research productivity and contributions to their respective professional and academic fields. In addition, it denies other researchers worldwide the opportunity to learn from and apply results of research carried out by ARU researchers.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need to ensure that results of research carried out at ARU are widely disseminated and reach the target users and beneficiaries.

ii. Visibility, convenient availability, and easy accessibility of results of research carried out at ARU.

iii. The need to ensure that results of research carried out at ARU contribute to the enhancement of the academic image of ARU and improve its standing among its peers.

iv. The role of information and communication technology (ICT) in enhancing dissemination of research results.

v. The need for having easily accessible databases of outputs from research projects carried out at ARU or under the auspices of ARU.

vi. The need to expedite processing and publication of ARU journals.

4.8.2 Policy Statements
i. ARU shall ensure that results of research it funds or carried out under its auspices are widely disseminated and given the highest visibility possible to enhance the university’s image and benefit target users.

ii. As a special gesture of support, ARU shall particularly encourage and financially support ARU researchers to disseminate their research results through conference presentations.

iii. ARU shall ensure that findings of research carried out at or under the auspices of the University are available in forms that easy and convenient to accessible both in person and online.

iv. ARU shall establish guidelines to provide incentives to reviewers of papers and editors of ARU journals.

4.8.3 Strategies

i. Provide adequate ICT facilities, including computers and software for disseminating and enabling accessibility of research carried out at or under the auspices of ARU.

ii. Reward individual efforts to disseminate and publicise research results by awarding extra credit to researchers who publish and publicise results of their research.

iii. Increase the publication frequency of the Journal of Building and Land Development (JBLD) and publish it online as well as in print.

iv. Increase the number of journals supported and published by ARU and offer them both online and in print formats.

v. Enable each school to establish an electronic database of final products of research carried out under its auspices and make sure that the database is up to date and reliably available and accessible online.

vi. Research grants to formally cover journal paper publication costs.

vii. Set aside more funds for paying for conference attendance costs for researchers who write and present conference papers.

viii. Encourage and fund the publication of books, including edited PhD theses.
4.9 Linking Research, Teaching and Public Service

4.9.1 Policy Issues

Research and public service constitute key tenets of excellence in teaching and training in tertiary institutions especially universities. Members of staff who are active in research and public service are more likely to be on the cutting edge of their disciplines and aware of international perspectives in their field of specialisation. Because textbooks may not be current in many developing areas, lecture notes may be the first point of reference with the latest developments. Lecturers have therefore to persistently engage in research and professional practice so as to be at the forefront of their disciplines. Findings from one’s research can be used to clarify, update, and amend the teaching context and focus. Research and professional practice enhance teaching through the introduction of new concepts and methodologies. Often students appreciate lecturers who apply research findings and professional practice in their teaching programmes. Unfortunately, at present, teaching at ARU is largely done in isolation from research and consultancy. Resolving environmental challenges emanating from the phenomenon such as climate change induced hazards require close synchronisation of research, teaching and public service.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need to compel all academic staff members to engage in research activities.

ii. The need to ensure strong linkages between research and the other functions of the University, namely teaching and public service.

iii. The need to ensure that ARU students benefit from academic staff engagement and experience in relevant professional practice.

iv. The need to mainstream environmental concerns in research agenda and teaching.

4.9.2 Policy Statements

- ARU shall promote research that supports teaching and enhance scholarship through clearly linking research, professional practice and teaching and learning;
• ARU shall ensure that research and consultancy activities underpin the trainees’ experience through its support of learning and teaching.

• ARU shall promote research activities that focus on current challenges faced by society, including environmental concerns.

4.9.3 Strategies

i. Members of staff shall be encouraged to make good use of their research and consultancy works in the teaching context.

ii. Vetted research and consultancy reports shall be deposited at the University Library and other libraries in academic units for use as reference materials to students.

iii. Ways of integrating and auditing embedment of research and consultancy into the learning environment for enhancing the trainees experience shall be developed by academic units.

iv. Members of staff shall be supported and encouraged to develop approaches to teaching that are research informed.

v. Academic units at ARU shall be encouraged to proactively establish partnerships with practitioners and others in the society.

vi. Schools, and Institute(s) research agenda to mainstream contemporary issues to include environmental challenges in their research agenda.

4.10 Ethical Considerations

4.10.1 Policy Issues

The credibility and reliability of reported research results and fair attribution of credit for originality and sources of reported research are greatly dependent on incorporation and
observation of ethical considerations at all stages of research. To ensure this, the importance of ethical considerations in research must be inculcated in researchers, especially up and coming or inexperienced researchers who may not be aware of the importance of ethical considerations. The ethical considerations must also be made known to users of research results produced by or under the auspices of ARU. Therefore consideration for ethical aspects of research must be built in the research culture of ARU, individual ARU researchers, and among ARU graduates. Needless to add, knowledge of ethical needs and implications must encompass consideration of intellectual property rights pertinent to tools and products of research.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need to ensure that ARU researchers and graduates understand the importance and importance of ethical considerations in research.

ii. To need to make sure that ARU researchers and graduates observe ethical considerations when carrying out research at or under the auspices of ARU.

4.10.2 Policy Statements

i. ARU shall ensure that ARU researchers understand the importance and implications of ethical considerations in research.

ii. ARU shall ensure that all research work carried out at or under the auspices of the university observe pertinent ethical considerations.

iii. ARU shall review institutional structures for research management.

iv. ARU shall formulate and impose severe penalties on staff/students proved to have behaved unethically in the course of conducting/disseminating research outputs.

4.10.3 Strategies

i. Conduct research ethics awareness raising and promotion campaigns among ARU staff and students.

ii. Incorporate or strengthen the research ethics component of curricula of research courses taught at ARU.
iii. Require ARU researchers to formally commit themselves in writing to the effect that they promise to abide by and observe all ethical considerations applicable to their research work.

iv. Punish individuals who themselves wittingly violate, ignore, or cause others to violate or ignore ethical considerations when carrying out research at or under the auspices of ARU.

v. Establish and operationalise Ethical Committee.

4.11 Research and Industry

4.11.1 Policy Issues

Industry is currently and potentially among the most important consumers and beneficiaries of results of research carried out by universities. It is also an important potential source of funding for contracted research, research – oriented consultancy projects, and other consultancy projects with large research components.

The linkage between research and industry is therefore very important for both industry and academic institutions. Reasons that attest to this include: 1) the linkage enables universities and research institutions to tap into research funding that is in the custody of industry, 2) the linkage ensures that results of research carried out by universities and research institutions reach and are used by industry easily and immediately upon being generated, and 3) the linkage provides a suitable feedback mechanism that helps universities and research institutions to properly select and prioritise areas of applied research that are most relevant and in greatest demand.

The main policy issues pertinent to the preceding discussion can be identified as:

i. Suitability of form and beneficial effects of existing linkages between university research and industry.

ii. The need, potential and advantages of enhancing the existing linkages and seeking new ones.
4.11.2 Policy Statements

i. ARU shall ensure that current linkages between university research and industry are suitable and beneficial to both research and industry.

ii. ARU shall continually examine and improve current linkages as well as pursue new opportunities for beneficial linkages between research and industry.

4.11.3 Strategies

i. From department levels to university level, identify and characterise existing linkages between ARU research and industry to know their scope and limitations.

ii. Identify strengths and weaknesses of existing linkages between research and industry so as to come up with measures for exploiting and enhancing their strengths and minimising the weaknesses.

iii. Identify potential additional research and industry linkage options for the whole university as well as for individual academic units.

4.12 Intellectual Property Rights

4.12.1 Policy Issues

Intellectual property rights (IPRs) constitute law-protected rights pertinent to intellectual property, patents, and trademarks. IPRs encompass Intellectual property rights, patents, and trademarks. Intellectual property (IP) protects creative works such as literature and art. In the case of ARU, IP would apply to various works published by ARU as a whole and ARU staff. The Journal of Building and Land Development (JBLD), books published by ARU and journal papers published by ARU staff in the JBLD and other national and international journals are also subject to the IP jurisdiction. IP also applies to books and other publications produced by Ardhí Publishing Centre (APC). IPRs pertinent to patents protect inventions and processes whereas trademark IPRs are meant to protect names and logos/emblems/symbols that identify specific individuals, companies or similar other entities and products of such entities. In the current situation, there is no evidence that IPRs are accorded their due attention although there is reference to them in various university documents. This has to change as the university integrates into the global intellectual and professional communities.
The main policy issues pertinent to the preceding discussion can be identified as:

i. Observation and adherence to IPR needs by ARU community members.

ii. Licensing of ARU’s IPRs and licensing of non-ARU IPRs for ARU or ARU staff members and students’ use.

iii. The need to ensure awareness on intellectual property rights, including possession of knowledge on own and other people’s rights and the attendant legal obligations and implications.

iv. The role of IPRs in promoting and enhancing creativity and innovation and protecting products of such innovations and creative work from unfair use.

v. Criteria for apportioning IPRs of innovations and creative works between the university and individual researchers who work for the University.

vi. Obligations of the University with respect to IPRs of individuals, companies, its contractors, and other entities that interact with the University.

vii. Apportionment of IPRs between the university and University staff for creative works: a) developed during both official working hours and non-working hours and 2) using resources that belong to the University and staff’s personal resources.

viii. Possible conflicts between intellectual property rights of the University and those of individuals and other entities contracted to temporarily or permanently work for the University.

4.12.2 Policy Statements

i. ARU shall encourage, support, and use its resources to deliberately assist individual staff members to acquire IPRs for their creative works.

ii. ARU shall respect, protect, and cause to be protected under its legal jurisdiction IPRs of its staff acquired or developed outside the legal jurisdiction of the University.

iii. ARU shall equitably compensate its staff and associates for their contributions to IPRs the university acquires.

4.12.3 Strategies
i. Conduct IPR awareness workshops and seminars on a regular basis to inform new and remind continuing staff of their legal rights and obligations with respect to ARU’s, their own, and IPRs of others.

ii. Incorporate the teaching of IPR issues in curricula of research methods courses for both undergraduate and postgraduate programmes.

iii. Develop and maintain a database of IPR worth creative works carried out by or under the auspices of the university.

iv. Develop and maintain a database of IPRs for major creative works owned by the university and university staff.

v. Provide incentives and direct compensation to individuals for helping the university to develop IPR worth creative works.

vi. Punish individuals for IPR violations including those due to plagiarism, regardless of ownership of the IPRs and publicise such acts as a warning to others.

4.13 Deployment of Research Project Resources

To maintain the required quality of research, the university is required to provide strategic support in terms of funding, facilities and personnel. At the end of the period of a research project, facilities acquired from the sponsors are required to be deployed in accordance with the conditions stipulated in the contract of the grant as well as laws, policies and procedures of the Government and the University.

Policy Issues

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need for the University to provide required strategic support to researchers.

ii. The need for ensuring that research project resources are properly deployed.

4.13.2 Policy Statements

i. ARU shall ensure that, except as otherwise expressly provided, all equipment purchased within a research project shall become and remain the property of ARU. Government laws, policies and procedures governing the disposal of University property (obsolescent or otherwise) shall be applied.
ii. ARU shall ensure that the unit or researcher that originally had possession of particular resources when executing a research project is given priority in reallocation of research resources when the project is completed.

4.13.3 Strategy

i. Put in place mechanisms for deployment of research resources in line with the national laws, policies and procedures.

4.14 Beyond Publications and Reports

4.14.1 Policy Issues

For research to have any impact, the results must inform and shape policies and programmes, and be adopted into practice. It is apparent that effective use of research-based knowledge is vital for combating poverty and fostering better development policies and programmes. There is a dire need not only to invest in generating new knowledge but to ensure that it is used in formulating and modifying policy and practice. Maximising the impact of research on policy and practice is a challenge, which requires formulation of strategies and building of capacity for realising it. This is because policymakers tend to be more influenced by non-research based considerations. If the impact of research results have to be maximised, the interest of policymakers and practitioners have to be attracted and they should be convinced that a new policy or different approach is valuable, and foster the behavioural changes necessary to put them into practice.

Most of the research results of ARU members of staff are documented in reports. Most of the research reports are in the custody of sponsors and shelves of the researchers. A handful of research outputs have been published in peer reviewed journals. Some of the research results have been presented in workshops and seminars. Some of the research being conducted by ARU has informed public policy and actions as well as helped the private sector and communities.

However, there are no tangible and deliberate initiatives to communicate and engage with key stakeholders purposely for influencing policy formulation and modification as well as in
devising new approaches in professional practice. Consequently, most of the research outputs from ARU have neither significantly attracted the interest of policymakers and practitioners nor influenced policy and professional practice. In view of this, developing of a strategy to maximise the influence of research-based evidence on policy and practice cannot be over emphasised.

The main policy issues pertinent to the preceding discussion can be identified as:

i. The need for research carried out by ARU and by ARU researchers to inform and shape national policies and programmes and respond to general professional practice needs.

ii. The need to actively engage stakeholders or consider their needs when formulating ARU research agenda and developing research projects.

iii. The need for research carried at ARU to make a difference in socio-economic development.

4.14.2 Policy Statements

i. ARU shall give priority to funding research projects that focus on problems relevant to current policies and professional practice and that have clear objectives that can influence policy and practice.

ii. ARU shall facilitate members of staff to disseminate to key stakeholders research-based evidence that can contribute to policies and practices that have a significant impact on peoples’ lives.

4.14.3 Strategies

i. Encourage researchers to engage closely with policymakers and other key stakeholders throughout the research process, from identifying the problem, undertaking the research itself and drawing out recommendations for informing policy and practice from the research results.

ii. Encourage researchers to understand the factors which may enhance or impede uptake of research results and develop appropriate strategies to address them.

iii. Encourage researchers to strongly imbed in the research process communication and engagement activities and building of strong relationships with key stakeholders.
iv. Encourage researchers to, where relevant, come out with usable demonstration products/photo-types
4.15 ICT and Research

4.15.1 Policy Issues

Currently, ICT facilitates research just as it facilitates teaching and provision of public service. It is used to prepare research proposals, including searching and accessing web-based literature sources. It is also used to document in electronically accessible forms and process research results. Furthermore, it is used to facilitate dissemination of research results, especially through journal paper publication. In spite of the widespread use and application of ICT in research and research-related endeavours, there is a wide gap between what ICT is currently doing and what it could do to facilitate research dissemination if fully utilised. For example, although the Journal of Building and Land Development (JBLD) is available online, its full content is not hosted on ARU’s website. Furthermore, research reports and publications of ARU staff are not available online. The same thing can be said about student dissertations and theses. On the whole, ARU’s use and application of ICT in research is characterised by individual efforts that are not necessarily institutionally coordinated or supported. As such, there is room for enhancing the role of ICT in facilitating execution of research as well as in dissemination of research results.

The main policy issues pertinent to the preceding discussion can be identified as:

i. Availability of ICT facilities including software to support dissemination of results of research carried out at ARU.

ii. Enhancement of campus-wide and off campus electronic availability of results of research carried out at ARU.

iii. Enhancement of publicity and accessibility or results of research carried out at ARU.

4.15.2 Policy Statements

i. ARU shall promote and support use and application of ICT in disseminating results of research carried out at or under the auspices of ARU.

ii. ARU shall encourage, support, and reward individual researchers who carry out research at or under the auspices of ARU to disseminate and publicise results of their research through ICT.
4.15.3 Strategies

i. Establish a university level repository for electronic versions of completed research reports, theses, dissertations, and journal publications.

ii. Promote and enhance use and application of ICT in general research.

iii. Provide for and ensure campus-wide and off campus electronic availability of results of results of research carried out at ARU.

iv. Host electronic versions of journals including completed research reports on ARU website.

v. Encourage and support individuals to post and publicise their research reports and published journal articles on ARU website.

vi. Improve and strengthen ARU website accessibility and reliability.

4.16 Research and Academic Freedom

4.16.1 Policy Issues

Academic freedom promotes an environment that is conducive to the most productive engagement in research and dissemination of research products. Academic freedom also ensures that researchers can pursue any research ideas they deem research-worthy and publicise their research findings in any suitable form and at any forum. As such, academic freedom is integral to the intellectual life of a University. It is also one of the pillars of good governance principles. The current status of academic freedom at ARU is principally in accordance with its theoretical tenets. However, at the moment it is difficult to gauge the integrity and robustness of the academic freedom at ARU mainly because so far it has not really been tested. It is however, noteworthy that to the effect that pursuit of it in the past there has been some incidences where dissemination of research results have been encumbered for lack of academic freedom at ARU\(^1\). In spite of this, there is a need for ARU to actively and legally promote and uphold academic freedom.

\(^1\) This refers to the problem encountered by some ARU academic staff who attempted to challenge the approach used in the 20,000 Plots Project in Dar es Salaam, on the strength of their previous research findings.
The main policy issues pertinent to the preceding discussion can be identified as:

i. The important to uphold of academic freedom with respect to research.

ii. Therefore, there is the need for ARU to actively and legally promote academic freedom.

4.16.2 Policy Statements

ARU shall ensure that values entrenched in the University education which include open and unfettered inquiry in the pursuance of knowledge are safeguarded/and thus not interfered by research funding agencies. ARU shall promote intellectually free University environment guided by enquiry, and search for knowledge and non-violation of academic freedom.

4.16.3 Strategies

i. Ensure freedom of speech through facilitation of open and unfettered public discussions.

ii. Ensure that researchers are free to advance knowledge, arguments and insights conditional only on the avoidance of scholarly misconduct.

iii. Institute mechanisms to protect the integrity and reputation of the University while preserving the autonomy of researches.
4.17 Research and Public Policies

4.17.1 Policy Issues

In recognition of the fact that research plays critical role in informing public policy areas and that Ardhi University is one of the lead national institution training and researching in land-based areas, its contribution has to be intensified.

Some of the policy issues pertinent to the research and public policy are:

(i) The recognition that research conducted at ARU actually plays or can potentially a critically important role in informing public policy;

(ii) The need to give priority to research themes or agenda that directly address public policy areas;

(iii) The need for suitable two-way feedback mechanisms for linking research formulation with consumption of research outputs.

(iv) The need to promote research that addresses contemporary environmental issues.

4.17.2 Policy Statement

1. ARU shall identify and promote research issues that emanate from and concern public policy areas; as well as aim to make a difference in the wider public life of Tanzanians, especially the poor.

2. ARU shall create mechanisms for liasoning and evolving research issues and agenda in collaboration with stakeholders in the public, private and public sectors.

3. ARU shall facilitate its academic to intensify research activities in contemporary issues such as environmental and climate change concerns.

4.17.3 Strategies

i. Organise and facilitate fora to solicit and measure society perceptions about research activities undertaken by ARU.

ii. Periodically assess stakeholders using ARU research outputs.

iii. Prepare and disseminate abstracts and research policy briefs.
iv. Define format and type of information that shall be published on the Institute/Schools website, and keep these up to-date.

v. Periodically audit the contemporariness of the research themes and issues addressed by Schools and Institute(s).

5.0 OPERATIONAL PROCEDURES

ARU will put in place operational mechanisms of conducting research such that there is uniformity in the key decision-making processes including application, scrutiny, approval and registration. The proposed operational procedures shall have the following main components:

i. Initiation, scrutiny, approval and registration of research projects. The approval of research proposals shall focus on quality, relevance, need, soundness and resources requirements (including financial resources). The roles and powers of different units within the relevant University administrative hierarchy shall be specified. The process shall ensure that all research proposals are subjected to ARU scrutiny and approval process before being accepted for funding (Annex I, II and III)

ii. Planning and budgeting guidelines, including applicable rates for cost estimates (Annex IV)

iii. ARU will enter into a research contract with the researcher when the project has been approved irrespective of the source of funding. An example of a research contract is included in (Annex V). In addition ARU shall scrutinize all contractual; requirements before a proposal are submitted to a prospective agency for funding. Hence all funds obtained through own initiative must be declared to the ARU.

iv. Financial regulations governing financing of research.

v. The General University financial regulation shall apply.

vi. 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 ARU University unless otherwise stated in the contract between the University and Financiers of research.

vii. The Academic Departments shall be responsible for monitoring and regularly reporting on ongoing research projects. The researchers will produce quarterly reports for the submission to the HoD using (Annex VI).

viii. Regulations regarding employment within research projects.
    HRM policies approved by the University shall apply.

ix. The Schools and the Institutes shall ensure that final research reports are peer-reviewed and guarantee that the researchers are adhering to scientific methods and norms of investigation and that research finding are credible. An example of final research report format is included in Annex VII.
ANNEXES

Annex I: Guidelines for the Approval of 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 II. The proposal should then be presented and submitted to the Departmental Higher Degrees Research and Publications Committee (DHDRPC) for scrutiny.

To ensure maximum efficiency and to minimize administrative problems, it is advisable that DHDRPC checks and limits the number of research projects undertaken at any one time by a researcher. The number and sizes of research projects will be dependent upon the DHDRPC's assessment of the individual researcher's workload and ability to handle and manage effectively several research projects at a time. In any case, consideration shall be given to ensure a reasonable balance between engagement in research activities, teaching and consultancy. The approval of research proposals shall take into account previous satisfactory performance. In general collaborative and group research work will be given preference over individual ones. ARU encourages international collaborative research and where funding is available, these should be given special preference.

2.0 Action by the Departmental Higher Degrees Research and Publications Committee (DHDRPC)

Research proposal should first be discussed by the DHDRPC. Once the DHDRPC is satisfied with the research issue, robustness of the proposal in regard of conceptual and theoretical framework, methodology, relevance, soundness and the financial estimates it will forward the same to the School, Institute Higher Degrees Research and Publications Committee (SHDRPC) with appropriate recommendations. However, if the Departmental HDRPC is not satisfied with the research proposal, the three possible courses of action it can take are:

- To send back the proposal to the researcher(s) for review and subsequent re-submission.
- 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. This may be the case 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 opt either to return it to the DHDRPC with recommendations or endorse the rejection. However, if the proposal is rejected by the DHDRPC for the second time, no further appeals should be entertained. As a guideline, the DHDRPC should limit its evaluation to a maximum of two months.
3.0 Action by the School/Institute Higher Degrees Research and Publication Committee (SHDRPC)

The SHDRPC will scrutinize the research proposal, especially the research objectives, conceptual and theoretical frameworks, research design, time schedule, phasing etc. The SHDRPC shall particularly scrutinise the cost estimates. It may make specific recommendations on the area coverage and resources required although academic responsibility and evaluation lies with the respective Departments.

If the SHDRPC is not satisfied with the research proposal, the courses of action to be taken shall be similar to those taken by the SHDRPC. The only exception is that, in the case of an appeal after the first rejection by the SHDRPC, the proposal is forwarded to the Dean or Director of the School/institute who shall make his/her recommendations to the SHDRPC. As a guideline, the maximum evaluation period of a research proposal at Faculty/Institute level should not exceed two months. For projects funded at School/institute level the SHDRPC has the final say on the approval of project (with room for appealing to the Dean/Director).

4.0 Action by the Senate Higher Degrees Research and Publications Committee (SHDRPC)

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

- To accept the proposal for funding if the committee is satisfied.
- To return the proposal to the School or Institute Research Committee for review and subsequent resubmission. This may be the case 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 also the presentation.

In case a research proposal is rejected and the applicant is not entirely satisfied with the decision, one can appeal an independent panel of three experts appointed by the Chairman SHDRC/DVC-AA to review the proposal and give the final a verdict.

5.0 Approval and Registration

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

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<tr>
<td>Project No. 1</td>
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<tr>
<td>Registration in the year 2010</td>
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<tr>
<td>Department of Environmental Science Management</td>
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<tr>
<td>School of Environmental Sciences and technology</td>
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</table>
The Directorate for 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 Conflict of Interest
In order to avoid “conflict of interest” in the approval of research proposals, all organs involved from Departmental to SHDRPC levels shall ensure that persons involved in a research project do not participate in the approval processes or other discussion that relates the evaluation of his/her research proposal.

7.0 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 School/Institute or University level depending on where funding is sourced. In any case, the contracts signed at School/Institute level shall be deemed to be contracts with the University. Format for research contracts is included in Annex V.

8.0 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 Departmental DHDRPC. A format for such progress reports is given as Annex VI of these guidelines.

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 SHDRPC by the School/Institute Research Coordinator.

In some cases, the DHDRPC may refer 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 or thematic areas 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 SHDRPC for School/Institute.

9.0 Final Research Report
At the completion of the research, a final research report should be submitted in the format contained in Annex VI. This shall include 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 DHDRPC which shall appoint an independent reviewer and then submit the review report to the DHDRPC 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 DHDRPC will have to appoint a second independent reviewer who will have to finish the review exercise within two weeks. In such a case, the DHDRPC 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 VI) 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. SEST/DESM/1*/2010. The numbers marked with an asterisk (*) should be in serial order.

At least 6 (six) hard copies and one soft copy (CD) of the final research report should be submitted to the SHDRPC for final approval. After the approval, these copies will be distributed as follows; Directorate of Postgraduate Studies Research and Publication, SHDRPC, Head of Department, Coordinator DHDRPC, ARU main library and the section library where this exists. The abstracts of the final reviewed research reports should be published periodically in the respective School/Institute Research Abstracts.

10.0 Research Seminars

The researchers shall be required to give a seminar/conference at the conclusion of their research work as well as be encouraged to give periodic seminars during the research work. The seminar/conference presentation will in principle be the last activity 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 due to the researcher(s).
Annex II: Format for Research Proposals

1.0 Title of the Project

The title should be scientifically valid and sufficiently descriptive to reflect the nature of the proposed work. The title of the project once approved cannot be changed or modified without the written consent of the respective SHDRPC.

2.0 Summary of the Project

A summary of the proposed project should be submitted taking into account the objectives, methodologies and the budget. Considerable attention should be given to the preparation of this item.

3.0 Objectives of the Project

A clear statement of the research problem(s) or issue(s) at hand should be given. Strategic goal(s) to which the solution of the stated problem(s) will contribute should be explicitly stated. Specific objectives and targets must be clearly stated in order to facilitate monitoring and evaluation of the project.

4.0 Literature Review and Contribution of Project

The research applicant must show the interrelationship of what has been done by others in the field and what he/she intends to do. It should reflect a thorough survey of the existing state of knowledge and how and in which way the intended work is going to contribute to the advancement of knowledge in the context of the problem to be addressed or bring about socioeconomic development.

5.0 Methodology

The researcher should clearly and thoroughly spell out the research plan for the project. The plan should identity and describe the different phases of the project, e proposed methods and analytical techniques. This section should also describe the facilities and major items or equipment to be used. The researcher should also show the relationship of his/her project to other ongoing projects in as far as sharing of physical facilities, equipment and data it concerned.

6.0 Project Duration

The anticipated duration of the project must be given to enable the appropriate ARU organs set aside the funds approved for that duration. It will also assist in drawing up monitoring schedules.

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2 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.
7.0 **Organizational and Management Plan**

The details and rationale for human power needs, budget requested, work schedules and organizational structure of the project should be given here. Bar charts and key decision points should be used to illustrate the research plan, including contingency plans.

8.0 **Anticipated Output and Utilization Plan**

Solutions and specific recommendations to the specific problem(s) or issue(s) that were addressed in the research projects constitute the anticipated output of the project. These outputs must tally with the objectives spelt out. In this section discussions on the steps already taken or planned to be taken to utilize the research results must be given. It should clearly list direct and indirect beneficiaries of the research output.

9.0 **Education and Training Components**

Specific educational and training requirements and programs geared at improving the professional capability of the staff involved in the project should be discussed in this section.

10.0 **Facilities and Funding**

The applicant should show the breakdown of all the funds being requested under the following: equipment (type of equipment and costs); travel (fares and places to be visited); others (specify). Where the applicant has applied for funds from some other sources he/she should specify the name of the Organisation, the date of application, the amount requested and its planned use.

11.0 **Justification or Rationale**

This section should clearly show the importance of the project by stating that the anticipated benefits of the project exceed the expected expenditure. The proposal should also show how the results of the research will be able to reach the end users and bring about socioeconomic development. The researcher should discuss the following issues as they relate to his/her project:

- Technical feasibility
- Research costs
- Relevance
- Researchability
- Contribution to long-term capability building
- Probability of research success
- Availability of outside scientific inputs.

12.0 **Dissemination**

Indicate where and in which form the results of the work may be disseminated/published.
13.0 Work Plan

The proposal should indicate the roles of the key researchers and timing of their involvement. The plan should clearly show the role of the principal investigator.

14.0 Budget

The estimated budget for the research proposal should be itemized and presented in a clear format as shown in Annex V.

15.0 Curriculum Vitae

Where deemed necessary, short CVs of the key researchers shall be attached to the proposal.
Annex III: Format for Evaluation of Research Proposals

1. Title

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Is it focused and relevant?

2. SUMMARY

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Is clear and concise?

Comments: ____________________________

3. LITERATURE REVIEW

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Comprehensive, relevant and up to date

Comments: ____________________________

4. GOALS & OBJECTIVES

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Clearly stated, priority clear and objectives achievable

Comments: ____________________________

5. STATEMENT OF PROBLEM AND RATIONALE

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Clearly stated and proposal is reasoned out

Comments: ____________________________

6. METHODOLOGY

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Proper, well designed, and related to all objectives stated

Comments: ____________________________

7. PERSONNEL (CVs)

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The applicant(s) is scientifically and technically capable

Comments: ____________________________

8. BUDGET (AND JUSTIFICATION)

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Realistic

Comments: ____________________________

9. CONCLUSION: Do you recommend approval of this proposal?

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Yes as presented

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Yes, subject to minor revisions shown under, 'Comments',

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No, see detailed comments under item 9.

Comments: ____________________________

9. Outputs/Outcomes: (What contributions, impact on the society)

10 Dissemination /communication strategy

Comments: (Use a separate paper for detailed comments)

Note: You may use a separate sheet of paper for detailed comments on each of the above sections
Annex IV: Standard Research Budget Format

1. Cost Estimate

Cost estimates for research Project proposals should be presented under the following subheadings:

i) Equipment, books, tools costs (if any)
ii) Payments to supporting staff*
iii) Labour costs
iv) Consumables/materials**
v) Travel and accommodation costs***
vi) Report writing costs

The cost estimates should conform to approval 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 rate or the estimated ticket cost, duration of stay, accommodation charges per night, food cost/allowance, if travelling by road in a faculty/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).
Annex IV contn. SUMMARY OF RESEARCH PROJECT BUDGET

<table>
<thead>
<tr>
<th>School/Institute:</th>
<th>Department:</th>
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<tr>
<td>Research Title:</td>
<td>Principal Researcher:</td>
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<tr>
<th>COST CODES</th>
<th>Total</th>
<th>Proposed Payment Schedule</th>
<th>Final</th>
<th>Comments</th>
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<td><strong>1.0 DIRECT COSTS</strong></td>
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<td>1.1 Equipment, books, tools costs (if any)</td>
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<td>1.2 Literature</td>
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<td>1.3 Payments to supporting staff</td>
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<td>1.4 Labour costs</td>
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<td>1.5 Consumables/materials</td>
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<td>1.6 Report writing costs</td>
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<td>1.7 Dissemination workshop/seminar or conference</td>
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<td><strong>2.0 TRAVEL AND TRANSPORT</strong></td>
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<tr>
<td>2.1 Travel to/from outside DSM</td>
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<td>2.2 Local transport</td>
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<td>2.3 Special requirements</td>
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<tr>
<td><strong>3.0 ACCOMODATION COSTS</strong></td>
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<tr>
<td>3.1 External assignments per diem</td>
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<tr>
<td>3.2 Other costs</td>
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<td><strong>GRAND TOTAL</strong></td>
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Payment Conditions:
- 1st Installment: Signed Main Researcher
- 2nd Installment: Signed Department Coordinator
- 3rd Installment: Signed Head of Department
- 4th Installment: Signed Associate Dean/Director, R+P
- Final Payment: Signed Director, R+P Directorate
Annex V: 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 Estimate duration of Project Date of estimated completion
   Initial: _____________________________
   Latest: _____________________________

1.7 Estimated cost of Project (in Tshs): _____________________________

1.8 Funds allocated to project (in Tshs): _____________________________

<table>
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<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
<th>TOTAL</th>
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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*

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<th>PERIOD COVERED (DATE)</th>
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<tr>
<td></td>
<td>Amount$^{1}$ Brought Forward</td>
<td>Fund$^{2}$ Received</td>
<td>Funds$^{3}$ Expended</td>
<td>Balance$^{4}$</td>
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<tr>
<td>1. Direct Expenditures</td>
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<tr>
<td>2. Travel and Transport</td>
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<td>3. Per Diem</td>
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<td>4. Honoraria</td>
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1. Amount should be shown in TShs.
2. The breakdown should be as shown in the budget approved for the reporting period.
3. Include as funds expended 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 VI: 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 1.5in and 1 in on all other sides.
- Printing should be on both sides of the A4 page.
- Format for reference numbers in the text and referencing should be standard. British Citation Standard BS 5605:1990 any other standard that is recommended for specific professions shall be used.
Annex VII: Research Contract

ARDHI UNIVERSITY
DIRECTORATE OF POSTGRADUATE STUDIES RESEARCH AND PUBLICATIONS

CONTRACT FOR RESEARCH

1. Name of Researcher(s) 1. (Principal Researcher)
2. ____________________________________________
3. ____________________________________________
4. ____________________________________________

2. 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.

3. The duration of doing the research will be………………………………………. Months.

4. The ARDHI University (ARU) undertakes to provide funding for the proposal project for the total amount of TShs……………………………… subject to the availability of funds.

5. The payment will be in accordance with the approval schedule that is attached to this contract.

6. All supporting staff, e.g. secretarial, technical and auxiliary will be from among the ARU staff/students. Permission to employ staff outside ARU, if for an extended period of time and/or on regular basis should be obtained from the Director, PGSRP before it is effected.

7. ARU reserves the right to withhold payment partially or fully, if it is not satisfied with the progress of the project.

8. The researcher(s) shall be required to refund the ARU payments received fully or in part in case of non-performance.

9. ARU will have copyrights on the research.

10. The research project has been assigned a unified ARU Code No…………………

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

Principal Researcher Witness

Dean, School/Institute of…………………………………………………………..

________________________________________

Date

Copy: Director, RP

3.0 **Electronic Format**

For purposes of inclusion in the ARU electronic database, an electronic format of the report based on commonly used software shall also be submitted to the Director, ARU Library, and Department, School and Senate.