



**UNIVERSITY OF ASMARA**

**DIRECTORATE OF RESEARCH AND HUMAN  
RESOURCES DEVELOPMENT**

**RESEARCH GUIDELINES, PROCEDURES, AND POLICIES.  
(DRAFT)**

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## **RESEARCH POLICIES AND PROCEDURES**

### **1.0 Introduction:**

The University of Asmara, like all other institutions of higher learning, has the three-fold mission of teaching, research, and services. The focus of the University up to the present has been on teaching. This was dictated by the massive need for trained manpower to support the reconstruction of the country after a devastating thirty-year war of liberation. After one and half decades, the University is moving to becoming a research-based University, and to realise this goal, it is reorganizing its research administration. In addition to establishing research centres to create a favourable environment for research, it has initiated research-based graduate studies. These moves have necessitated the preparation of this handbook.

The primary purpose of this handbook is to present the organisation of research and the policies and procedures that guide the pursuit of the research mission of the University of Asmara. The policies and procedures set forth in this handbook are basic to the conduct of research. This guideline is intended to ensure excellence in research, uphold highest ethical standards, define conditions for collaborative research, and protect intellectual property rights. It is hoped that the handbook will acquaint members of the university community with the organization and objectives of the research program, established procedures for preparing proposals for external funding, facilities and services that support the research activities and policies and procedures for protecting and transferring knowledge and technology generated through research.

Universities derive their intellectual vitality from research. Through research, universities generate new knowledge, and through it the well-being of people. Research builds the capacity for critical and independent thinking, and strengthens the foundations for teaching. As more and more research outputs are inputted to various courses, teaching becomes more relevant and meaningful; this in turn lays the foundation for a motivating teaching-learning environment

The University of Asmara is shifting from the traditional modalities of conducting research that produce fragmented results to thematic research approaches that enhance research collaboration, interdisciplinarity and that address research problems in holistic manner. Moreover, the University is preparing to start research-based postgraduate programmes. Learning to conduct research is the prime component of the postgraduate curricula.

The task of the Directorate of Research of the University of Asmara is to build the research infrastructure of the University and create and maintain an environment which is conducive to conducting research.

## **1.1 Research Mission of the University of Asmara**

The central research goal of the University of Asmara is to become a focal point of research of excellence. Its research motto is to generate new knowledge through innovative research, to seek solutions to problems, to extend the intellectual competence of its faculty, and ultimately to use the new knowledge and its expertise for the betterment of Eritrean societies. The major aims are, thus, to:

- build the research capacity of the University;
- create and maintain a research culture and environment in which the University of Asmara becomes a research focal point of national and regional prominence;
- contribute to the scientific, technological, intellectual, cultural, social and economic development of the country;
- create the foundations for interdisciplinary research, and ensure their efficacy and effectiveness;
- ensure the relevance, quality and validity of research;
- liaison and interact closely with research departments and research centres of Ministries and other institutions for collaborative research ventures;
- attract sponsored, i.e. externally funded research;
- create, maintain and expand opportunities which enable students and staff to develop their potential as scholars and professionals;
- generate, extend, preserve, and apply knowledge through, research, teaching and practice.

## **1.2 Research Values**

Research is the pursuit of the truth, and the importance of research is often measured by its “value added” in terms of its contribution to truth through new knowledge generated, and its contribution to the improvement of the well-being of people. The key principles to which researchers are expected to adhere are high ethical standards, and validity and accuracy in the collection and reporting of data. Pursuit of the following values forms the cornerstone of research at UoA:

- A commitment to excellence and the pursuit of truth without bias and prejudice;
- A concern for people respecting their rights, and tolerance to their views, frankness and free expression and exchange of ideas;
- A commitment to equal opportunity for all researchers and graduate students to enable and encourage them for fulfilling useful roles;
- A commitment to appropriate research ethics, efficiency and effectiveness in the use of research resources;
- A recognition and reward of research achievement by faculty of UoA, collaborating researchers, and students;
- An encouragement of positive competition in research through an “incentive structure” to enhance quality and relevance of research.

## **2.0 RESEARCH ORGANIZATION AND ADMINISTRATION**

### **2.1 Research Organization and Establishment of Research Centres**

Cognizant of the need to firmly establish and institutionalise research, committed to critical scholarly reflection and intellectual excellence, and realizing the need to encourage research on priority areas by Eritrean and expatriate scholars, the UoA has established five research centres to create an institutional environment that is conducive to, and supportive of, interdisciplinary research. Additional research centres may be established when and if necessary. The UoA sees these research centres instrumental in improving the management of research and fulfilling its research mission. The purpose of the research centres is to encourage and facilitate the development of a collaborative research culture within the Colleges and the University as a whole, to improve research performance and to help produce high quality research graduates from the postgraduate programmes. The University of Asmara recognizes the importance of the research training and research activities of postgraduate students in fulfilling its research mission. Clearly, the research achievements of these students will make significant contributions to the overall research performance of the University. Thus, the research centres will have to create strong synergy with the School of Graduate Studies. The creation of research centres is expected to focus research resources (expertise, infrastructure, etc) on research themes of importance to the University and the nation as a whole. Moreover, on the top of facilitating integrated research management, research centres will enhance and improve research cooperation among individuals and Colleges. The central objectives of the research centres are to:

- create and maintain an institutional support in recognition of the fundamental importance of research as part of the University's three-fold mission;
- facilitate and coordinate the conduct of research in their respective thematic research areas;
- develop focused research projects and research teams;
- monitor the progress of funded research projects and ensure their adherence to the stated objectives and ethical standards;
- build and maintain database and ensure their security and proper use in their respective areas of mandate;
- encourage, coordinate and manage collaborative research within the University, and between the University and other institutions inside and outside the country;
- encourage the raising of research funds by designing research programmes that may be supported by grants from internal private or public agencies and external sources ;
- support research in the postgraduate programmes;
- disseminate research findings through seminars, workshops, lectures, symposia, various publications, etc. in their respective areas of mandate;
- build and continuously upgrade the research competence of faculty of UoA through research training and other activities to ensure the scientific rigour of their research works.

The research centres that the University of Asmara has established are:

- i) Centre for Gender Research, Studies and Resources (CGRSR))
- ii) Medicinal Plants and Drug Discovery Research Centre (MPDDRC)
- iii) Agricultural Research Centre (ARC)
- iv) Development Research Centre (DRC)
- v) Centre for Natural Resources and Environment Research (CETER))

Other research centres may be established as the University develops the required critical mass in human capacity and research infrastructure. A brief description of each of the centres follows.

### **2.1.1 Centre for Gender Research, Studies and Resources (CGRSR))**

The CRRSR aims to become a centre of expertise and excellence with respect to women's issues, generating reliable gender-related data for national policy. The centre will engage with broad institutional network in Eritrea and the Eritrean policy, planning and programme arena. Its major functions include:

- engage in research that identifies critical gaps and needs regarding women and gender issues in Eritrea, including training needs;
- capacity building and mainstreaming gender issues through various training;
- outreach and networking activities that link the centre with other institution in Eritrea, and outside ;
- acquisition of resources on gender for research, curriculum development and teaching;
- introduce courses on gender to the University and school curricula.

The Centre has five broad areas of interest revolving around research, capacity building and gender mainstreaming, outreach and networking, improving female enrolment and performance, and improving the Centre's facilities. The activities under each of these areas are given below.

**Research:** To develop research agenda that identifies the critical gaps and needs regarding women and gender issues, develop national data base on gender, generate knowledge for policy analysis and advice, coordinate gender-based research, encourage faculty and students to carry out gender-based research, and share research outputs through different media.

**Capacity Building and Gender Mainstreaming:** To build capacity in gender research and teaching, introduce an introductory course on gender, provide short-term and long-term gender training for faculty, establish gender awareness programmes in the University, and mainstream gender in the University and related institutions such as National Union of Eritrean Women (NUEW) , National Union of Eritrean Youth and Students (NUEYS), etc.

**Outreach and Networking:** To establish partnership with related national, regional and international institutions and organizations and develop student and faculty exchange

programmes with them, establish a website, and prepare newsletters and other publications to share information.

**Improving Female Enrolment and Performance:** To initiate programmes related to female enrolment and retention, provide leadership training for female students at the UoA, to establish role models and mentors at selected primary and secondary schools, and provide guidance and counselling to female students as needed. This will be done in collaboration with NUEW.

**Improving the Centre's Facilities and Equipment:** To upgrade the physical infrastructure and equip the Centre with adequate resources to enable research and training.

Through such activities, the Centre will bring about changes in attitudes and transformations at individual and institutional levels. More over, it is expected that the research outputs of the Centre will be used by policy makers and planners, ultimately resulting in more gender responsive policies and programmes.

### **2.1.2 Medicinal Plants and Drug Discovery Research Centre(MPDDRC)**

According to WHO estimates, about 25% of the most commonly used drugs in the world today are derived from plants. Eritrea has rich floral diversity, and Eritrean societies heavily depend on traditional medicines derived from plants, in addition to thermal and non-thermal waters, and soils as well as healing ceremonies, which collectively may be referred to as the Eritrean traditional healing systems. There are many plants in Eritrea that are known for their curative potencies. However there has never been a systematic study of the chemical and biological contents of such plants. More often than not, the practice and dependence on such medicines is dismissed as unscientific. On the other hand, with increasing deforestation and desertification, many of these plants and traditional healers who use them may be lost soon permanently. This calls for a systematic survey and analysis of the medicinal plants and traditional healers associated with them. Aims of the Centre are, therefore, to:

- develop a database on traditional healers;
- collect information on medicinal (antibacterial, antifungal, antiviral, anticancer, etc) plants from traditional healers, and taxonomically identify, rank and document them;
- evaluate the various routes of administration (pharmacokinetic studies) and excretion mechanisms to establish their stability in body fluids, cytotoxicity, capacity to reach infected tissues, etc.
- analyse and develop effective and safe therapeutic agents for the treatment of various human ailments;
- extract and isolate biologically active components and explain their chemical structure;
- support the development of experience and expertise of traditional healers, researchers, and health workers in investigating the safety and efficacy of widely used traditional remedies.

- establish a botanical garden of medicinal plants.

This research centre has five sub-themes, relating to the major killer diseases in the country: Hypertension, Diabetes, Tuberculosis, HIV/AIDS, and Malaria. The research outputs will contribute to the development of new drugs, to improvement of access to health services, and to integration of traditional healers into the modern health system., thereby making them complementary to one another. The major expected results are:

- New, effective drugs for the major killer diseases in the country
- Extensive database on medicinal plants and traditional healers
- Recognition/acknowledgment of the value of traditional medicines
- Viable policy options for sustainable development of medicinal plants

### **2.1.3 Agricultural Research Centre (ARC)**

Eritrea is a victim of poverty, and food insecurity consequent upon it. Eritrea does not produce enough food even in good rainfall years. The poverty and food insecurity of the Eritrean population is the combined product of a number of factors that interact with one another in a mutually reinforcing way. Some of these factors are frequent drought, degradation of the agricultural resource base, lack of foreign currency for food importation, asset attrition due to the long war of liberation, conflicts, lack of capital investment for small and medium enterprises, and poor infrastructure seed-bed.

Food security, the elimination of the threat of hunger, is the priority of the Eritrean government. However, the attainment of this goal will require the proper identification of strategic entry points to the agricultural sector of the country. In the absence of reliable data and knowledge in land-use practices, crop calendars, cropping systems, crop landraces, crop tolerance/proneness to drought and pathogens, crop responses to fertilizers and irrigation water, agroecology and agroclimatology, etc. the identification of such entry points becomes immensely difficult. The Agricultural Research Centre is, thus, established with the following aims:

- develop research competence and to improve research performance in agriculture;
- make an inventory of the agricultural resource base of the country and document them;
- conduct applied, basic and strategic research in the fundamental agricultural problems of the country;
- design collaborative research projects with similar local and international institutions, and seek funding for them;
- create outreach programmes to facilitate the dissemination of research outputs to farmers, extension workers, policy makers and planners;
- engage in contract research and commercial farming to generate income to fund research projects.

The research focus of the Agricultural Research Centre is on *Sustainable Natural Resources Management for Food Security in Fragile Environment: Nutrient Retention and Sensible Water Use*. This theme is further divided into three sub-themes, viz.

Agricultural Production, Management of Irrigation Water, and Marketing and Post-Harvest Processing.

The research centre is expected to have favourable impacts on the agricultural sector of the country directly or indirectly. The quality of information and knowledge on the agricultural resource base of the country will be improved. Research outputs will be disseminated to end users through various publications like reports, journal articles, newsletters, etc. This will enable policy makers, planners and extension workers to make enlightened decisions and provide proper advice. The quality of agricultural training will also improve. The identification of suitable landraces/seeds, the discovery of new variants, development of effective soil-water conservation methods, dissemination of tested agroforestry practices, etc. will ultimately improve self-sufficiency in food production.

#### **2.1.4 Development Research Centre (DRC)**

The mission of the Development Research Centre (DRC) is to enhance interdisciplinary and multidisciplinary research by creating conducive research environment for high quality research in the development problems and challenges of Eritrea. The development challenges of Eritrea are complex, and they require coherent strategies, identification of appropriate technologies, prioritisation of development objectives, etc. The Development Research Centre's overall aim is to generate knowledge through innovative research, to seek solutions to developmental problems, to improve the intellectual competence of its faculty, and ultimately to use the new knowledge and its expertise for the betterment of Eritrean societies. The aims of the DRC are to :

- develop a research agenda on development issues and challenges of Eritrea;
- To strengthen the research capacity of the University of Asmara in development issues, challenges and problems by encouraging, facilitating and promoting interdisciplinary and/or multidisciplinary research approaches, and by establishing and developing baseline data on socio-economic parameters of the country;
- act as focal point for development research by creating a community of researchers in development problems, and by documenting and disseminating research outputs to policy-makers and other potential users and relevant institutions to ensure the impact of research findings;
- actively search for research funds by contacting funding agencies and institutions;
- establish external and internal linkages/partnership with similar institutions to share information and expertise, conduct joint research, exchange research experience, organize joint conferences, etc.;
- endeavour to establish and enhance cooperation with the business community, government institutions, NGOs, etc. in the areas of research and training;
- build and develop research infrastructure (books, journals, computers, software, office and reading space, internet connectivity, etc.) to ensure high quality research;
- encourage and facilitate the organization of multidisciplinary postgraduate programs tackling developmental problems;

- provide short-term and long term training in development studies;
- provide consultancy services to generate income to fund research.

The Development Research Centre has four sub-themes:

- i) The Economic Development sub-theme which will address the constraints of development in the public and private sectors;
- ii) The Social Development sub-theme, which will address issues of social problems like the internally displaced persons, commercial sex workers, orphans, handicapped persons, and homeless children;
- iii) The Administrative and Governance sub-theme which will deal with issues of governance and institutional development, concentrating on issues like accountability, transparency, human rights, and democracy;
- iv) The Linguistic and Cultural Development sub-theme which will focus on issues of language and culture in the Eritrean context in the era of globalisation, including Eritrea's cultural heritages and their significance for archaeological research and tourism development.

The DRC will disseminate the research outputs to end-users such as policy makers, the private sector, NGOs, CBOs, communities, civil societies, etc. through printed media, workshops, seminars, conferences, etc. The DRC will strengthen the research capacity of the University of Asmara and enhance the University's role in socio-economic development of the country.

### **2.1.5 Centre for Natural Resources and Environment Research (CENTER)**

Due to the history and geography of the country, Eritrea suffers heavily from environmental problems. Land degradation, desertification, loss of biodiversity, climate change, etc are some of serious problems and challenges that the country faces in its endeavour to eliminate poverty and embark on the path to sustainable development. The processes and causes of such problems in the Eritrean context are little known. Without scientific knowledge of the processes and causes, it becomes difficult to design effective measures to combat them. This research centre will close the knowledge gap in environmental problems in Eritrea.

The natural resources of the country are also little known. Eritrea is believed to be endowed with various resources like precious metallic and non-metallic minerals, building materials, underground water, etc., but the distribution and size of such resources have not been studied and evaluated sufficiently, although recent exploration works in some minerals show encouraging results. Viewed against these situations, the aims of this research centre are to:

- build a research centre of national and regional prominence known for both its quality and relevance of research;
- create, sustain and strengthen the thematic and interdisciplinary research culture;
- make systematic study of the nature, size, distribution and value of the country's natural resources, and monitor them for spatio-temporal changes;
- create a pool of resources to facilitate research in such areas;

- facilitate the research of graduate students whose research work lies within its research mandate;
- seek funds from various sources such as donor countries and agencies;
- develop resource and ecosystem management systems appropriate to local conditions through integrated research;
- build strong and durable linkages with internal, external partners and research centres of similar interest;
- create and maintain channels for translating research outputs to resource management practices on one hand, and for obtaining feedbacks and information on local problems on the other.

This research centre has five research sub-themes. These are:

1) Mineral Resources sub-theme, with focus on inventory of the mineral resources of Eritrea and identification of potential areas, including detailed geological study of potential areas, and research in ore genesis and better ways of finding ore deposits. These works may be conducted through research projects that will improve technology transfer to the internal linkage partners.

2) Energy Resources sub-theme, with focus on detailed geological study of the onshore sedimentary sequences of hydrocarbon potential areas and analysing source rock potential; study/inventory of the geothermal potential of Eritrea and identification of potential areas, including detailed study of geothermal sites and gradients, and assessment of the potential of renewable energy resources such as solar, wind, mini-hydroelectric and biomass-based.

3) Water Resources sub-theme, with focus on the inventory, development and management of water resources by establishing a proper data bank of all existing extraction wells with all relevant data; studying the ground water potential and its precise estimation; developing and applying technical methods of keeping run-off water back to infiltrate in to the subsurface; assessing the water needs of the country for various uses; formulating water management plans for the country, particularly the rural areas; advising water institutions on the proper use and maintenance of existing installations, and establishing protection measures against pollution of ground and surface waters.

4) Land Resources sub-theme, with focus on land capability assessments and mapping, land use/cover patterns and dynamics, and their environmental implications, inventory of the faunal, floral and agricultural genetic resources of the country, perception of land resources by local populations and their conservation strategies, and indigenous knowledge on land resources.

5) Environmental sub-theme with focus on the study of effects of exploitation of natural products on environment.

The research outputs will heighten the awareness of planners, policy makers and the public of the seriousness and threats of environmental degradation by the dissemination

research outputs. The knowledge generated will contribute, thus, to the design and development of appropriate measures to combat the deterioration of the environment. The increased awareness will also increase public participation in the proper management of natural resources.

## **2.2 Status of the Research Centres**

The research centres mentioned above are multidisciplinary research centres.

1. Each research centre will be led by Head who will be responsible for its planning, management, supervision, performance, accountability with regard to University guidelines, quality assurance, and synergy with other centres and graduate studies.
2. Research centres will be "nested" or located within relevant Colleges for convenience and expediency, but they will not be the sole property of those Colleges. In deed, research centres will function as independent units irrespective of the Colleges in which they are found. Research centres will be accountable to the Directorate of Research.
3. Each research centre will identify its short- and long-term research infrastructure (space, computing facilities, equipment, chemicals, etc.) requirements, prepare strategic plans to tackle them, and be fully responsible for the implementation of the plan.
4. Each research centre will account for its research and financial performances, and it will present annual report on its achievements, financial disbursements, etc. to the University Research Board (URB) at the end of each academic year.
5. Each research centre will develop its research agenda, and undertake a sustained research effort on a clearly defined and focused research projects or themes.
6. Each research centre will identify a critical mass of researchers, including graduate students, and their supervisors to conduct research on selected projects or themes.
7. Each research centre will actively work and campaign to attract research funding from internal and/or external funding sources. Research centres that demonstrate their capacity to produce tangible research outcomes will have better competitive margins for research funding, and must commit themselves to excellence.
8. Each research centre will organize seminars, workshops, conferences, training, etc in its area of mandate.
9. Each research centre will expedite the processing of research proposal submitted to it.

## **2.3 Research Administration**

The administration of research at the UoA is made of the following functionaries.

- i) The Director of Research
- ii) The Research Board
- iii) Heads of Research Centres
- iv) Research Teams

### **2.3.1 The Director of Research:**

The Director of Research is the principal officer of research at the UoA. S/he is appointed by the President of the University. The Director of Research is responsible for the overall research activities and programs at UoA. His major functions are to:

- i) coordinate, oversee and direct the conduct of research programmes of research centres, and their overall operations;
- ii) ensure adherence to the guidelines and standards set by the University;
- iii) prepare and present internal working procedures and other relevant guidelines and/or policies to the URB for approval;
- iv) facilitate and/or coordinate the recruitment or secondment of adjunct research fellows as per the guidelines;
- v) review and follow-up the progress of research projects in conjunction with Heads of research centres, and submit reports to the URB;
- vi) prepare a consolidated research, strategic plans and budget (budget requests of all research Centres), and submit to the Office of the President;
- vii) submit annual reports to the University Research Board and University President;
- viii) process and facilitate sabbatical and research leaves, participation in workshops, symposia, conferences, etc. as per guidelines.
- ix) Process and facilitate the review of internal or external research proposals.

### **2.3.2 The University Research Board (URB):**

The Director of Research is assisted by the University Research Board (URB). The URB which is composed of the followings:

- |  |             |
|--|-------------|
| i) Director of Research                  | Chairperson |
| ii) Heads of Research Centres            | Members     |
| iii) Dean the School of Graduate Studies | Member      |
| iv) Three senior faculty                 | Members     |

Six senior faculty candidates will be presented by the Director of Research, and three will appointed by the University President. The URB elects its secretary.

The URB has the following major functions:

- i) Act as the oversight body for the encouragement of thematic research within the University of Asmara, and develop research policy and guidelines pertinent to it, and amend them when and if deemed necessary
- ii) Ensure that research proposal have been reviewed as per the guidelines, and approve or reject them
- iii) Ensure that joint research ventures are in line with the thematic research approach of the University, and review the funding protocols for research in such collaborative ventures
- iv) Monitor and review progress on research projects that it has approved
- v) Assist in building the research infrastructure/capacity of the research centres, and the University at large;
- vi) Assist in the organization of conferences, university-wide workshops, seminars, etc.
- vii) Design appropriate mechanisms to disseminate the results of research performed under the auspices of the University, with the objective that the results reach the widest possible popular and scientific audiences
- viii) Develop appropriate forms to facilitate the administration, coordination and follow-up of research at the University
- ix) Deliberate and make decisions on sabbatical and research leaves, as per guidelines
- x) Handle research complaints, misconduct and other matters arising from the conduct of research
- xi) Develop and maintain synergy with the School of Graduate Studies
- xii) Deliberate and decide on any other issues related to research
- xiii) Ensure that all data collected and sources of data (e.g. fossils), are placed under the relevant Research Centres, ensure their security, and facilitate access to them by appropriate researchers

The URB will serve for three years.

### **2.3.3 Heads of Research Centres**

A Head leads each research centre. The functions and responsibilities of the Head are:

- i) Be responsible for the overall planning, management, supervision, performance adherence to University guidelines, quality assurance, synergy with other centres and graduate studies, etc.
- ii) Prepare strategic plans and budget, and implement them
- iii) Direct and control the financial disbursement of research funds as approved by the URB, and prepare annual reports on the performance, achievements, financial disbursements, etc. of the research centre to URB at the end of each academic year
- iv) Lead and direct the research centre develop and articulate its research agenda starting from themes, sub-themes down to specific research projects

- v) Identify and organize a critical mass of researchers, including graduate students and their supervisors, to conduct research on identified research themes and sub-themes
- vi) Make an inventory of available research facilities and identify short- and long-term research facility (space, computing facilities, equipment, chemicals, etc.) requirements to support research under the centre
- vii) Coordinate the preparation of research projects for funding from internal and/or external funding sources
- viii) Represent the research Centre in national or international meeting and pertinent fora
- ix) Establish links with similar national, regional, and international centres and/or organizations
- x) Develop and maintain a database relevant to the Research Centre, and ensure their security
- xi) Monitor the progress of research projects funded and/or approved by the Centre, and report on their status to the URB in its regular meetings
- xii) Perform any other activity related to the functioning and administration of the research Centre;

Three candidates for each Head of a Research Centre will be nominated by researchers affiliated with each Research Centre, and one of them will be appointed by the Director of Research and approved by the University President.

#### **2.3.4 Research Team Leaders:**

Each Sub-theme will have a core of researchers, i.e. a Research Team. Each Research Team will have a team leader. Team leaders will be elected by sub-theme members, and they will:

- i) act as a focal persons for a research sub-theme.
- ii) coordinate research in their respective sub-themes.
- iii) coordinate the preparation of specific research projects/proposal in their sub-themes.
- iv) report to the concerned Head of research Centre about progress and problems.
- v) advance transport, purchase, per diem, etc. request to the concerned Head of research, for further processing.
- vi) perform any other task related to their sub-themes.

#### **2.4. Financial Matters.**

All financial transaction will be made as per the rules and regulations of the FIOD (Financial Information and Operations Division). The FIOD will see that all research funds are used as per the University's financial regulations. It is wise for research Heads and Team Leaders to familiarise themselves with the basic financial rules.

## **2.5 Procurement:**

The Procurement Department of the University facilitates the purchase and procurement of research materials, equipment, chemicals, supplies, etc. Procurement could be a complex process, and it often takes time. The Procurement Department will require a lead time to process any purchase requisitions, particularly from external sources. Heads of Research Centres and Team Leaders should, thus, plan and put their purchase requisitions ahead of time to ensure they arrive at the time required.

### 3.0 POLICIES, REGULATIONS AND PROCEDURES GOVERNING RESEARCH

The scholarship and integrity of research programs at UoA requires that faculty and students uphold ethical and other standards related to good research practice. The following guidelines have been prepared to sensitise faculty, graduate students and partner researchers in the pursuit of their research. Research centres may also propose additional guidelines that are compatible with this guideline. Thus, these guidelines will be subjected to continuous process of improvement and development.

#### 3.1 Research Procedures That Involve Humans

Ethics and ethical principles extend to all spheres of human activity. The primary purpose of ethical principles and associated guidelines for research involving humans is the protection of the welfare and rights of participants in research. The secondary purpose is to facilitate research that benefits the researcher's community and/or humankind.

The guideline of ethical conduct in research involving humans identifies the ethical principles and values, which should govern research involving humans. It offers guidance for ethically sound research design and practice.

All research involving human subjects should be conducted in accordance with four basic ethical principles, namely **integrity**, **respect for persons**, **beneficence** and **justice**. The ethical principle of **integrity** signifies commitment to the search for knowledge, to recognized principles of research conduct, and to the honest and ethical conduct of research as well as dissemination and communication of results. The principle of **respect for persons** signifies respect for the welfare, rights, beliefs, perceptions, customs and cultural heritage of both the individual and/or community involved in the research. The ethical principle of **beneficence** expresses the researchers' responsibility to minimize risks of harm or discomfort to participants in research projects. The ethical value of **justice** requires that, within a population, there is a fair distribution of the benefits and burdens of participation in research, and for any research participant, a balance of burdens and benefits. Any research involving human beings should have research protocols that address these ethical principles. Moreover, such research must be designed to ensure that respect for the dignity and well being of the participants takes precedence over the expected benefits to knowledge.

It is generally agreed that these principles, which in the abstract have equal moral force, guide the conscientious preparation of proposals for scientific studies. In varying circumstances, they may be expressed differently, and given different moral weight. Thus, their application may lead to different decisions or courses of action.

Research that involves human subjects must comply with the procedures given below. It should be stressed that the procedures set below are intended to protect the rights,

integrity and welfare of both researchers and participants. These guidelines are set to ensure that procedures are consistent with sound research design and they do not expose human participants to unnecessary risks. These procedures apply to research that involve human subjects such as surveys, interviews, educational strategies, questionnaires, and review of medical or other records.

1. The reason for the research and the purpose or aim of the research is clarified to participants.
2. Before research is undertaken, whether involving individuals or collectivities\*, the consent of the participants must be obtained, except in specific circumstances defined elsewhere in this guideline. To conform with ethical and legal requirements, obtaining consent should involve:
  - i) Provision to participants, at their level of comprehension, of information about the purpose, methods, demands, possible risks (physical, social, psychological), inconveniences, discomforts, possible outcomes, and potential benefits of the research (including the likelihood and form of publication of research results);
  - ii) The exercise of a voluntary decision to participate. The consent of a person to participate in research must not be subject to any coercion, or to any inducement or influence, which could impair its voluntary character.
  - iii) The consent form appended (Appendix II) must be filled in by every participant. The consent form should contain the investigators' signature indicating that a summary of the institutions' and investigators' responsibilities toward human subjects has been read and indicating agreement to provide proper guidance for the research to ensure that the rights and welfare of the human subjects are protected. In the case of student investigators, the signature of the faculty member supervising the research is also to be provided. Researchers shall ensure that the informed consent of each subject is documented by a signed copy of the form included in the approved protocol, and kept safely under the control of the researcher.
  - iv) In some circumstances, and some communities, consent is not only a matter of individual agreement, but involves other interested parties, such as formally constituted bodies of various kinds, collectivities, or community elders. In such cases, the researcher needs to obtain the consent of all properly interested parties before beginning the research.
  - v) A complete description of the research procedures to be followed must be given to participants and ensure that the procedures to be followed are clear to, and properly understood, by participants. A description of the characteristics required in subjects, the number to be used, and how they will be recruited etc. should be clarified.
  - vi) A person may refuse to participate in a research project and needs to give neither reasons nor justification for his refusal.
  - vii) A participant must be free at any time to withdraw consent to further involvement in the research. If any consequences may arise from such withdrawal, advice must be given to participants about these before consent to involvement in the research is obtained.

3. There should not be discrimination with respect to sex, religion, ethnicity, language, etc. in selection or sampling of subjects, taking into account the purposes and/or nature of the research, the setting in which it will be conducted, and the population from which subjects/samples will be recruited.
4. Every research proposal involving humans must demonstrate that the research is justifiable in terms of its potential contribution to knowledge and is based on a thorough study of current literature as well as prior observation, approved previous studies, and where relevant, laboratory and animal studies.
5. All research proposals involving humans must be so designed as to ensure that any risks of discomfort or harm to participants are balanced by the likely benefit to be gained.
6. Research must be conducted or supervised only by persons or teams with experience, qualifications and competence appropriate to the research. Research must only be conducted using facilities appropriate for the research, and where there are appropriate skills and resources for dealing with any contingencies that may affect participants.
7. Research is essential to advance knowledge about children's and young peoples' well-being but research involving children and young should only be conducted where:
  - a) the research question posed is important to the health and well-being of children or young people;
  - b) the participation of children or young people is indispensable because information available from research on other individuals cannot answer the question posed in relation to children or young people;
  - c) the study method is appropriate for children or young people; and
  - d) the circumstances in which the research is conducted provide for the physical, emotional and psychological safety of children or young persons.
8. When considering approval of research involving persons with an intellectual or mental impairment, the URB and/or Research Centres should weigh the potential benefits, risks and undue burden.
9. Consent to participation in research by a person with an intellectual or mental impairment must be obtained from the person with the intellectual or mental impairment whenever the person is of sufficient competence and, where the impairment is temporary or recurrent, at a time when the impairment does not prevent the person giving or refusing consent. Failing that, consent must be provided from a legal caretaker of such a person.
10. Research on people under intensive care cannot be conducted unless consent is obtained from a potential participant before admission to that care.
11. If the research procedure is such that conformity to the principle of consent is not feasible, and neither the individual nor the individual's representative can consider the proposal and give consent in advance, the URB, on the basis of advice provided by experts/professionals in the area, may approve a research project without prior consent of potential participants whose consent can not be secured provided it is satisfied that,

- (a) inclusion in the research project is not contrary to the interest of the patient; and
  - (b) the research is intended to be therapeutic and the research intervention poses no more of a risk than that which is inherent in the patient's condition and alternative methods of treatment; and
  - (c) the research is based on valid scientific hypotheses that support a reasonable possibility of benefit over standard care; and
  - (d) as soon as reasonably possible, the patient and/or the patient's relatives or legal representatives will be informed of the patient's inclusion in the research and of the option to withdraw from the research without any reduction in quality of care.
12. Consent of a child's or young person's participation in research must be obtained from
- a. the child or young person whenever he or she has sufficient competence to make this decision; and either
  - b. parents/guardian; or
  - c. any organization or person required by law.
  - d. The consent form prepared for this purpose must be completed.
13. Research proposals involving a collectivity will be approved only when the URB is satisfied that the following issues have been addressed in the research protocol:
- a) Whether, in addition to individual consent, collectivity leaders should be consulted for approval;
  - b) Issues of consent, privacy, confidentiality and harms to either individuals or the collectivity have been properly addressed and followed a process of negotiation;
  - c) the ownership of data and the manner of dissemination of research findings have been agreed upon; and
  - d) the manner in which disagreements between the researcher and the collectivity will be resolved.

*\*Collectivities are distinct human groups with their own social structures that link members with a common identity. Collectives are distinguished by common beliefs, values, social structures, customary collective decision-making, collective interests, or other enduring features that identify them as a separate group. Examples of collectivities may include cultural or ethnic groups.*

- 14 . State whether the identities and data collected from participants will be public or will be kept anonymous. If it is to be kept anonymous, it should be known to the participants that results will not be released in any individually identifiable form without any prior consent of participants. The procedures or measures planned to maintain the privacy, safety, confidentiality and anonymity of participants should be stated. Where the records and results of research contain information of clinical significance, it is the responsibility of both the researchers and the research centres to maintain the security and storage of records and results so as to enable any necessary follow-up studies to be carried out.
15. Avoid any exculpatory language through which the participant is made to waive or appear to waive any of the subject's legal rights, or releases or appears to

- release the research investigator, the sponsor, and any other party or its agents from liability for negligence.
16. The right of the participant to discontinue his/her participation without any repercussion to the subject such as penalty or forfeit of benefits to which the participant is entitled should be respected, and told to participants.
  17. For research involving more than minimal risk, an explanation as to whether any compensation and/or any medical treatments are available if injury occurs and, if so, what they consist of, or where further medical information may be obtained should be provided.
  18. People who take specific or blood samples should have appropriate qualification, and must follow the procedures outlined in Appendix VII
  19. A clear indication of any cost that may be entailed because of participation in the research must be included.
  20. A separate, comprehensive draft **Guideline for Ethical Conduct in Research involving Humans**, is being prepared and the URB may apply it when deemed appropriate. Other materials specific to a research could be included, like additional safeguards for minors, institutionalised individuals, or other potentially vulnerable subjects.
  21. The University understands the need for **Human Research Ethics Sub-Committees (HRES-C)**, and such an entity will be established as soon as possible. Until such entity is established, the URB, assisted and advised by professional will handle such research proposals.

Proposals involving human subjects must attach protocols covering such issues. Once a protocol is approved, researchers are strictly required to follow the procedures described in the approved protocol. Any changes in the procedures without approval by the URB are forbidden. If a research project requires new procedures or requires to modify approved ones, a request has to be submitted for approval by the URB.

### **3.2 Research Procedures That Involve Animals**

The essential contribution of animals in research and education aimed at improving the health or welfare of both humans and animals is well documented. The role of animals remains critically important in understanding the fundamental processes of life, and in developing treatment for injuries and diseases. The main objective of this section is, therefore, to prescribe matters to be observed at the time of planning and executing animal experiments at the University, so that experiments can be conducted properly from both scientific and ethical viewpoints with due consideration for animal welfare.

The URB believes that the use of animals in research is a privilege. This imposes a major responsibility to provide for their proper care and humane treatment. Good animal care and good science go hand in hand. It should be stressed that using animals for scientific purpose is only acceptable when the harm (physical or psychological) done to animals is outweighed by the benefits of the research. Thus, research involving animals should be conducted in consideration of its relevance to the improvement of human or animal health and the advancement of knowledge for the good of society.

Researchers carrying out projects that involve farm animals or other animals should comply with the procedures given below. Farm animals are broadly defined as those used or intended for use to improve nutrition, breeding, management, production efficiency, or the quality of food or fibre. However, it is possible that researchers may use other animals, particularly worm-blooded or vertebrate animals used in biomedical research, teaching, and testing. Particular care should be taken with invasive procedures (any procedure or substance that may cause pain or distress such as experimental surgery) on all animals. Researchers dealing with animals should consider the costs and benefits of procedures involving animals before proceeding with the research. Research on animals will not be conducted until the URB has reviewed that the procedures are appropriate and ethical.

### **3.2.1. Laboratory research in animals**

1. Research involving animals should be undertaken with a clear scientific purpose. The following issues should be considered when designing and performing research with animals.
  - i) Rationale and purpose of the proposed use of animals
  - ii) Justification of the species and number of animals requested: whenever possible, the number of animals requested should be justified statistically.
  - iii) Availability or appropriateness of the use of less-invasive procedures, other species, isolated organ preparation, cell or tissue culture, or computer simulation
  - iv) Adequacy of training and experience of personnel in the procedures used
  - v) Housing and husbandry requirements
  - vi) Appropriate sedation, analgesia, and anesthesia
  - vii) Unnecessary duplication of experiments
  - viii) Conduct of multiple major operative procedures
  - ix) Criteria and process for timely intervention, removal of animals from a study, or euthanasia if painful or stressful outcomes are anticipated
  - x) Post-procedure care
  - xi) Method of euthanasia or disposition of animal
  - xii) Safety of working environment for personnel
  - xiii) Gains – value-added- from the research in terms of knowledge generation pertaining to better understanding of the species under study, processes underlying the evolution, development, maintenance, alteration, control, or biological significance of behaviour, or benefits to the health and/or welfare of human beings and/or animals.
2. The scientific purpose of the research should be of sufficient potential significance to justify the use of animals. The researchers should act on the

assumption that procedures that would produce pain in humans will also do so in other animals.

3. The species chosen for study should be best suited to answer the question(s) posed. Researchers should always consider the possibility of using other species, non animal alternatives, or procedures that minimize the number of animals in research, and should be familiar with the appropriate literature.
4. Researchers should make every effort to ensure that those responsible for transporting the animals to the facility provide adequate food, water, ventilation, space, and do not impose unnecessary stress on the animals.
5. Animals taken from the wild should be trapped in a humane manner and in accordance with applicable regulations of the country.
6. Endangered species or taxa should be used only with full attention to required permits and ethical concerns.
7. When alternative behavioural procedures are available, those that minimize discomfort to the animal should be used.
8. Procedures in which the animals are anaesthetized and insensitive to pain throughout the procedure and is euthanized before regaining consciousness are generally acceptable.
9. Procedures involving more than momentary or slight aversive stimulation, which is not relieved by medication or other acceptable methods, should be undertaken only when the objectives of the research cannot be achieved by other methods.
10. Experimental procedures that require prolonged aversive conditions or produce tissue damage or metabolic disturbances require greater justification and surveillance. These include prolonged exposure to extreme environmental conditions, experimentally induced prey killing, or infliction of physical trauma. An animal observed to be in a state of severe distress or chronic pain that cannot be alleviated and is not essential to the purposes of the research should be discontinued immediately.
11. Procedures involving the use of paralytic agents without reduction in pain sensation require particular prudence and humane concern. Use of muscle relaxants or paralytics alone during surgery, without general anesthesia, is unacceptable and should be avoided.
12. Surgical procedures, because of their invasive nature, require close supervision and attention to ethical considerations by the researcher. Aseptic

(methods that minimize risks of infection) techniques must be used on laboratory animals whenever possible.

13. All surgical procedures and anaesthetization should be conducted under the direct supervision of a person who is competent in the use of the procedures.
14. If the surgical procedure is likely to cause greater discomfort than that attending anaesthetization and unless there is specific justification for acting otherwise, animals should be maintained under anaesthesia until the procedure is ended.
15. Sound postoperative monitoring and care, which may include the use of analgesics and antibiotics, should be provided to minimize discomfort and to prevent infection and other unwanted consequences of the procedure.
16. Animals cannot be subjected to successive surgical procedures unless these are required by the nature of the research, the nature of the surgery, or for the well-being of the animal.
17. When the use of an animal is no longer required by an experimental protocol or procedure, in order to minimize the number of animals used in research, alternative uses of the animals should be considered. Such uses should be compatible with the goals of research and the welfare of the animal. Care should be taken that such an action does not expose the animal to multiple surgeries.
18. When euthanasia appears to be the appropriate alternative, either as a requirement of the research or because it constitutes the most ethical form of disposition of an animal at the conclusion of the research,
  - i) euthanasia shall be accomplished in a humane manner, appropriate for the species, and in such a way as to ensure immediate death, and in accordance with procedures outlined in the latest version of the American Veterinary Medical Association (AVMA) Panel on Euthanasia<sup>(2)</sup>.
  - ii) disposal of euthanized animals should be accomplished in a manner that is in accord with all relevant legislation, consistent with health, environmental, and aesthetic concerns, and approved by the URB or Animal Care Sub-committee. No animal shall be discarded until its death is verified.
19. If a research proposal includes procedures that have not been previously encountered, or that have the potential to cause pain or distress that cannot be reliably controlled (e.g. physical restraint, multiple major survival surgery, food or fluid restriction, use of adjuvant, use of noxious stimuli, intracardiac or orbital-sinus blood sampling, etc.) the URB may recommend

a limited pilot study designed to assess the effects of the procedure on the research animals.

20. An Animal Care Sub-Committee (ACS-C) may be established when deemed necessary, and it may generate additional guidelines.

### **3.2.2 Field Research**

1. Researchers conducting field research on animals should disturb their populations as little as possible, consistent with the goals of the research. Every effort should be made to minimize potential harmful effects of the study on the population and on other plant and animal species in the area.
2. Research conducted in populated areas should be done with respect for the property and privacy of the inhabitants of the area.
3. Particular justification is required for the study of endangered species. Research on endangered species should not be conducted unless special permit is obtained.

### **3.2.3 Care and Housing of Animals**

To provide suitable housing and husbandry, investigators should consider both size and quality of the space. Accordingly,

- i. sections properly equipped for the right and smooth execution of experimental animal care and animal experimentation should be secured.
- ii. appropriate facilities for the care and use of animals in experiments should be established taking into consideration the habit, ecology, etc of the animals.
- iii. Heads of Research Centres conducting animal experiments should endeavour to consolidate experimental facilities, equipment, structure and organization necessary for the management and operation of the experiments.

### **3.2.4 . Acquisition and Treatment of Animals**

Animals not bred in the University are to be acquired lawfully.

- a. Investigators should make a close observation of the state of animals all the time from the introduction until the completion of experiments and take proper measures in case the situation demands.
- b. Researchers should endeavour to maintain and manage exclusive sections and facilities for animal rearing and experimentation. To secure this investigators should pay attention to physico-environmental factors – atmospheric conditions (temperature, humidity, air-flow, wind velocity, ventilation, light, smell, dust, etc.) of animal rooms and laboratories; living condition (structure of animal rooms, cages, bedding, feeding, watering, etc.); sound and vibration, etc. – and

bio-environmental factors – animal-room inmates (species, strain, sex, age, number, density of animal population, etc.); microbiological contamination; unnecessary addition of stress; etc.

- c. Researchers should endeavour to attend to the care and rearing of experimental animals. Researchers using animals are required to ensure five freedoms, namely
  - freedom from malnutrition;
  - freedom from injury and diseases;
  - freedom from thermal and physical discomfort;
  - freedom from fear and stress;
  - freedom to express most normal, socially acceptable patterns of behaviour.
- d. Researchers could seek the advice or cooperation from experts regarding the care and rearing of animals as stipulated above.

### **3.2.5. Planning Experiments**

- i. Researchers should refer to literature etc. when planning animal experiments, and endeavour to refrain from experiments conducted for the mere reconfirmation of established facts.
- ii. Researchers should formulate experimental plans after making a close examination of respective research purposes and take into account the presence of any possible alternatives to animal experiments.
- iii. When selecting animals suitable for their experimental purposes, their species, strain, quality, number and the conditions of their care and use in experiments should be considered, in order to reduce the scope of animal experiments to the minimum necessary for the achievement of research objectives.
- iv. Careful attention should be given to the methods and environments of experiments from an ethical viewpoint, endeavouring, for instance, to alleviate as much as possible the anguish inflicted on animals, throughout experiments.
- v. When formulating experimental plans, researchers are encouraged to consult experts who have substantial knowledge and experience in laboratory animals or animal experimentation.

### **3.2.6. Experimental Procedures**

- a. Investigators should draw up written experimental plans and apply to the Director of Research.

- b. When written experimental plans are applied, the Director should refer the application to the URB for inspection.
- c. In the process of the inspection, URB may devise necessary measures for approval to investigators such as providing advice, or making them revise the written experimental plans.
- d. On receiving URB's results of the inspections, the Director should determine to give an approval or not to each, and notify the decisions promptly to the investigators through Head of Research Centres in whose Centre the research is to be conducted.
- e. The Director may request investigators to present reports on the progress of the experimental circumstances, in compliance with the Board's request.

While conducting experimental work

- i. Investigators should take care not to inflict unnecessary anguish on animals by using proper restrains and anaesthetics.
- ii. Investigators should seek the advice from experts in matters prescribed above (i), if occasion demands.

Some of the measures to be taken after experiments are:

- a. when disposing experimental animals on which experiments have been done or is discontinued, investigators should endeavour to release the animals from anguish immediately by administration of lethal dose of an anaesthetic, cervical dislocation, inhalation of carbon dioxide, or other proper means of euthanasia.
- b. Investigators should endeavour to prevent environmental pollution by the carcasses, etc., of experimental animals.
- c. Investigators may seek advice or cooperation from experts regarding the measures when disposing animals.

### **3.3 Responsible Practices In Research**

The following codes of conduct provide a framework for sound research procedures. The overall aims of these codes of conduct are to provide a framework for sound research procedures and to minimize the incidence of misconduct in research.

### **3.3.1. General ethical considerations**

1. Research centres and individuals conducting research are expected to commit themselves to high standards of professional/research conduct. Staff and students engaged in research have the duty to ensure that their work enhances the good name of the University, and the profession and discipline to which they belong.
2. As far as possible, Head of the research Centres should be personally involved in active research. Heads of research centres should also closely observe and monitor the research activities sponsored by their centres. Heads are also expected to create and maintain a healthy professional interaction among researchers.
3. Staff and students are expected to engage in those research activities/projects that conforms to accepted ethical standards as stated in various sections of this guideline. Graduate students should be properly guided by their supervisors to ensure that their research conduct conforms with the established norms of research.
4. The beauty of research lies in the academic discourse that it generates. Debate on, and constructive criticism of, research work are thus essential parts of the research process, and researchers be prepared for such inputs from colleagues.
5. Research centres, staff and graduate students have the responsibility to ensure the safety of all property and life while conducting research. Research centres and Colleges are expected to develop appropriate guidelines relating to:
  - safe use of laboratories;
  - procedures to ensure that biohazardous substances and organisms do not leak to the environment.
6. If data of a confidential nature are obtained, for example, from individual patient records or questionnaires, confidentiality must be observed and researchers must not use such information for their own personal advantage or that of a third party as per Section 3.1. In general, however, research results and methods should be open to scrutiny by colleagues within the institution and, through appropriate publication, by the profession at large.
7. Its is recommended that researchers pay due attention to how their data are recorded, referenced and stored. There might always be a need to refer to data even after the research project is complete, for instance, due to controversies that a given research outcome generates.

### **3.3.2 Publication rights and authorship**

The University of Asmara encourages publication of research outputs. The University retains and protects the right of researchers to publish their research results. Research results may be published as books, journal articles, chapters in books or conference proceedings, monographs, etc. There may, however, arise a situation in which researchers may be advised to delay their publications. For instance, researchers may be advised to delay publication in the case of novel discovery until necessary arrangements are made to protect their intellectual rights. During publication, note should be given to the following and other similar points.

1. Unless otherwise specified in a written agreement, all participants in a research project have fair share in publications and other benefits accruing from that research. Due recognition of all participants is a part of a proper research process and conduct. Hence, the contribution of research students, research assistants, laboratory technicians, and other support staff should be properly acknowledged.
2. Entitlement to joint authorship of a publication, or other benefits, is based on participation in conceiving, executing or interpreting at least part of the research reported. "Honorary authorship", i.e. listing of a person as a joint author of a publication when he/she has not participated in the research project, is unacceptable.
3. When a final report is ready for publication, all co-authors must read the final paper and sign the Content/Publication Agreement Form indicated in Appendix VI, indicating their agreement to the substantive contents of the paper and terms for joint authorship. A copy of such a statement should be given to each co-author and the research centre that sponsored the research.
4. Papers for publication must be submitted to one journal or one publisher at a time. Simultaneous submission of a paper to more than one journal or publisher is unacceptable.

### **3.3.3 Graduate research supervision**

Graduate students work under qualified and experienced senior faculty who guide and advise them. Graduate students may not be familiar with the research guidelines of the University. Thus, supervisors should provide their advisees with proper orientation and advice relating to the University guidelines for the proper conduct of research, including those covering ethical requirements for studies on human or animal subjects, requirements for and care in the use of potentially hazardous agents, laboratory safety procedures, research misconduct, etc. Additional guideline for graduate students may be prepared by the School of Graduate Studies if found necessary.

### **3.3.4 Conflict of interest in research**

Conflicts of interest in research can arise due to a number of reasons such as unequal sharing of benefits and/or recognition, omission in publication, modification of research report without consultation by research collaborators, and the like. Individuals with such grievances must submit a detailed account of the incident in writing to the Directorate of Research and a copy to the relevant research centre Head. The Director and the University Research Board may study the case, or they may create a committee to study the case.

## **3.4 Research Misconduct**

The code of conduct outlined above is expected to enhance the responsible practice of research at University of Asmara. Its major purpose is to minimize misconduct in the conduct of research. The code of conduct outlined in the guideline may minimize

misconduct, but it may not eliminate it completely. Thus, some incidences of misconduct may be encountered, and it is essential to have in place procedures for dealing with them.

The misconducts listed below, and the procedures dealing with them apply to staff of the University, graduate students who have received proper orientation by their supervisors, and external research collaborators who jointly conduct research approved by the University Research Board.

Misconduct in research includes:

1. The fabrication of data: claiming data records where none has been collected
2. The fabrication of research outcomes: claiming results where none has been obtained
3. The falsification and/or manipulation of data including changing and/or erasing records to make them fit predetermined results or models
4. Plagiarism: the presentation of other people's works as one's own including the direct copying of textual material without proper citation, the use of other people's data without acknowledgment, or the use of ideas and methodologies from other people without adequate attribution
5. Misleading ascriptions like the listing of authors without their permission, attributing work to others who have not in fact contributed to the research, and the lack of appropriate acknowledgment of work primarily produced by graduate students or associates
6. Intentional negligence of the University's research guidelines and code of conduct for the responsible conduct of research.
7. Departure from approved research protocols in relation to human or animal subjects
8. Attempts to smuggle out, or make copy or casts of fossils, or theft of, data, samples, artefacts, fossils, and other materials of importance to research and the nation
9. Sabotage: intentional actions intended to delay or make fail an on-going research project
10. The use of data for purposes other than the one for which the data was initially collected, or its sales, or its transfer to third parties without the consent of participants (human subjects of research), or individuals who own the knowledge
11. Illegal disclosure of the confidentiality and/or anonymity of data
12. The use of the University's research infrastructure for production of illegal products such as drugs and other illegal activities.
13. Other practices that seriously deviate from those norms commonly accepted within the research community for proposing, conducting or reporting research

Misconduct does not include honest errors or honest differences in interpretation or judgments of data.

### **3.4.1 Dealing with problems of research misconduct**

#### 3.4.1.1 Protection of interested parties

Research misconducts may conflict with the research interests of many individuals and institutions, and they must be handled with extreme care. When an allegation of misconduct is reported or made, the protection of all interested parties is essential.

Interested parties may include:

- The person bringing the allegation
- The researcher against whom a complaint is made
- Graduate students and associates working with the researcher concerned.
- Journals in which allegedly fraudulent papers have been or are about to be published
- Funding bodies which have contributed to the research
- In some cases the public- for example if a drug is involved

Protection of interested parties could pose a dilemma. For instance, adequate protection of the complainant and the accused demands absolute confidentiality and reasonable speed in the process of investigation. On the other hand, the protection of other parties may demand disclosure of the misconduct. The decision to disclose or maintain confidentiality will also vary from case to case. When such cases appear, judgments and subsequent decisions will be made by the Director of Research in consultation with the University Research Board.

#### 3.4.1.2 The receipt of complaints

Allegations of misconduct in research may originate inside the University, from other institutions, in learned journals or in extreme cases in the press. Inside the University, allegations may come from any staff members or from students. The URB will deal with all allegations.

The Directorate of Research will receive formal complaints relating to misconduct in research, and the Director will notify the URB of the receipt of a complaint. An immediate meeting of the URB will be called to study the allegation and supporting materials provided by the complainant. The URB will decide whether the allegation should be dismissed or investigated further. If a preliminary investigation is to proceed, the URB may create a committee of senior staff knowledgeable in the area of complaint, but from disciplines not affected by the research in question, to deliberate and decide on the complaint. The committee will report its findings and recommendations to the URB through the Director of Research. The URB will study the report of the committee and decide on final measures to be taken.

The process of investigation by the committee or the URB will include:

1. The researcher or staff member against whom a complaint of misconduct has been filed will be informed of the allegation in writing and given an opportunity to respond in writing. The complainant will be kept anonymous.
2. When and if deemed necessary, the concerned researcher may be asked to produce experimental or other data files, or other materials related to the research and allegation made for scrutiny by the investigating body.
3. The Director of Research will see that all precautions are taken to protect the accused from defamation until the investigation is over.
4. The Director of Research will see that all precautions are taken to protect the complainant from possibility of victimisation until the investigation is over
5. If legal advice or expert advice on the issue is required, the Director of Research will arrange for such advice.

3.4.1.3 Measures to be taken:

A) False allegations:

1. If an allegation is found to be false, the researcher/staff member concerned will be informed of the results of the investigation, and the conclusion of the investigation will be recorded on his or her file, as far as possible, in a form satisfactory and favourable to the researcher/staff member concerned.
2. The complainant who brought false accusations will be disciplined in proportion to the false allegation if he/she is staff member of the University of Asmara. If the complainant is from outside the University, the institution he is affiliated with will be informed in writing of the complaint and results of the investigation including details of the nature, seriousness and origin of the complaint, the process of investigation, the results of the investigation and decisions reached ultimately. Such a person will be excluded from any benefit and/or services that the University of Asmara offers.

B) True allegations:

1. If an allegation is found to be true, the researcher/staff may be suspended from funding and access to research infrastructure of the University of Asmara for certain period of time.
2. If the breach of guidelines or conduct is severe and deliberate, the URB may recommend for suspension from his duties and responsibilities;
3. All research grants extended to him will be withdrawn immediately;
4. The Director of Research, advised by the URB, will decide either to disclose or keep confidential the complaint, results of the investigation and actions taken to parties whose interest are believed to be affected.
5. If an allegations casts doubt on the validity of one or more research publications produced by the accused staff member, the URB may decide to investigate the person's past research, and recommend even withdrawal of any recognition

given on the bases of those works if found inconsistent with the University's guidelines, and for *ex ante* research works, if found to be inconsistent with established norms of research.

6. If the researcher is an expatriate, his research collaboration will be immediately terminated, and he will be *perosona non grata* from the University.

### **3.5 Research Recognition**

It is expected and assumed that all faculty will be engaged, to some degree, in some research activities. The University encourages engagement in research by staff as a means of generating knowledge and/or solutions to problems, improving the quality of teaching and the teaching-learning environment. The research performance of staff will be measured by a number of performance indicators such as:

- capacity to attract both external and internal research grants;
- articles in international and national refereed journals;
- books and chapters based upon research;
- conference and seminar presentations;
- completions of research by higher degree student;
- patents;
- other recognized work, such as exhibitions, compositions and performances (in arts, for instance).

Such recognition is expected to lead to positive competition in research that is vital for ensuring the quality and relevance of research. However, the University will ensure that competition in research does not lead to

- too-hasty preparation and submission of papers that compromise quality and accuracy of reporting of research findings;
- the artificial division of a research reports into multiple, small reports to inflate the "publication count" of the author/s.

## **4.0 REVIEW OF RESEARCH PROPOSALS:**

All research proposals submitted to research centres for funding are subject to review. Research proposals are executed only after approval by the URB. These reviews are applicable to joint research proposals or proposals developed by UoA faculty and submitted to any of the research centres for funding. The review process proceeds as follows. The review application and process of proposal by expatriate graduate students are covered separately.

### **4.1 The Review Process**

#### **4.1.1 Internal proposals**

Researchers must follow the format provided in the Appendix part of this document in preparing their proposal. Once a proposal is prepared, it will be processed as follows.

- i) Proposals will be submitted to an appropriate research centre. The research centre will check whether or not the proposal falls under its thematic and sub-thematic research mandates.
- ii) The research centre will notify the receipt of proposals to the Directorate of Research and the URB. In consultation with the Director of Research and URB, the proposal will be forwarded to at least two reviewers with expertise in the area of the proposal for comments and possible suggestions. This process will have to be completed within 15 days of the receipt of the proposal. Reviewers are expected to submit their comments, views, suggestions, etc. to the centre within 15 days of receipt of the proposal. The comments will be communicated to the researchers immediately.
- iii) Once a proposal is cleared by reviewers, the final proposal will be forwarded to the URB along with all the original comments and suggestions to ensure that all of them have been duly incorporated.
- iv) The URB will then review the proposal to see that it meets all guidelines, standards of excellence, and ethical concerns, and approve or reject the proposal. The decision of the URB will be communicated to the applicant within 15 days of its regular meeting dates. If the guidelines are met, then the Board will recommend approval, and if necessary approval with funding. All decisions of the URB will be communicated by the Director of Research.

The URB meets four times a year on the 15<sup>th</sup> day of the following months: September, December, March, and June. If the 15<sup>th</sup> falls on a holiday, then the committee meets on the following working day. The submission of proposals will be at least 45 days before the regular meeting as mentioned above.

#### **4.1.2 External proposals**

- i) External proposals will be expected to meet the same guidelines as internal proposals.
- ii) External proposals will be sent to the Director of Research, who will screen them for adherence to University submission protocols.
- iii) All proposals formatted to University protocols will be forwarded to the URB for general review, i.e., to assess the proposal's adherence to thematic and other guidelines. Those proposals meeting University guidelines and certain minimum standards will be forwarded to a Head of relevant research centre and to appropriate reviewers.
- iv) If sent to Head of a research centre, the proposal will be forwarded, without review, to reviewers most suited to evaluate the proposal. No less than two expert reviewers will assess the proposal's scientific merit, its pertinence to national thematic research priorities, and its appropriateness to disciplinary and interdisciplinary needs. Relevant government agencies will be consulted at this stage if and when appropriate. There will be 15 days for review. Research centres may ask other members of faculty or experts from outside the University to evaluate proposals when more appropriate expertise is required in the review.
- v) The review, with comments, will be forwarded to the sending body. The comments and recommendations will then be forwarded to the URB for its final review and decision 45 days before the regular committee meeting dates stated in Section 3.1 -Internal Proposals- for final approval.
- vi) Once the research project is approved, the Director of Research will issue a formal letter of endorsement within 14 days on the committee's regularly scheduled meeting dates. The need for final approval before letters of endorsement are issued ensures that foreign researcher meets all guidelines, and agrees to terms including agreement to participate in the teaching program of some departments.

#### **4.2 Review guidelines**

The review of proposals at all levels will employ the following general guidelines in evaluating their quality and relevance.

- i) The proposal must address a research theme or sub-theme identified by any of the research centres and must meet objectives of the research centre. However, proposals that do not fall under the identified research themes or priorities may be considered if the research is found to be scientifically compelling by the URB, or reviewers.
- ii) Proposals should provide evidence of collaborative and cross-disciplinary research approaches.
- iii) Collaborative research proposals funded externally must show and/or include at least a 20% of the total grant to a capacity building component with respect to human capacity and/or research facilities of a research centre.

- iv) Non-collaborative research by PhD, MA, and MSc candidates will be considered after a brief and quick review to see if they meet rigorous scientific standards and UoA research priorities.
- v) If a hosting institution requires some form of teaching collaboration, be it a field course, laboratory course, or classroom instruction, then foreign researchers need to address such concerns in their proposals.

### **4.3 Funding**

Internal funding to support research activities will be allocated competitively on the basis of merit, and compliance with the University's guidelines and protocols. Approval of funding will be done by the URB. However, individual researchers can seek their own funding for their projects.

## **5.0 RESEARCH COLLABORATION AND HOSTING OF RESEARCHERS**

The University of Asmara strongly encourages research collaboration with similar institutions both inside and outside the country. Research collaboration or joint research ventures are important contributors to building research capacity at UoA. All collaborators will be required to sign the research agreement form (FORM/04) provided in Appendix V. Various types of research collaborations could be envisaged:

- i) Adjunct researchers: These are staff of other Universities who come on sabbatical or research leave primarily, but not exclusively, to conduct research in Eritrea and ask to be hosted by University of Asmara. Adjunct researchers may also be identified and invited by research centres to participate in an on-going research or newly proposed project. This also applies to contract research.
- ii) Joint research ventures, or research collaborations: These are joint research projects that are conceived, developed, and conducted jointly by staff of the University of Asmara. Such research projects are also jointly administered and managed.
- iii) Research by expatriate graduate students: these are research conducted by masters or doctoral students.

Adjunct researchers hosted are equally expected to abide by the regulations governing research at UoA.

### **5.1 Obligations and Rights of Hosted Researchers**

As University of Asmara-based researchers are provided with research facilities by the University, these costs should be recoverable and can be used to sustain administration of research and fund new research initiated by local researchers.

#### **5.1.1 Overhead and administrative fees:**

Researchers hosted by the University of Asmara will have the following obligations.

- i) University of Asmara researchers who receive research grants that are external to University funding will provide 10% of the grant total for laboratory-based and 5% for non-laboratory-based projects as institutional overhead to the University of Asmara.
- ii) Foreign researchers who collaborate with University of Asmara researchers and who are funded from abroad will be charged 10% administrative fee on all pertinent expenditures if there is no use of University facilities.
- iii) Foreign partner researchers who use University facilities and equipment will pay an administrative and overhead fee of 15% on all pertinent expenditures.
- iv) Non partner foreign researchers will pay an administrative and overhead fee of 20% on all pertinent expenditures.

- v) Administrative charges applicable to graduate students from foreign universities will be in accordance with terms specified in the *Section 5.1.2*.
- vi) Fees must be paid prior to initiation of research.

The University of Asmara will provide the following services to the researchers:

- i) Write invitation letters to facilitate entry of foreign researchers to Eritrea. The invitation letter will be written by the Director of Research, in consultation with relevant entities.
- ii) Process their residence and /or work permits
- iii) Process their travel permits within the country
- iv) Provide offices and office furniture
- v) Provide stationary and other materials
- vi) Provide housing (when available ) at reasonable rent
- vii) Provide access to laboratories and computing facilities

### **5.1.2 Research by expatriate graduate students**

The University of Asmara may host foreign graduate students conducting research on Eritrea-related subjects in order to enhance scholarship and to contribute to knowledge on Eritrea. Research proposals by expatriate graduate students should follow the following guidelines.

#### **5.1.2.1 Application**

Students are required to send their applications to the Director of Research at least three months before the expected arrival of the student. This should take into account the summer period (mid June through end of August) where the University is not in session. The application of the student will be reviewed by the URB on the basis of the University's Guidelines. The application should include:

- (i) A research project proposal, following the University's proposal guideline, outlining the work to be done, and indicating the relevance of the study to the enhancement of knowledge on Eritrea.
- (ii) A letter of support from an official of the home university: The official needs to state that the home university will help the University of Asmara in obtaining a copy of the thesis of the student in case the latter fails to do so.
- (iii) Two letters of recommendations from two of the professors of the student.
- (iv) A letter of application from the student indicating the time frame of the student's stay in Eritrea and clearly stating the support sought from the University of Asmara. The student needs to declare to fulfil his/her obligations (as stated in section 5.4.2.2 below) to the University of Asmara.
- (v) A brief CV.

- (vi) Establishing contact with the appropriate research centre of the University of Asmara may be advantageous.
- (vii) Evidence of financial support for the research.

#### 5.1.2.2 Obligations of the student

The student is required to perform the following while being hosted by the University of Asmara, and after that.

- (i) Serve as teaching and/or research assistant at the hosting department, or research centre.
- (ii) Give a seminar to the department, centre, the University community, or when applicable to the public at large towards the end of his/her stay on a topic related to the research work.
- (iii) Present a brief report of his activities during his stay to the hosting department, or centre, with a copy to the Director of Research before his departure.
- (iv) Send to the Director of Research a copy of his/her thesis and other publications originating from the research. If the thesis is in a language other than English, a brief summary of the thesis in English should accompany the thesis.
- (v) The student must be responsible for housing, living expenses, insurance, and other necessary items for his/her stay in Eritrea that are not covered by the support given by the University of Asmara.
- (vi) The student needs to pay the following fees:
  - A non refundable application fee of US\$ 100
  - Administrative support fee of US\$ 1000 for the first (one) semester
  - An additional fee of US\$ 500 per additional semester
  - Students who want waiver of teaching or other obligations will pay additional 1000 USD per academic year

Recommendation for waivers, whenever applicable, should come through the research centres. The Director of Research, in consultation with appropriate University authorities, will give the ultimate decision on it and the URB will be informed.

#### 5.1.2.3 Obligations of the University of Asmara

The University of Asmara will give the following support services to the students it hosts.

- (i) Act as host University of the student, and facilitate the processing of necessary documents for his/her research
- (ii) Issue appropriate administrative letters to Eritrean authorities to enable the student to carry out the research work in Eritrea
- (iii) Provide the student a temporary office at the University premises if the student is performing teaching or other related academic activities assigned by the hosting research centre or departments
- (iv) Provide housing (when available) at reasonable rent

- (v) Assign a supervisor for the duration of his stay: Students are advised to look for a faculty who may provide guidance to them during their stay in Eritrea. Any arrangement of this type should be sorted out in advance, in collaboration with the hosting research centre. Hosting departments or research centres will design a mechanisms for follow-up.
- (vi) Assigned supervisors will
  - guide the student in the implementation of the research project.
  - monitor that the student is progressing as per agreed upon schedule.
  - guide the student in the preparation of data collection protocols to ensure that the data collected is appropriate and relevant to the research project.
  - guide and help the student in the analysis and interpretation of data.
  - guide the student in the write-up of any drafts/chapters during his stay at UoA.
  - ensure that the student fulfils his obligations under the agreement.
  - provide any other guidance and consultation related to the project.

### **5.5 Distribution of Overhead and Other Fees**

Recognizing that one of the hallmarks of a research university is to invest overhead funds in research development, the University of Asmara will use a good portion of its overhead funds and fees to invest in innovative local research. It is important to create incentives for researchers and departments who are active in pushing forward the University's research mission. While funds are normally limited at institutions of higher education, the overheard moneys and fees provide an important source of funding for this purpose.

The overhead and administrative fees will be allocated according to the following protocols. The first disbursements will be allocated as follows:

- i. 10% of the fee to each department(s) sponsoring the research (up to 3 departments).
- ii. 10% of the fee to each research centre (s) sponsoring the research (up to 3 research centres). In the absence of a sponsoring department (s), the share of the research centre (s) will be 20%.
- iii. 10% of the fee to participating Eritrean Principal Investigator(s) or supervisor(s) to fund future research, or spend in research-related activities like participation in conferences.

The remaining funds will be allocated as follows:

- i. 30% of the fee to sustain the operations of the Directorate of Research and to support its related activities like production of guidelines, brochures, strategic plans, organization of seminars, reproduction and printing, etc.

- ii. 50% of the fee to be invested in the production of two scientific journals, one dedicated to the physical and life sciences, the second to the social sciences, humanities, business, and law.
- iii. 20% of the fee to be allocated to the University Research Library for upgrading journal collections.

## 6.0 INTELLECTUAL PROPERTY

Intellectual property refers to original creative works embodied in tangible and intangible products that have economic value, which becomes the property of inventors and innovators. Inventions and innovations such as new technologies, industrial designs, artistic works, etc. are often the result of demanding research. Intellectual property, thus, needs societal recognition and legal protection. In many countries, intellectual property rights are protected by law. The protection of intellectual property, i.e. property laws, has twin goals. The first is to reward the creators of original works by preventing others from copying, performing, or distributing those works without permission. The second is to provide incentives for people to produce scientific and creative works that benefit society.

### 6.1 Forms of Intellectual Property

There are four principal types of intellectual property, namely **patents**, **copyrights**, **trademarks**, and **trade secrets**. Patent is a legal document of rights granted by governments to an inventor. The granted patent is published in newspapers or through other media, and hence, enforced before the court. A Patent gives an inventor the exclusive right to make, use, and sell an invention for a specified number of years. By awarding special rights to inventors, the patent system encourages the advancement of research and development. Copyright is a legal right granted to authors and artists to control uses of works of arts, books, scientific articles, music, photographs, software and other similar works. Copyright gives authors the exclusive privilege to reproduce, distribute, perform, lend, rent, condense, modify, translate, or display their creative works for a specified number of years. The goal of copyright is to encourage authors to invest effort in creating new works of art and literature. Trademark is any word or symbol used by manufacturers or sellers to distinguish their goods from those of others. Trademark gives protection to the public by marking the source of the material with the aim of helping consumers to identify goods that they like or dislike. Trade secret is the right to withhold information or invention. It may consist of formula, technique, methodology, device, etc. that is not in public domain, but has economic value. It is not necessary that the subject under trade secret be new, novel, or unique for legal protection.

There are four categories of laws to protect the intellectual rights mentioned above. Patent law, which protects inventions that demonstrate technological progress; copyright law, which protects a variety of literary and artistic works, such as scientific articles, books, paintings, sculpture, prose, poetry, plays, musical compositions, dances, photographs, motion pictures, radio and television programs, sound recordings, and computer software programmes; trademark law, which protects words and symbols that serve to identify different brands of goods and services in the marketplace; trade secret law which protects the right to withhold information on invention. The latter two (trademark and trade secret laws) may not be immediately relevant to UoA, but the former two are relevant.

Eritrea's Transitional Civil Code covers copyrights and trademarks, but the laws pertaining to patents are limited, and a patent office does not exist yet. Until a comprehensive national intellectual property law is in place, the UoA is taking the initiatives to protect the intellectual rights of its faculty.

### **6.1.1 Patents:**

Patents are given for a wide array of products such as

- Machines;
- Compositions of matter such as new chemical compounds of economic, medicinal or other values;
- Innovative industrial, organizational, technological and production processes;
- Significant improvements of existing items (previous inventions) provided the intellectual property right of the previous inventor(s) has expired;
- The invention or discovery of asexual reproduction of new types of vegetation;
- Discovery of plants/animals that are novel, distinct from existing varieties, and stable in essential characteristics.
- New and distinct industrial designs;
- Computer programmes;
- Specially bred organisms to serve specific purposes;
- Certain laboratory processes, etc.

The issue of patent is not adequately covered either in Transitional Commercial Code of Eritrea or in the Transitional Civil Code of Eritrea. Short reference to patents is made in Section 6, Article 148 of the Transitional Commercial Code of Eritrea. In No. 2 of this article, it is merely stated that "Patents will be subject to provisions of special laws". There is no patent office in the country so far, and until such an office, supported by patent laws is in place, the UoA will continue to process patent applications as follows.

#### **6.1.1.1 Process of granting a patent**

##### **A. Applications**

To obtain patent protection, an inventor must file a patent application with the Directorate of Research. The application must contain the following information:

- i) The specification, which gives a general description of the invention or innovation;
- ii) The claims, which provide more detailed statements explaining exactly how the invention or innovation works and/or is assembled, including attributes that the inventor or innovator claims are new to it. In case of improvements, the significance of the improvement and its advantages must be clearly stated.
- iii) Drawings that illustrate the invention or innovation where applicable.

The URB assisted by experts (internal or external) in the area and the legal advisor of the University will determine whether or not the invention qualifies for a patent. During the patent examination process, the patent examiner(s) may ask the applicant to answer various questions about the invention. He may also be required to provide related information without prejudicing his/her right. If the outcome of the assessment is favourable, the applicant will be recommended for a patent and the URB may issue a *certificate for patent entitlement*, and the applicant will be encouraged to register his patent with appropriate institutions such as World Intellectual Property Organization (WIPO), Africa Intellectual Property Organization (ARIPO), etc.

#### B. Qualification for Patent

For an invention to qualify for patent, it must satisfy the following criteria:

- i) The invention must be “novel”, i.e. the invention did not previously exist. No patent will be given for inventions that are “anticipated”, i.e. inventions that have been covered in other patents or described in scientific journal, magazines or books.
- ii) The invention must be “non-obvious,” which means that the invention must represent a significant improvement to existing technology. Simple changes to previously known devices do not qualify for a patent.
- iii) The invention must be “useful”, which is understood to mean that it is beneficial to humanity. Novel inventions that can only be used for illegal or immoral purposes are not patentable.
- iv) Any other criteria deemed necessary in the patent examination process.

It should be noted that newly discovered natural laws or scientific principles are not patentable.

#### C. Terms

The time for which the patent is valid may vary from invention to invention, but it will not be less than ten years for any patent, effective from the day the application is filed. The patent is granted to the individual or individuals who made the invention. However, if the invention is the product of a contract work, or if the invention is part of an employee’s regular work, the employer may also claim the right to use the invention as well. It should be noted that a patent only grants rights within the jurisdiction of the body that issued it. Thus, a patent right issued by the University of Asmara may not be acceptable by all institutions in the country. Similarly, a patent right issued in Eritrea may not be valid in other countries. Applicants are advised to contact the **World Intellectual Property Organization (WIPO)**, which is specialized agency of the United Nations, dealing with such matters for international patent rights.

#### D. Legal Notice

Notice is often required in order to protect or exercise rights. The notice could be made either by the inventor once he is issued with a patent right, or the institution issuing the patent right. The purpose of this legal notice is to inform the public of

such a right so that the intellectual work is protected from unauthorized use. Legal notice gives the inventor legal right and ownership of the patent that prohibits unauthorized use by others.

#### E. Disputes

There may arise a situation when two or more persons apply for patent for the same invention or innovatio. Under such conditions, one of the followings will be applied.

- (i) As a matter of principle the one who first invented the item will receive the patent right, where and when this can be determined.
- (ii) If it is unclear which of the applicants the first inventor is, the person who filed the application first will get the patent right.
- (iii) If conditions (i) and (ii) can not be verified definitively, a joint patent may be issued.

#### F. Infringement

Any individual or organization that makes, uses, or sells a patented invention without the prior permission of the patent holder is guilty of infringement. The person holding the patent, called the patentee, may sue the infringer in an appropriate court to recover damages and obtain an injunction, which requires the infringer to refrain from committing future acts of infringement. Article 674, No.2 of the Transitional Criminal Code of Eritrea (Title II, Chapter 1) clearly states that “unlawful acts” relating to industrial designs or models, or patented inventions or processes are punishable by law. The accused infringer can defend himself in many ways including by bringing the doctrine of the *first sale* which states that once the patentee sells a particular item, the purchaser of that item may use it or resell it without being considered an infringer.

### 6.1.2. Copyright

Copyright refers to the exclusive privilege given to authors of literary or artistic works to reproduce, distribute, perform, or display their creative works. This right is protected by copyright laws, whose principal goal is to encourage authors to invest effort in creating new works of art and literature. Copyright law is the legal foundation protecting the work of many major industries, including book publishing, motion-picture production, music recording, and computer software development.

#### A. Qualification for Copyrights

A work qualifies for copyright protection when it is both *fixed* and *original*. A work is considered to be *fixed* if it is recorded in some permanent format like writing it down, storing it on a computer floppy disk, CD-Rom or any other form of storage, recording it on videotape, or sculpting it in marble or other materials including metals. A work is considered *original* if it is not copied from existing materials and if it shows a reasonable amount of creativity. Short phrases and titles are usually not protected by copyright. It needs to clear from the outset that copyright only protects the words,

notes, or images that the creator has used, and not any of the ideas or concepts revealed by the work. If, for example, a scientist publishes an article in a journal, bulletin or in a book explaining a new process, the copyright only prevents others from copying the words or diagrams of that article. Under such circumstances, a copyright law does not prevent anyone else from using or applying the process described by the scientist. If the scientist wants protection for the process, he must obtain a patent. Similarly, copyright does not forbid authors from topics on which others have written previously; it only forbids them from using the words that a previous author has used.

## B. Copyright in Eritrea

Copyright is fairly adequately covered in the Transitional Civil Code Eritrea. Articles 1647 to 1674 in Title XI of the Civil Code cover Literary and Artistic Ownership, and spell out the conditions under which copyrights are granted and protected. Moreover, Articles 2672-2697, which relate to “Contracts of Publication”, spell out the conditions on which rights of ownership of literary or artistic works may be given by authors to third parties like publishers. Articles 675-679 of the Transitional Criminal Code of Eritrea (Title II, Chapter 1), provide for offences relating to infringement of literary and artistic copyrights.

The articles mentioned above cover almost all issues relating to rights of ownership of literary and artistic works. For instance, they cover the subject matter to which copyrights extend. Right of ownership is given to five categories of “works of the mind”. These are

- **Literary works** such as books, booklets, articles newspapers, lectures, theoretical/dramatic works, etc.;
- **Musical compositions** with or without text, radio phonic or radio visual works, choreographic works, etc.;
- **Figurative works** like drawings, paintings, engraving, sculpture, photographic and cinematographic works;
- **Illustrations** like maps, plans, sketches, plastic works pertaining to geography, topography, architecture or other sciences; and
- **Any other work** created by the intelligence of the author and presenting an original character.

The public is informed of a copyright by a copyright notice. There are standard notices that are followed internationally. The notice is often placed in each published copy of the protected work and optionally consists of either the word *copyright*, the abbreviation *copr.* or the symbol ©, accompanied by the name of the copyright owner and the date of first publication. For sound recordings, the symbol ~ is used instead of the symbol ©. Although in some countries like the USA, the use of these symbols may not be obligatory, the URB recommends the use of the symbols.

The Transitional Civil Code of Eritrea gives authors the following rights.

- i) Only the author has the right to publish his work, and this right passes either to a person named by him or, in default of such persons, to heirs of the author after his death.

- ii) Only the author has the right to produce, or reproduce his work during his life.
- iii) Only the author has the right to authorize the adaptation of his work during his life.
- iv) Only the author has the right to alter his work.
- v) Works published after the death of authors are protected for fifty years after publication.

Authors can not object to the translation of their works nor forbid performances of their works at family gatherings or schools where performance is done free of charge. Moreover, authors cannot forbid analysis and press reviews of their work, nor reproduction of copies in single copies for private use only. (For details, authors should consult the relevant articles).

### C. Infringement

An infringement of a copyright is said to occur if a copyrighted work is reproduced, distributed, performed, displayed, adapted, altered, or modified in any form without the permission of the owner(s) of the right. The production of a work that is substantially similar to an existing work may also be considered an act of infringement subject to judgments by courts.

Owners of copyright may demand various remedies for the infringement. They may demand an injunction, i.e. the secession of such infringement, the destruction of the adapted, or altered copies, compensation for the moral and material prejudice caused to them, etc. The conditions on which owners of rights may act are specified in Art. 2027-2178 which relate to “Extra Contractual Liability and Unlawful Enrichment”. It should be noted that the use of a copyrighted material for criticism, comment, teaching, and research, even without permission of the copyright owner falls under what is commonly referred to as *fair use*, and may not constitute act of infringement by a court

### D. International Copyright Laws

There are also important international treaties that deal with copyright laws among nations. The Berne Convention, first adopted in 1886 in Berne, is the first and perhaps the most important international treaty concerning copyright laws. It has gone through various revisions since its first adoption. Most countries of the world are members of this Convention. Members of the Berne Convention grant copyright protection to works of authors who are citizens of any member country, enabling author to obtain copyright protection in many nations. The treaty also forbids members from placing conditions on copyright protection based on the observance of formalities, such as registration of the copyright or placement of the copyright notice on copies of the work.

Another treaty called the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), was signed in 1994. Most countries of the world are also signatories of this treaty. This treaty clarifies several aspects of copyright law and strengthened copyright protections internationally.

In spite of such protections infringement are common mainly because some countries are either deliberately lax with enforcement of copyright laws, or lack the institutional capacity to enforce them. Thus, copyright pirates reproduce artistic and even literary works such as music on compact discs, computer software, and videocassettes of movies, and sell them at very low prices.

### **6.1.3 Trademark**

Trademark is any word or symbol used by manufacturers or sellers as a distinguishing mark to identify their goods from the goods of others. Trademarks help consumers either to identify goods they have used and enjoyed in the past, or to avoid goods and services that they dislike. Examples of well-known trademarks include Coca-Cola for soft drinks, Kodak for film, Nike for footwear, and Microsoft for software. The Transitional Commercial Code of Eritrea protects trademarks. Articles 135 to 141 deal with trade names and distinguishing marks. The law prohibits the use of trade names or trademarks that create confusion in a manner prejudicial to the interest of another trader, or the public. Owners of trademarks may sue infringers, and the court may order monetary damages to be paid, and an injunction prohibiting infringers from using the trade name that has created confusion. A different trader may not use the same trademark for different goods.

### **6.1.4 Protection of Indigenous Knowledge**

Traditional or indigenous knowledge, including genetic and natural resources, is one important depository of knowledge. Such knowledge has provided crucial information for the development of numerous profitable commercial products. Yet people with such knowledge are seldom protected for the knowledge they hold. The following arrangements could be followed to protect the rights of holders of indigenous knowledge.

- i) Material Transfer Agreements (MTA): This is a deal or agreement that specify conditions under which research materials and/or information are supplied. The MTA agreement
  - ensures that the material or information supplied will be solely used for research, and will never be given to a third party;
  - specifies the monetary and non monetary compensations to be provided for the supply of information or research material;
  - specifies the mode of benefit sharing in case of novel discovery.
- ii) Extend the legal provisions of IPR to cover traditional knowledge
- iii) Co-patent new products developed on the basis of indigenous knowledge, so that holders are regarded as co-inventors.
- iv) The entire community from which the previous material was taken should also share the benefit.

Researchers who want sensitive knowledge/secret divulged from custodians of such knowledge must complete the Material Transfer Agreement Form- FORM/02- provided in Appendix III.

## **6.2 Legal Issues**

The laws for patents, copyrights and trademarks vary from country to country. However, in almost all branches of intellectual property, the legal system seeks to balance the interest of inventors on one hand, and the interest of the general public on the other. This implies laws must be strong enough to protect the rights of owners so that they encourage authors and inventors to invest the necessary effort in innovation. At the same time, laws must also allow people some freedom to use the intellectual property of others, so that progress on artistic, technological, and commercial progress proceeds unhindered. Thus intellectual property laws confer general rights on creators but at the same time make some limitations on those rights, or make some exceptions to the rules to allow the general public to benefit from artistic, literary and technological innovations. For example, a scientist may use someone else's invention to conduct experiments, without prejudicing the rights of the patent owner. Similarly, copyright law allows a literary critic to quote passages of a novel in a review. There are similar conditions in which trademark laws allow traders to use trademarks of other traders without prejudicing the interest or rights of the trademark owner.

Despite increasing protection of and international agreements on intellectual property rights, there is widespread sale of counterfeit versions of intellectual property products, such as software, movies on videotape, brand-name athletic goods, and even patented medicines, which cost the owners of the rights billions of dollars each year. In fact some countries tend to tolerate such violations, because counterfeit products are sold openly in formal markets. It was to reverse this condition and control counterfeit products that the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) was signed by many countries in 1994. Administered by the World Trade Organization (WTO), TRIPS strengthened legal protection for intellectual property around the world. Some countries like the United States have also started to negotiate directly with countries such as China, where counterfeiting has been particularly extensive. It is increasingly becoming difficult to protect intellectual properties posted in the Internet as such works can be easily copied.

## **7.0 SABBATICAL AND RESEARCH LEAVES**

Sabbatical and research leaves are intended to encourage faculty to engage in research, allow them complete ongoing researches, facilitate access to research/teaching resources not available at University of Asmara, broaden/deepen their scholastic competence, explore and examine new research/instructional methods to improve their career, etc. These leaves give faculty a respite from their normal duties and provide them with the opportunity to develop professionally. Hence, they are an inseparable part of the intellectual, academic and professional life of individual members of the academic staff and the University as a whole.

### **7.1 Sabbatical Leave**

#### **7.1.1 Purpose of sabbatical leave**

The goal of a sabbatical leave project is to engage faculty in the areas of study, research, scholastic travel like sharing work experience, or other innovative activities, and to contribute to the University as a whole upon his/her return. The URB lists the following types of sabbatical activities:

- i) Research (literature survey and formulation of research projects, completion of on-going research, etc.) and publication;
- ii) Updating of knowledge in subject field, including practical training;
- iii) Curriculum and teaching materials development
- iv) Service to the country like voluntary contribution to Ministries
- v) Other innovative intellectual or academic activity or plan

#### **7.1.2 Eligibility for sabbatical leave and application procedures**

- i. Sabbatical leave is a faculty's academic right;
- ii. A sabbaticant must be an Eritrean with Ph.D., or an expatriate with Ph.D. working in local salary;
- iii. Faculty may apply for sabbatical leave during or after the seventh year of credited service from date of appointment or following the return from a previously granted sabbatical or study leave;
- iv. A sabbatical leave can only be postponed by mutual agreement;
- v. The seven years of University service must be without interruption, excepting where reason for interruption is acceptable. However, the period of any interruptions shall not count as years of credited service for sabbatical leave consideration. The period of short-term disability (one semester) shall be counted as credited service for sabbatical leave consideration while the period of long-term disability (more than one semester) shall not be counted as credited service;
- vi. Extra years served prior to a previous sabbatical leave shall not count as years of credited service for sabbatical leave;
- vii. A sabbatical leave can be spent inside the country, outside the country or both;

- vi) Staff members shall apply for a sabbatical leave, in writing, at least 4 months before the planned date of leave. This sabbatical leave application shall be accompanied by a plan of teaching, research or other scholastic activities, in conformity with the purpose of sabbatical leaves as outlined in Section 7.1.1.
- vii) The staff member shall forward the application materials to the URB with copies to the concerned Department and College.
- viii) The URB will process and facilitate the sabbatical leave applications.
- ix) Heads of Department and Deans must inform all staff of eligibility to apply for sabbatical leave and the arrangements they have to make within the department to facilitate sabbatical leave.

### **7.1.3 Length of sabbatical leaves**

Sabbatical leaves are normally granted for a non-extendable twelve-month period. Sabbatical leaves may however, be granted for six-month periods in different academic years. For staff members granted two six-month sabbatical leaves, the years of credited service for the next sabbatical leave shall begin twelve months from the start of the first six-month leave, and should be processed within 24 months of the first part of the leave. The remaining part of a sabbatical leave can not be claimed 24 months after the first part was used. If sabbatical leave is granted for less than a total of twelve months the remaining months will not be added to a future sabbatical or research leave.

### **7.1.4 Payment**

- i) The University shall pay full salary to sabbaticants.
- ii) The staff member may request that full or a portion of his/her salary be made available to him/her before leaves for sabbatical.
- iii) Sabbaticants are entitled to any benefits like annual salary increments, promotions, etc due in the year/semester of leave.

### **7.1.5 Return from sabbatical leave**

A sabbaticant will submit a report to the URB with copies to the Department and College within 45 days of return from sabbatical leave. This report shall describe the sabbatical experience in terms of the fulfilment of the sabbatical leave plan. If two six-month sabbatical leaves are taken in non-consecutive academic years, the staff member shall submit a report following each sabbatical leave within 30 days of return.

### **7.1.6 Support**

The University of Asmara has the duty to provide institutional support when faculty search for fund for leaves.

## **7.2 Research Leave**

Research leave is an extended period of research-related work or scholarship intended to enrich the intellectual life of faculty. Research leaves do NOT include any leave taken during the summer break.

### **7.2.1 Purpose of research leaves**

The goal of a research leave project is to engage faculty in the areas of research, or enable completion of an on-going research. The URB lists the following types of research activities:

- i) Research formulation, including literature survey;
- ii) Completion of ongoing research, and possibly its publication;
- iii) Facilitate access to research resources (laboratory facilities, literature, data, expertise) not available at UoA.

### **7.2.2 Eligibility for research leave and application procedures**

- i) An Eritrean with Masters or Ph.D., or an expatriate with similar qualification working in local salary;
- ii) Staff members may apply for research leave during or after the four years of credited service from date of appointment or following the return from a previously granted research or study leave;
- iii) The four years of University service must be without interruption excluding acceptable reason for interruption;
- iv) A faculty asking for a research leave shall apply in writing, and he/she must present a compelling justification, accompanied by a research plan.
- v) The faculty shall forward the application for research leave for the following academic semester to the URB and copies to the concerned Department and College. The research leave has to be approved by the URB.
- vi) Application for research leave should be made at least one academic semester before the commencement of the leave.
- vii) Faculty can spend their research leave inside the country, outside the country or both;

### **7.2.3 Length of research Leaves**

Research leaves are normally granted for a non-extendable, one semester (four months) period.

### **7.2.4 Payment**

- i) The University shall pay full salary to faculty on research leave.
- ii) Faculty on research leave is entitled to any benefits like annual salary increments, promotions, etc. due in the semester of leave.

### **7.2.5 Return from research leave**

A faculty will submit a detailed report to the URB, with copies to his department and college, within 30 days of return from the research leave. This report shall describe the research experience and/or activities in terms of the fulfilment of the research leave plan.

### **7.2.6 Support**

The University of Asmara has the duty to provide institutional support when faculty are searching for funding to cover research leaves.

## **APPENDIX 1: Guidelines for the Preparation of Research Proposals**

### **GENERAL STRUCTURE OF THE PROPOSAL FOR A RESEARCH PROJECT**

The purpose of the research proposal is to help you think through each step of the research process of the research project. Moreover, it allows other people to see and think through your research so that they can share their views and provide useful comments or advice. Thus, by writing your proposal you will be sharing ideas with others and be in a better position to explore alternatives. The process of writing a research proposal will help you make intelligent and ethical research decisions from the beginning. Note that the research proposal is always written in the future tense.

The research proposal builds on research ideas that a person may have thought before, or on a research journal. The research journal is a sort of diary which jots down research ideas generated at different times while reading or conducting research. In the research proposal, a number of points will have to be considered: what the research hypothesis/questions are and how they have been arrived at; how the variables are to be defined; how the samples are going to be selected; what tests and analysis are to be conducted; how the research proposal fits existing research, etc. The major components of a research proposal are discussed below, and has to be followed whenever applicable.

#### **1. TITLE**

A research proposal must have a title. The title is the first thing readers will see. State the tentative title of your proposal. Make it specific, concise, informative and distinctive. The title must be specific, concise, direct, and informative. Make sure that the title conveys the purpose and content of the study. It must appear centred at the top of the first page of the proposal.

#### **2. RESEARCHERS**

The name, full address, institution affiliated with, and qualification of the researchers must be clearly provided, preferably in the front page.

#### **3. ABSTRACT**

A summary of not more than 500 words should be provided at the beginning of the proposal.

### **3 STATEMENT OF THE PROBLEM AND RELATED RESEARCH (LITERATURE REVIEW)**

The purpose of this section is to demonstrate that you have read the relevant research and thoroughly understand the research problem. The previous study must be investigated fully; however, only a meaningful and succinct summary must be presented. Present a critical review of related research, i.e. the non-technical aspects, not just a summary of the findings, but all the debates and paradigms associated with the research problem. Show clearly the relation of the reviewed material to your problem, hypothesis, research questions, assumptions, etc. Make sure that the research reviewed and cited or quoted is relevant to your study. This should lead to a clear and complete formulation of the problem.

After articulating the reasoning behind the research problem, the plan of the work along with its justification must be presented. Discuss the importance or significance of the problem selected, and the contribution of your research to either its better understanding or its solution. To convince people that the research proposal is interesting, they should know first what exactly you are studying. The concepts used must be clearly defined and their importance in terms of the research proposal clearly stated. The relation of the specific problem to the broader problem in the area must be clearly shown. The purpose of the study must be in an unambiguous and precise way; the general scope of the study must be adequately presented.

### **4 HYPOTHESES AND RESEARCH QUESTIONS**

Clearly state the hypothesis or research questions to be investigated. Make sure that the hypotheses formulated can be tested, and the research questions are answerable. This implies that your hypotheses must be formulated in a way that they can be tested as far as possible. If adequate justification can be provided, non-diagnostic hypotheses (conceptual or remedial hypotheses, for instance) may also be formulated. In some cases, research questions may take the place of hypotheses. You should also include how the hypotheses are going to be tested and why they are going to be tested the way they are going to be tested. In other words, the method of testing must be justified. The reasons for choosing the procedures selected must be clearly stated.

### **5 OBJECTIVES:**

The objective of your research, i.e. the purpose of your research, along with its significance, or possible contributions must also be clearly stated.

### **6 METHODOLOGY**

State clearly and fully the methods to be used in data collection and analysis to test your hypotheses and/or answer your research questions. Under this section, the following points must be kept in mind:

- 6.5 Indicate the nature, source, characteristics and size of your sample to be used; describe the sample in detail;
- 6.6 Describe the sampling procedure clearly; provide the rationale for selecting the sampling procedure selected;
- 6.7 State clearly the techniques and/or instruments to be used in data collection; e.g. experimentation, questionnaire method, direct observation, etc. The reliability of the data collected in this manner must be indicated;
- 6.8 Indicate whether or not the study can be replicated. A study must preferably be replicable so that the hypotheses formulated or the research questions asked can be retested. This is important for theory and/or law building activities;
- 6.9 Describe concisely the statistical treatment of the study. State clearly the methods of data analysis, including the appropriateness of the techniques used in relation to your hypotheses, or research questions.
- 6.10 As part of the proposal, it might be useful if the chapters into which the study is going to be divided is presented, and the possible contents of each chapter briefly discussed. This means that a tentative outline must be prepared, so that the flow of the chapters and the organization of the study is clearly understood from the beginning of the study.
- 6.11 If possible indicate how your research findings will be presented. Research findings are often presented in various ways, or a combination of them, like in tabular form, graphic form, or simply in verbal description (discursive method).

## **7 OPERATIONAL DEFINITIONS**

Clearly define and/or explain the key variables, concepts and terms, which have special meaning in your study. Do not include mere semantic definitions of such terms. The definitions or explanations provided must be meaningful and relevant to the study, rather than mere dictionary definitions.

## **8 ASSUMPTIONS AND LIMITATIONS OF THE STUDY**

Make explicit the assumptions underlying the various phases of the study. Avoid implicit assumptions as far as possible. The assumptions made must be reasonable. How the study has been narrowed down or delimited must be clearly presented. This may be done by time, number, location, etc.

## **10. TIME FRAME AND BUDGET**

This section must provide a detailed budget breakdown and the duration of the different phases of the research project in weeks along with output indicators at the end of each phase.

## **11. CAPACITY BUILDING**

The contribution of the research project to building and/or enhancing research capacity at the University of Asmara must be clearly stated. There has also to be

clear allocation of budget for this purpose. Capacity building components are like supply of laboratory or other equipment, supply of chemicals, PhD training, workshops, etc.

## **12. DISSEMINATION OF RESEARCH FINDINGS**

Modalities of disseminating the research findings must also be indicated. This may include seminars, conference presentations, journal articles, books, monographs, etc.

**APPENDIX II: Consent Forms**

The following Consent Forms will have to be completed in any research that involves human beings. Form 1A will be completed when adults are involved; Form 2A will be completed when minors or adults incapable of representing themselves are involved.

CONSENT FORM

FORM/01A

I agree to participate in the research titled (*title of research*), which is being conducted by (*investigator's name, department at UoA and full address*) under the direction of (*UoA faculty advisor, department and full address*). I voluntarily consent to participate in this research or interview, and I can withdraw my consent at any time without penalty, or any other consequences, and have the results of the participation and/or interview, to the extent that it can be identified as mine, returned to me, removed from the research records, or destroyed.

The following points have been explained to me:

- 1) The reason for the research and/or interview;
- 2) The procedures to be followed;
- 3) The discomforts or stresses that I may experience;
- 4) The results of this participation will be public/ (OR) anonymous.

\_\_\_\_\_  
Signature of Researcher      Date      Signature of Participant      Date

CONSENT FORM

FORM/01B

I give my consent for my child or \_\_\_ (*Name of child/person under guardianship*) to participate in the research titled (*title of research*), which is being conducted by (*investigator's name, department at Uo and full address*) under the direction of (*UoA faculty advisor, department and full address*). I understand that this participation is entirely voluntary, and I and/or my child can withdraw consent at any time without penalty or any other consequences, and have the results of the participation, to the extent that it can be identified as my child's, returned to me, removed from the research records, or destroyed.

The following points have been explained to me and my child:

- 1) The reason for the research, or participation
- 2) The procedures to be followed
- 3) The discomforts or stresses that my child may experience
- 4) The results of this participation will be public/ (OR) anonymous

\_\_\_\_\_  
Signature of Researcher      Date      Signature of Parent/ Guardian      Date

**APPENDIX III: Material Transfer Agreement Form**

The following form has to be completed whenever sensitive or vital information is being involved in a research project. The form could be changed, without prejudice to the interest of the custodian, to include other and/or additional mechanisms like financial compensations.

MATERIAL TRANSFER AGREEMENT FORM

FORM/02

I, (*Name of knowledge custodian, full address*), hereafter referred to as the custodian, and (*Name of investigator, department at UoA and full address*), hereafter referred to as the investigator, have made the following agreements relating to the research titled (*title of research*).

- i) The custodian agrees to divulge his knowledge/secrets pertinent to the current research conducted by the investigator.
- ii) The investigator agrees and assures the custodian that the knowledge/secret divulged will be solely used for research purposes, and will NOT be passed to a third party without prior consent of the custodian;
- iii) The investigator agrees that in case the knowledge/secrete leads to a patentable discovery, the custodian(s) has the right to claim a share of all benefits accruing from it.

\_\_\_\_\_  
Signature of Investigator      Date      \_\_\_\_\_  
Signature of Custodian      \_\_\_\_\_  
Date

**Witnesses:**

- 1. \_\_\_\_\_ (Name, full address)    I.D. No. \_\_\_\_\_    Signature \_\_\_\_\_    Date: \_\_\_\_\_
- 2. \_\_\_\_\_ (Name, full address)    I.D. No. \_\_\_\_\_    Signature \_\_\_\_\_    Date: \_\_\_\_\_
- 3. \_\_\_\_\_ (Name, full address)    I.D. No. \_\_\_\_\_    Signature \_\_\_\_\_    Date: \_\_\_\_\_

## APPENDIX IV: Progress Report Form

The following progress report form has to be completed biannually, two weeks before the meeting of URB, and submitted to the sponsoring Research Centre with a copy to the Directorate of Research.

RESEARCH PROJECT PROGRESS REPORT FORM

FORM/03

### 1.IDENTIFICATION

1.1 Title of Research Project: \_\_\_\_\_  
\_\_\_\_\_

1.2 Name of Principal Investigator: \_\_\_\_\_

1.3. Names of Participant Researchers:

i) \_\_\_\_\_

ii) \_\_\_\_\_

iii) \_\_\_\_\_

iv) \_\_\_\_\_

v) \_\_\_\_\_

### 2.PRESENT STATUS OF THE PROJECT

2.1 State what has been done so far in precise and concise way:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.2 State briefly the major findings, if any, of the research project to date:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2.3 State briefly what remains to be done to complete the project:

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2.4 Give the expected date of completion: \_\_\_\_\_

2.5 List and discuss the problems faced, i.e. hindering the progress of the research, and how they are being tackled, including the roles played by the research centre and/or the Directorate of Research.

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**3. BUDGET**

- 3.1 Amount of fund allocated: \_\_\_\_\_
  - 3.2 Amount of fund used so far: \_\_\_\_\_
  - 3.3 Amount of fund left: \_\_\_\_\_
  - 3.4 Additional fund requested: \_\_\_\_\_
  - 3.5 Reason for additional fund requested: \_\_\_\_\_
- 

**4. BUDGET CLEARANCE BY FIOD (FINANCIAL INFORMATION AND OPERATIONS) DEPARTMENT OR ANY OTHER APPROPRIATE BODY:**

4.1 Authenticated by (Name) \_\_\_\_\_  
Signature \_\_\_\_\_  
Date \_\_\_\_\_

**4. PERSON RESPONSIBLE FOR THE REPORT**

5.1 Prepared by (Name) \_\_\_\_\_  
Signature \_\_\_\_\_  
Date \_\_\_\_\_

## APPENDIX V: Research Agreement Form

This form is to be completed after the URB has approved a research proposal and its funding.

### RESEARCH AGREEMENT FORM

FORM/04

The University of Asmara (hereafter referred to as the University) and \_\_\_\_\_ (*Name of Principal Investigator, department at University and full address*) (hereafter referred to as the PI) agree as follows:

The PI shall carry out the research project titled \_\_\_\_\_ (*give title of project*).

The PI will carry out the research project in collaboration with the following researchers:

- 2.1. (Name, department at University and full address of collaborator 1)
- 2.2. (Name, department at University and full address of collaborator 2)
- 2.3. (Name, department at University and full address of collaborator 3)
- 2.4. (Name, department at University and full address of collaborator 4)
- 2.5. (Name, department at University and full address of collaborator 5)

1. The PI and his collaborators will carry out the project as described in the attached research proposal with diligence, professional integrity and scientific rigour to their best capacity.
2. The PI and his collaborators will observe the guidelines governing research at the University.
3. The University, through the (*Name of sponsoring Research Centre*), shall provide the sum of \_\_\_\_\_ (*give sum in figures and words*) Nakfa/US Dollar/Euro to finance the project.
4. The PI will ensure that the fund allocated is used as per the financial regulations of the University, keep all records of expenditures, and account them to the FIOD.
5. The PI will submit progress reports to the sponsoring research centre and Directorate of Research twice a year until completion of the project.
6. The project will start on \_\_\_\_\_ (*give date/month/year*) and end on \_\_\_\_\_ (*date/month/year*).
7. The life of project can be extended by mutual agreement (when there are valid reasons) with the sponsoring research centre and approved by the URB, or its executive body.
8. The project may be terminated, by mutual consent of the researchers and the sponsoring research centre, subject to approval by the URB or its executive body, if it faces serious problems.

9. All durable items purchased for the project belong to the University, and the PI will handover such items to the sponsoring research centre upon the completion or termination of the project.
10. The PI will give a scientific and financial report upon successful completion of the project.
11. The PI and his collaborators will be the sole authors, as per **Section3.3.2** of the guideline, of any publications coming out of the project.
12. The University, and the researchers will share any other benefits accruing from the project.
13. Any other term (s) specific to research projects can be added by the sponsoring research centres.

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For the University

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Principal Investigator

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Date and Seal

**APPENDIX VI Content/Publication Agreement Form**

CONTENT/PUBLICATION AGREEMENT FORM

FORM/05

I, the undersigned co-author of the intellectual work titled \_\_\_\_\_

\_\_\_\_\_

have inspected it fully and I agree with its contents. The work is being submitted to

\_\_\_\_\_

for publication. I also agree on the order of the name of co-authors as it appears in the work.

\_\_\_\_\_

Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

**APPENDIX VII: Organizational/Administrative Structure**

