African Union

Research and Publications Policy of the Pan-African University

PAU
Pan African University
Université PanAfricaine

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Contents

Acronyms

AU	African Union
AUC	African Union Commission
CAADP	Comprehensive Africa Agricultural Development Programme
CESA	Continental Education Strategy for Africa
HCD	Human Capital Development
ICT	Information and Communication Technology
IP	Intellectual Property
IPR	Intellectual Property Right
KD	Knowledge Dissemination
KM	Knowledge Management
M&E	Monitoring and Evaluation
NEPAD	New partnership for Africa's Development
PAC	Policy Advisory Committee
PAU	Pan African University
PhD	Doctor of Philosophy
PI	Principal Investigator
PIDA	Programme for Infrastructural Development in Africa
RMEIA	Research Monitoring-Evaluation and Impact Assessment
RPC	Research and Publications Committee
RPO	Research and Publications Office
STI	Science, Technology and Innovation
STISA	Science, Technology and Innovation Strategy for Africa
TT	Technology Transfer

1.   INTRODUCTION

The Pan African University (PAU) is a continental academic and research institute established by the African Union (AU) in 2011. The University is based on the guiding principles of academic freedom, autonomy, accountability, and quality assurance to strengthen the existing African academic institutions at the graduate level to advance academic excellence in the whole continent. PAU also radiates out for the successful achievement of excellence and international partnerships in academic and cutting-edge research activities focussed on African issues, gender parity and equality at all levels and in all university functions. Research at PAU demands good practices based on fundamental principles of research integrity (honesty, reliability, respect, and accountability). PAU remains committed and resilient to ensure the preservation of the natural wealth of Africa for future development with equity and sustainability.

PAU also aims at the promotion of African integration through the mobility of students, academic and administrative staff. A pillar stone for African integration will be collaborative research to resolve the challenges faced by African countries and setting up the institution of an appropriate framework to enable the African Diaspora to contribute towards strengthening of higher education and research in Africa.

Furtherance of academic promotion cannot be achieved without inter-disciplinary and multidisciplinary research programs linked to policy-making processes and promotion of productive linkages with the industrial sector for innovation and dissemination of new knowledge. Successful achievements in the above will be ensured to their fullest extent through the use of information and communication technologies for pedagogy, research and management.

In order to contribute to the emergence and strengthening of an African higher education and research platform, the PAU consists of five thematic institutes hosted by existing institutions located in the five geographic regions of the AU. The selection of these centres directly reflects the strategic objectives of AU to address the needs of Africans in a balanced and fair manner that demonstrates its objective of equity at all levels.

PAU has its Life and Earth Sciences (including Health and Agriculture) located at the University of Ibadan in Nigeria, Western Africa. Basic Sciences, Technology and Innovation is located at the Jomo Kenyatta University of Agriculture and Technology in Kenya, Eastern Africa. Governance, Humanities and Social Sciences is placed at the University of Yaoundé II in Cameroon, Central Africa. The Centre for Water and Energy Sciences (including Climate Change) is found at the University of Tlemcen in Algeria, Northern Africa, and Space Sciences at the Cape Peninsula University of Technology, South Africa, Southern Africa.

The Commission of the AU officially launched the PAU on 14 December 2011, and the PAU Statute was formally adopted by the AU Summit of the Heads of States on 28 January 2013. Article 14 of the Statute stipulates that PAU shall develop its own Research Policy.

2.   VISION, MISSION AND OBJECTIVES OF THE POLICY

2.1   Vision

PAU aspires to be a leading research-intensive university in Africa, recognised internationally for its graduate programs, and quality, relevance and impactful research.

2.2   Mission

PAU endeavours to provide a comprehensive graduate education that makes its foundation on the primary needs of Africans; engage in quality research and outreach programs geared towards the development of a prosperous, integrated and peaceful Africa.

2.3   Objectives

The **General objective** of this Research and Publications Policy is to provide strategic direction and conducive environment for the advancement of dynamic and innovative research in order to enhance the sustainable development of Africa.

The **specific objectives** are:

i.   To strengthen the human capital development and management to enhance research capacity at PAU.
ii.   To plan, design and develop relevant and doable research.
iii. To establish a system through which staff and graduate students are provided with research opportunities.
iv.   To ensure research at PAU is conducted responsibly and all research undertakings follow good practices.
v.   To disseminate research findings of PAU to the wider readership and make open access to its publications, and facilitate technology transfer (TT).
vi.   To facilitate the acquisition of research funds.
vii. To provide access to adequate research facilities to PAU researchers and partners.
viii. To protect intellectual property rights (IPRs) and create an environment for flourishing of creativity and innovation.
ix.   To keep the research policy dynamic in line with advances in science, technology and innovation (STI).

3.   Policy Directions and Strategies

PAU embraces a wide range of objectives that include ensuring the relevance of teaching and research to the development of Africa, and PAU becomes instrument for the implementation of Agenda 2063 of Africa through human capital development (HCD) and its research outcomes. PAU realizes that this can only be achieved by ensuring that the academic staff and students exercise their full academic rights in their efforts to advance the development of Africa in parity. PAU shall be responsible for the governance of research so that it is conducted with equity and fairness on all its campuses in the various regions of Africa and by extension to institutions it is collaborating with. In due course, PAU demonstrates that it remains accountable for all its research undertakings, including those conducted with other partner institutions for the advancement of science and social development of Africa and the rest of the world.

3.1   Good practices in research

PAU observes the following guiding principles to ensure academic staff and students bear the rights and responsibilities of their research outcomes, to engage in practical, ethical and intellectual challenges that come along with their duties as scientists of excelling quality. It is also the conviction of PAU that its staff and students celebrate and cherish overriding principles as integral parts of their scholarly duties. Such principles include: **Excellence in research (**searching for new knowledge when conducting research with the ultimate aim of generating outcomes of the highest quality); **Integrity** (abiding by all legal and ethical requirements that are applicable in research): **Honesty** (fostering the culture of honesty in research and delivery of its outcomes with accuracy and purpose); **Accountability** (recognizing and embracing in the conduct of research).

3.2   Research in the African context

Research in the African Continent as represented by PAU bases its objectives on AU Agenda of 2063, a strategic framework for the socio-economic transformation of the continent. It builds on, and seeks to accelerate the implementation of past and existing continental initiatives for growth and sustainable development. In order to realize the 2063 Agenda, AUC has developed a comprehensive ten-year Continental Education Strategy for Africa (CESA 2016 – 2025), the objectives of which is to "create" new African citizens who will be effective change agents for the continent's development. Furthermore, PAU upholds Science, Technology and Innovation Strategy for Africa by 2024 (STISA-2024) which places STI at the epicenter of Africa's socio-economic development and growth.

Some of the past and current initiatives that PAU should pursue include the Lagos Plan of Action, The Abuja Treaty, The Minimum Integration Programme, the Programme for Infrastructural Development in Africa (PIDA), the Comprehensive Africa Agricultural Development Programme (CAADP), The New partnership for Africa's Development (NEPAD), Regional Plans and Programmes and National Plans. It is also built on national, regional, continental best practices in its formulation.

Following this, PAU plays its share by contributing to the advancement of research in areas where it matters for African development. Among others, addressing peace and security, governance, poverty reduction, malnutrition, elimination of hunger, health improvement, and enhanced technology are overriding issues, while it uses its young and talented scientists that have received world acclaim by participating in cutting-edge research to find Africa's place in this competitive World.

3.3   Scope of the policy

PAU, in its attempt to generate usable knowledge to contribute to the development of Africa based on evidence obtained through research, endeavours to include basic, applied and contract research, policy development, artistic and creative productions and in general, by providing the freedom necessary for faculty members of PAU to conduct research in areas that interest them most. Research at PAU motivates researchers to consider a broad spectrum of think-tank activities, all characterised by necessarily strenuous intellectual endeavours and the intention to influence the thinking of others through teaching, research, publications and dissemination of knowledge.

To achieve the above-mentioned major scope of research at PAU, this Research and Publication Policy addresses the contemporary research conditions at PAU host institutes by keeping watchful eyes on African and global research trends. It also places African and global research trends into perspective to give directions to contemporary research at PAU host institutes. PAU will remain resilient to global changes by updating itself in line with the needs of Africa's development and global research trends. PAU will also demonstrate its unwavering commitment to serve the African people reach the knowledge economy of the World.

3.4   Purpose of this policy

This Research and Publications Policy of PAU sets the foundation of the research environment in which academic staff and students conduct their research to generate and disseminate new knowledge that serves Africa and beyond. It also ensures the development of a research culture that is resilient to any changes that may come from any corner of the world. Based on AU Agenda of 2063, and strategies of CESA 2016 – 2025 and STISA 2024, PAU fosters research for development and capacity building (human and infrastructure), and contribute towards the advancement of STI making Africa competent in the global scientific arena.

4.   BUILDING HUMAN CAPITAL AND RESEARCH CAPACITY

The development of human capital has been identified as a major driving force for the progress and advancement of the African continent. This comprises of the advancement of the African culture, knowledge, education, vocational qualifications, professional certifications, work-related experiences, and competencies of the workforce. In the present world where human capital propels knowledge economy, PAU in partnership with collaborating institutions undertakes its share of duties and responsibility to ensure that research, training and skills/careers development programs that match Africa's needs and capacity are conducted in order to contribute to the human capital development of the continent.

Objective:
To enhance research capacity and the outputs thereof at PAU with the resolve of strengthening the human capital development and its management in Africa

Policy statements:

4.1   Human capital development

a) Put in place mechanisms for strategic trainings for regular updating of the skills and awareness of researchers.
b) Ensure the presence of optimum mass of researchers.
c) Motivate researchers by way of recognizing and rewarding mechanisms.

4.1.1 Early career researchers

a) Create enabling research environment to strengthen the postgraduate programs.
b) Establish schemes for the provision of induction and training on their respective research directions to early career researchers.
c) Establish mechanism to cater for the regular monitoring of the career development of the researchers and technical staff.

4.1.2 Researcher career development

a) Establish programs to support the professional development of researchers at each stage of their research career.
b) Provide adequate training and career development following contemporary technological innovations.
c) Periodically review the effectiveness of these trainings and career development packages.

4.2   Research for innovation

a) Create space for cutting-edge research for African merited researchers.
b) Invest on cutting-edge and curiosity-driven research to remain competitive in the scientific world.
c) Provide mechanisms for converting cutting-edge research outcomes into marketable products and technologies.
d) Leverage on international research trends.

4.3   Research management

a) Devise mechanisms to enhance the effectiveness of PAU researchers.
b) Ensure and continuously improve the awareness of PAU researchers on funding and collaboration opportunities.
c) Encourage PAU institutes to diversify their research funding resource base.
d) Ensure research results are effectively disseminated to the wider society and, where appropriate, commercialize them.
e) Work towards enhancement of research impact.

5.   PLANNING, DESIGN AND DEVELOPMENT OF RESEARCH PROPOSALS

For research to be carried out responsibly and with integrity, good planning is essential. A research plan includes the overall purpose of the research; the gap to be addressed and its significance, the methods to be employed and how the data generated will be analysed. Good research planning ensures safe and productive research environment, where research is executed within its timeframe and budget to deliver the outcomes it is planned to achieve.

Objective:
To plan, design and develop relevant and feasible research proposals for Africa's development

Policy statements:

5.1   Planning and designing
a) Ensure all aspects of the conduct and management of the research are identified and considered including the work-plan with timeframe and budgeting; responsibility canters for each activity.
b) Support local capacity building with focus on equity.
c) Develop guidelines and formats for the appropriate design of research projects.
d) Ensure the engagement of all stakeholders in research planning and design and identify the role of each party in the research.

5.2   Identification and development of research ideas
a) Develop modalities for senior staff to assist junior researchers and graduate students in identifying and developing research ideas.
b) Create a platform for stakeholder consultations at all stages of research, and collect new research ideas based on practical issues of the operations of stakeholders in their institutions and their community services.

c) Establish incubation centres where researchers and the business community meet in search of innovative research ideas.

d) Establish the link and direct online access to all relevant publications to support academic staff and students in their efforts to follow up contemporary international developments in research.

e) Explore options to acquire single subscription for international database for use by all PAU community.

f) Establish a reward system to recognize outstanding researchers, research concepts and projects of proven achievements.

g) Engage with potential partners for collaborative research and joint-funding applications from sponsoring organizations.

5.3   Development of research concepts

a) Provide support and convert ideas into concept notes.

b) Remain alert to calls for proposals and mobilize researchers and students to develop winning proposals.

c) Align projects to institutionally prioritized research areas.

d) Engage with potential partners for collaborative research and joint funding.

e) Seek the necessary seed funding and space for developing concept notes.

f) Prioritize strategic research areas for soliciting funds.

5.4   Converting concepts into proposals

a) Make a concerted effort to capture the interests and committed participation of all stakeholders in proposal development to enrich research concepts.

b) Ensure the correct team of stakeholders are brought together to develop proposals.

c) Provide the necessary technical and financial support the proposal team requires to come up with competent proposals.

d) Ensure the proposals so developed are assessed by internal and external reviewers and approved by the designated PAU offices and committees.

5.5   Submission of proposal

a) Follow the established approval procedure for submitting research proposals.

b) Ensure that proposals are submitted before deadlines.

c) Obtain confirmation of receipt from the organization to whom the proposals are submitted.

d) Follow up the fates of submitted proposals for funding and communicate their status to all involved parties.

6.   ORGANIZATIONAL STRUCTURE OF RESEARCH

PAU establishes organized research units through which research is managed, provided with support. Staff and graduate students are provided with enabling environment to conduct research

Objective:
To establish a system through which staff and graduate students are provided with research opportunities in a conducive environment

Policy statements:

6.1   Research offices at PAU
a)   All research programs of the PAU institutes will be subject for assessment and monitoring.
b)   The research office monitors future trends in research and suggest to policy briefs and updates as deemed necessary.
c)   The research office maintains and updates its website and database.

6.2   The research committee
a)   A research committee formed by the Senate will formulate specific research policies, guidelines and procedures.
b)   The committee is responsible for overseeing the operations of the PAU's Research and Publications.

6.3   Researchers
a)   The research workforce of PAU recognized positions comprisies of senior scientists, research staff, post-doctoral fellows, emerging researcheres, and research assistants.
b)   PAU may create new research positions as deemed necessary.
c)   The creation of such new research positions will be based on merits and international competitions.

d) PAU may appoint adjunct faculty, research associates and visiting scholars as deemed necessary.
e) PAU fosters networking for creation of research partnerships and for sharing of best research practices among researchers.

6.3.1 Requirements to undertake research
a) Subject to the requirements of IPRs and commercialization, all academic staffs of PAU are required to conduct research.
b) All academic staff members are expected to present their research findings at international conferences to increase networking and visibility of PAU.

6.3.2 Statutory and ethical obligations
a) Academic staff and students of PAU are required to comply with this Research and Publications Policy, the Senate Legislation or any other PAU regulations and oblige themselves to all ethical obligations and contractual agreements in the conduct of their research projects.

6.4 Research supervision and mentoring
a) Put in place a system to provide first rate supervision and mentoring.
a) Establish research mentoring system to help out research fellows and students internalize cultural norms and standards of research and form a sense of identity and commitment to research.
b) PAU encourages informal mentoring, while facilitating institutionally mediated formal mentoring.
c) Create effective and enabling research environment to ensure the integrity and quality of research.

6.5 Safety in research
a) Establish a system where research activities are undertaken in an environment that is safe and meets all ensure safety of researchers through international safety procedures for the sake of safeguarding researchers from any professional hazards.
b) Ensure academic staff members adhere to international standard safety requirements in the conduct of research.
c) Ensure researchers, their associates and assistants follow strictly safety procedures at all times.
d) Ensure researchers strictly follow the regulation for the safe disposal of hazardous liquid and solid waste materials.
e) Provide researchers and their support staff with regular trainings on safety procedures prior to engagement in research.
f) Regularly maintain research facilities to ensure international standard and factory operation specifications.
g) Regularly monitor for strict compliance to all safety and health procedures.

6.6 Researchers´ mobility
a) Foster mobility of faculty and graduate students and collaborative research.

b) Promote international contacts, experience sharing, and co-publications to enhance quality of research innovativeness.

c) Develop modalities and procedures for implementing research mobility.

6.7 Linkages in research

a) Encourage linkages among PAU institutes, and other universities and research centres.

b) Foster university-industry linkage, collaborative research, and research outreach.

6.8 Gender balance in research

a) Foster gender equity in all its research programs.

b) Establish programs for improving the gender balance in research.

6.9 Operations of research data

a) Encourage PAU academic staff to keep accurate, retrievable and clear records of their research procedures, results and problems.

b) Provide access to primary research data generated at PAU unless they are restricted by other regulations, and agreements that curtail their release, or for reasons of commercialization.

c) Ensure that research data are protected, safeguarded and provided with reliable back up facilities.

d) Data shall be kept in their original formats and all forms of storage, be it tapes, videos, discs, etc. should not be deleted, formatted or modified in any way.

e) Data shall be kept until alternative regulations are in place.

f) Regarding personal research data, the following issues can be considered:

 i. Academic staff and students have the duty of confidentiality to the individual or individuals involved whenever they use personal data unless there are other reasons such as ethical or legal issues to do it otherwise.

 ii. The information and communication technology (ICT) and documentation services should ensure that the necessary arrangements be made for securing personal research data or to deny access to unauthorized personnel.

 iii. It is the duty of the principal investigator (PI) to ensure that the personal research data of collaborating researchers and institutes are also duly protected.

6.10 Research cycle management

a) Provide training on research cycle management.

b) Monitor various stages of research cycle, the planning and conduct of research, the recording and reporting of results, and the dissemination, application and exhaustive use of research outcomes.

6.11 Research award

a) Establish a system to award outstanding PAU researchers.

b) Such merit recognition system should be designed in such a way that it motivates others in PAU and elsewhere to continue to make efforts to work with PAU.

7. RESEARCH INTEGRITY AND RESPONSIBLE CONDUCT OF RESEARCH

Research is the quest for knowledge obtained through systematic inquiry and thinking, observation and experimentation. Such an endeavor at PAU demands good practices based on fundamental principles of research integrity (honesty, reliability, respect, and accountability), which refers to high quality and robust practices across the full research process. Research ethics are a subset of research integrity, focusing on the principle of avoidance of harm, within a statutory and regulatory framework.

Objective:
To ensure research at PAU is conducted responsibly and all research undertakings follow good practices.

Policy statements:
7.1 Academic freedom in research

a) Assure the fullest protection of freedom of inquiry, thought, expression, and publication.

b) Uphold the freedom to information.

c) Maintain regular information outlets for public awareness on the activities and achievements through published newsletters, online reports, social media outlets, open-days and other communication modalities of PAU institutes.

7.2 Research integrity

a) Ensure all research undertakings at PAU are conducted with rigour and highest level of integrity.

b) Ensure PIs of research projects are knowledgeable with ethical issues and their governance and are responsible for risk assessment, and ascertain health and safety regulations to their fullest extent.

c) Ensure allegations of misconduct are handled in a transparent, robust and fair process.

7.3   Good practices in research

a) Ensure all the necessary materials, research staff, technical support and other resources, including finance, are in place with the required quality and standards as per the project activity plan before the project is launched.

b) Nurture a research environment that supports research undertakings with rigour and integrity.

c) Monitor research undertakings to assess whether appropriate practices/mechanisms are in place to provide assurances over the integrity of research.

d) Ensure research undertakings conform to all ethical, legal and professional requirements and obligations.

e) Ensure the regular implementation of internal and external quality assurance assessments.

7.4   Conflict of interest

a) Educate faculty about situations that generate possible conflicts of interest.

b) Encourage staff and graduate students to conduct their research in an environment that avoids or minimizes conflicts of interest.

c) Conflicts of interest arising from personal and/or research activities must be immediately and verifiably disclosed to PAU responsible offices.

d) Failure to declare known conflicts of interest may be deemed misconduct in research.

7.5   Research involving human subjects

a) PAU declares its concurrence to Declaration of Helsinki and the Human Rights Act 1998.

b) PAU upholds that all academic staff and students conducting research involving humans as subjects of research have defined moral obligations and uphold mutual respect and integrity.

c) PAU researchers must clearly and explicitly explain to the subjects the possible risks involved in the research and the written consent of the subjects to participate in the research must be obtained.

d) PAU researchers must recognize the rights of individuals or groups of individuals who wish to decline to be engaged in a research project as subjects. By extension, if any individual or groups of individuals wish to resign from the research after the research is underway; their rights for the same must be respected without any reservation.

7.6 Protecting the rights and ensuring safety of humans involved in research

a) Ensure researchers protect human subjects against even the slightest possible risks of physical, psychological and social harms that may arise due to their participation in the research. In circumstances where foreseeable discomforts or distresses are expected, the human subjects must be informed and their prior consent obtained.

b) Any or all possible risks to research participants or subjects must be explained in the languages or formats they understand.

c) The ethical procedures designated for any PAU project must be sufficiently rigorous to ensure the minimization of risks and discomforts of human research subjects.

d) The rights for private consultations of individual research participants on issues of anticipated risks or discomforts must be respected.

e) PAU researchers must express to research participants that any information gathered from human subjects shall remain confidential and anonymous.

f) Any or all forms of electronic recordings of the research participants require their consent to be used in any way.

g) In circumstances where the actual research participants of a research who do not have full autonomy of thought or who are not in a position to give consent, be it due to age (too young or too old) or sickness (mental or physical) or due to disabilities, the legal representative or the closest in kin or the spouse of that participant can be requested for consent.

7.7 Ethical clearance

a) Where applicable PAU institutes shall establish ethics committee.

b) Training on research ethics and guidelines shall be provided to students and researchers.

c) All PAU research undertakings involving human subjects are required to fulfil all ethical requirements of PAU.

d) Acquiring ethical clearance from the ethics committee is mandatory.

e) In circumstances where PAU research takes place outside PAU institute, it shall be governed by the ethical requirements of the host institute.

7.8 Legal responsibilities for research involving human subjects

PAU researchers who engage themselves with human subjects:

a) Abide by the requirements of common law of negligence.

b) Realize that liability arising out of negligence is always assessed against the procedures and preventative measures taken by the researcher.

c) Ensure that consents are obtained from the human subjects before making any bodily contacts, particularly if the contact entails any degree of inconveniences or discomfort on the subjects.

d) Ensure that consents are obtained from the human subjects where medicines, foods or drinks of any kind are given to human subjects or spraying, rubbing, creaming, washing are involved in the research.

e) Avoid discriminating among human subjects.

f) Refrain from any intentional or unintentional defamation of human research subjects.

g) Acquire consent prior to any reproduction, translation and adaptation, not text matters only, but also images and figures of research outcomes obtained from research work conducted on or with human research subjects without their prior consent for the same.

7.9 Research involving animals

7.9.1 Responsibilities of PAU and its collaborating institutes

a) Establish animal ethics committee that ensures appropriate care is taken and international animal rights codes of conduct are followed in the use of experimental animals for scientific purposes.

b) Ensure all persons handling experimental animals have the appropriate knowledge and skills and understand their duties and responsibilities.

c) Organize periodic trainings to upgrade the knowledge and skills of personnel involved in the handling of experimental animals.

7.9.2 Responsibilities of the PAU animal ethics committee

a) Ensure that all activities, use and care of experimental animals follow international codes of ethics.

b) Ensure that animals are used in experiments only when their use is essential to achieve the desired outcomes and only when there are not any other alternative ways of conducting the experiment without animals to generate the same desired outcomes.

c) Ensure the correct ethical procedures are in place in reviewing proposals.

d) Ensure that the care and management of animals in experimental facilities approach as much as possible their natural environments of the respective animals.

e) Undertake follow-ups, reviews and unannounced professional visits to ensure the codes of ethics for experimental animals are routinely implemented.

f) Work vigilantly to take appropriate actions regarding non-compliance.

g) Submit regular reports and suggest recommendations for amendments and improvements to the proper handling of experimental animals.

7.9.3 Animal care and management

a) Researchers at PAU must monitor that the health, food, water, their acquisition and breeding, indoor/outdoor facilities, holding facilities, acclimatization, conditioning, transport, housing and care, pegs, cages, containers, meeting their biological cycle processes (rest time, mating season, etc.) of experimental animals are fully ensured.

b) Other related issues must meet all internationally prescribed codes.

7.9.4 Post-research management of experimental animals

a) Management of post-research experimental animals must start immediately (without any shock of transition) in accordance with the procedures approved by the animals' ethics committee and the international codes of conduct.

b) These provisions should include a review for re-housing, returning to normal husbandry or their natural habitat with gradual acclimatization, and implementation of humane disposal/sacrifice procedures.

7.10   Misconduct in research

a) PAU recognizes misconduct in research as falsification (inappropriate manipulation of data), fabrication (creating false data), plagiarism, misrepresentation (suppression, misleading, unfair treatment, un-disclosing, deletion of data, etc.), breaching of any PAU regulations set for the management of research, inciting others into research misconduct, unauthorized use of data and any other such wrong doings.

b) Reference should be made for any handling or management of any misconduct in research to the bylaws of PAU.

8.   PUBLICATIONS POLICY

Openness is an essential part of science. Open publication increases the reliability of science, and it is a prerequisite for scientific research as well as the potential for utilising science in decision-making. All PAU researchers are required to publish their research findings. PAU grants open access to scientific publications produced by its researchers except for some restricted ones.

Objective:
To disseminate research findings of PAU to the wider readership and make open access to its publications

Policy Statements:
8.1   Open access policy
Open access publications and hence access to research findings increases the reliability of science.

a) PAU commits its publications to open online access.
b) Encourage researchers to archive their research publications in the research repository of PAU.
c) Publications are openly accessible and searchable online either immediately after publication or after an agreed upon grace period with the publisher of the article, book or proceedings.
d) Dissertations shall be made openly available in the publication archive of PAU, with the exception of dissertations published by a commercial entity.
e) Maintain bibliographic details of all research outputs in the research repository within a defined period of the release of publications.
f) No personal information of authors other than those that appear in publications shall be made available

8.2   Publications

a)   In keeping with its mission, PAU encourages and provides support to researchers to disseminate their research findings in appropriate media.

b)   PAU requires all its academic staff and students to remain committed to standards and responsibilities of openness, transparency and accountability.

c)   It is the duty of the research and publications office (RPO) at PAU institute to identify and make known to all its researchers the standard procedures and formats for citation of external sources.

d)   PAU emphasizes that all its academic staff and students have the obligation to duly acknowledge all external sources of information in a standard that is internationally accepted.

e)   Non-compliance to the above may be considered as plagiarism.

f)   Oblige researchers to the ethical obligations of recognizing all those involved in the research activity.

g)   PAU shall require that no one publication is concurrently submitted to two or more publishers.

h)   Publications released by PAU faculty members (together with those of its subsidiary institutes) will be made available on PAU website designated for the purpose.

i)   All information made to the public shall be in a format and language that is friendly to the public.

j)   The ICT unit of PAU or its subsidiary institutes will be responsible for posting the publications on the designated website.

k)   Academic departments are also responsible for ensuring that information posted on the website is updated regularly.

8.2.1 Exemption of some publications from distribution

a)   PAU reserves the right to restrict access to specific publications, technology outputs and works of art based on internal regulations that govern the distribution of such publications, IP rights, on ethical grounds or commercialization purposes.

b)   Exemptions for the open distribution of specific publications shall be respected in the interests of PAU, collaborating institutions involved in the research and the organizations that sponsored the research.

c)   Publications restricted from distribution should also be known by the authors so that the exempted publications or their parts should not be distributed in any way.

9. RESEARCH FUNDS AND MANAGEMENT

PAU provides two types of institutional funds, Graduate student research funds (masters and PhD) and research funds provided to faculty for short-term projects and long-term impactful research in line with PAU's priority areas. PAU also encourages faculty members to apply for competitive research grants internationally. PAU ensures that research projects achieve their set goals.

Objective:
To provide adequate funds to research undertakings at PAU and ensure their proper use

Policy statements:
9.1 Research funding policy
  a)   PAU is committed to the provision of graduate student research funds to research training programs (masters and PhD).
  b)   PAU provides research funds to faculty members on competitive basis in its priority research areas.
  c)   To sustain vibrant research, PAU explores all possibilities of funding research, including international competitive grants and endowment funds.

9.2 Research fund management
  a)   Block grants are held centrally.
  b)   Ensure research funds are used rationally and for research purposes only.
  c)   Put in place both internal and external auditing system.
  d)   Ensure periodic reporting on the utilization of research funds.

9.3 Agreements with funding agencies
  a)   Ensure responsibilities and obligations of all involved parties and these are clearly stated in the agreements.
  b)   Ensure that the agreements inform funding agencies or sponsors or partners about the potential benefits and limitations of the research.
  c)   Intellectual property (IP) of any research and its outcomes is owned by PAU. In circumstances that the funding agency wishes to share the IP, such requirements shall be captured in the research agreements.
  d)   Ensure funding agencies receive financial reports, audit reports, interim and final technical reports.
  e)   Any conflict of interest that may arise during the progress of the research shall be discussed to resolve the situation amicably.

10.   RESEARCH FACILITY DEVELOPMENT AND MANAGEMENT

New knowledge and innovation can only develop in an environment with adequate research facility. Research facilities include scientific equipment, special habitats, libraries, databases, archives, laboratory facilities, research vessels, measuring equipment, telescopes, networked computer equipment, etc.). Adequate record will be kept on the use and maintenance of equipment. Laboratory safety is given due consideration. Hazardous materials and waste are handled following PAU and international standard procedures.

Objective:
To work towards providing the state-of-the-art research facilities to PAU researchers and partners

Policy statements:
10.1   Research facility development
   a)   Avail adequate facility for teaching/learning and research programs.
   b)   Develop instruments that regularly monitor research meets contemporary research demands.

10.2   Use and maintenance of research facilities
   a)   Give the utmost priority to proper operations and maintenance of its research facilities.
   b)   Put in place mechanisms for preventive maintenance of research facilities.
   c)   Make research facilities available for use by external entities or persons coming outside PAU, only if the use will not disrupt regular academic, laboratory, or research programs of PAU.
   d)   PAU reserves the right to limit or completely reject the use of its research facilities or equipment by external entities.

11.   INTELLECTUAL PROPERTY RIGHTS

Intellectual property rights (IPRs) are legal rights that are generated from intellectual thoughts, activities and creations. In the context of PAU, intellectual properties include among others, patents, copyrights, trademarks, databases rights, rights in designs, and any other innovations. PAU encourages the development, protection and commercialisation of research results arising from its research activities. PAU enables researchers and funding agencies to earn recognition or financial benefit from what they invented or created. By striking the right balance between the interests of innovators and those of the wider public, the IP system aims to foster an environment in which creativity and innovation can flourish.

Objective:
To protect IPRs and create an environment for flourishing of creativity and innovation

Policy statements:
11.1 Intellectual Property Policy
  a) Ensure IPRs are protected.
  b) Put in place a legal system to protect the creativity of PAU's researchers and their interests thereof worldwide.
  c) Design mechanisms to promote creativity and innovation.

11.2 IP assets and rights covered in this policy
  a) Subject to the definition stipulated under this policy and the laws and proclamations or directives governing the same in countries that host PAU institutes, and without limiting the generic nature of the term IP, this policy considers the items below as assets and works towards their protection and their ownership belonging to PAU.
   i. Research outcomes in the form of publications or technologies generated in whole or shared with the authors, partners or inventors.
   ii. Patents, trade and service marks, utility models (such as indigenous innovations).
   iii. Works generated by computer hardware or software owned or operated by the University.
  b. Films, videos, multimedia works, typographical arrangements, field and laboratory notebooks, and other works created with the aid of PAU's facilities.
  c. PAU's logo or any others created to represent PAU research or projects, algorithms.
  d. Registered and unregistered designs, plant/animal varieties, algorithms and topographies.
  e. Databases, computer software, firmware, courseware, and related materials.
  f. Learning and teaching materials including lecture notes, course/module handouts, audio or visual recordings, PowerPoint presentations and other learning materials or works published, electronically or otherwise, by PAU or made available through its facilities, resources or networks.
  g. Any form of know-how and information associated with the above.
  h. Industrial designs, copyright in literary and artistic works, geographical indications, new plant/animal varieties, trade secrets (confidential data, information or compilation used in research and business), technology based materials in online courses, research proposals, traditional knowledge and any

other IP-related assets that may be created by persons covered under this policy.

i. Patentable and non-patentable inventions.

11.3 Intellectual property and copyright

a) PAU reserves the IPRs on all assets generated in the process of its teaching, research, TT and community services, unless PAU chooses to transfer or share any or all of these rights to other institutes.

b) PAU does not declare complete ownership of its copyrights to publications (books, journal articles, proceedings, music compositions, or paintings, etc.) that could be shared property with the authors. However, PAU reserves the right to use these materials for teaching and community service purposes.

c) In the due process of research conduct course whenever inventions and discoveries are encountered in the course of the implementation of a research, the IPR Office of PAU must be informed immediately with the appropriate evidences.

d) Academic staff and students and those collaborating researchers and institutes must maintain confidentiality regarding their research outcomes, pending the legalization of their outcomes and confirmation of the ownership of their IPRs.

e) PAU researchers (including graduate students) and all collaborating individual researchers and institutes must be aware of the obligations and responsibilities IPR policy of PAU.

f) The IPR Office of PAU must always update and regularly ensure that all of the researchers and students of PAU and outside partners are knowledgeable of PAU IPR policy details.

g) Whenever PAU researchers and students proceed to a publisher with a material to be published, they must include PAU as part of the IPR owners and ensure at least that PAU reserves the right to use that material when published for non-commercial purposes such as educational, research and community services.

11.4 PAU's rights in incidental discovery or invention

a) PAU holds that an "incidental discovery or invention" as a discovery or invention made accidentally by researcher(s) (including students, PAU researchers and those from collaborating institutes); i.e., serendipitous discovery or invention at PAU while a research designed to generate another set of outcomes is in progress.

b) In recognition of the contribution of PAU and its community for the "incidental discovery or invention", PAU should be given an irrevocable, perpetual, non-exclusive, royalty free world-wide right to use "incidental discovery or invention" in the PAU's non-profit educational and research activities.

11.5 Ownership of IPR assets

a) PAU shall own any IP that is made, designed, discovered or created at PAU by academic staff, students, researchers employed by PAU on contract basis, voluntary service providers, visiting researchers, researchers and students and researchers from other institutes and persons who can be categorized in one of the above.

b) PAU may not claim IPR in partnership projects where circumstances are such that
    i. PAU is already compensated financially or otherwise, as agreed upon in writing, for the contributions it has made as partner university.
    ii. The use of resources from PAU is insignificant such as use of PAU library facilities, other facilities available to the public or occasional use of office space in the progress of the project. However, prior consent of PAU is required to observe that these benefits are not trespassed or infringed.
c) This PAU policy on IPR for assets prevails for all personnel described above who are under employment or under some form of agreement with PAU with the understanding that any and all forms of updates will be provided to them and they can also request PAU to be briefed on any updates.
d) Ownership of IPR prevail to all mentioned above in this section, until such time as the relations of these personnel with PAU is changed requiring revisiting of agreements and copyrights and IP laws are updated or modified in time to the level of impacting existing agreements.
e) PAU rights may also be reviewed, updated, upgraded or even waived depending on upcoming prevailing circumstances. Any such changes require the final endorsement of PAU governing body.
f) This policy of ownership of IPR continues to be in force even after the relations of the research personnel or students from within PAU or outside institutes is terminated.

12. RESEARCH GOVERNANCE, LEADERSHIP AND INTEGRITY

Research governance is a process for ensuring the quality and relevance of research, and for protecting the rights, dignity, safety and wellbeing of those involved. Research governance refers to the structures in place for decision-making and accountability in relation to the direction and management of research at the PAU; and the framework of policies, procedures and codes of practice that apply to research. Research leadership on the other hand refers to the influence of one or more people on the research-related behaviour, attitudes or intellectual capacity of others.

Objective:
To ensure quality and relevant research is efficiently conducted with available resources and good research practices prevail

Policy statements:
12.1 Research governance
   a) Establish an efficient organizational structure to provide robust research governance policies and procedures; oversee research undertaking at PAU; and facilitate collaboration among the PAU institutes and other partners.
   b) Ensure a system is in place to enhance scientific quality, promote good research practices and ethical standards, provide administrative follow-up, prevent poor performance and misconduct, and monitor and evaluate research undertakings.
   c) All responsible research offices shall closely work on aspects of research from research ideas initiation to proposal development, soliciting funds, implementation of the project, reporting, disseminating the knowledge and technology thereof as per PAU policies for the purpose.
   d) There will be technical committees that provide background studies and oversight in the development of project proposals and implementation of the same.

e) The RPO at PAU and at each institute will give oversight to research and publications undertakings and approves research projects.

f) The cascading hierarchies are responsible for implementing this Research and Publications Policy and that all who are involved in research and publications are made aware of it and do the same whenever conducting research.

g) Oversee the conduct of transparent M&E for the good of the establishment of PAU research culture.

12.2 Research leadership

a) Ensure research is aligned to the development goals of the AU.

b) Ensure research at PAU contributes to the advancement of STI in Africa.

c) The senior officials of PAU provide leadership and guidance for research activities and ensure that a research environment and culture prevail whereby good research conduct is in-built.

d) PIs are expected to lead and manage their respective research teams, secure new research grants, liaise with stakeholders, publish, respond to institutional issues and agenda, and maintain and develop their own research expertise.

e) The PIs and their associates should ensure that an environment of mutual respect and cooperation is created among researchers and their assistants.

12.3 Setting research priority areas

a) Based on the priority disciplines and professions set at the AU level (Basic Sciences, Earth Sciences, Health Sciences, Agriculture Sciences, Technology and Innovation, Water and Energy Sciences including Climate Change, Space Sciences, Governance, Humanities and Social Sciences), PAU institutes set their respective research priority areas to be reviewed periodically. These priorities should identify research programs in interdisciplinary overarching manner.

b) The Research and Publications Committee (RPC) of PAU shall approve the prioritized research plans or themes and pass them for final approval to the PAU governing body.

c) Academic units shall set their research priorities based on the Faculty research priorities. The academic units' RPCs shall approve the same.

d) In funding research, the PAU shall give priority to research programs and to multi-disciplinary research falling within the institutional research priorities, as opposed to individual research projects.

13. KNOWLEDGE MANAGEMENT: DISSEMINATION AND TECHNOLOGY TRANSFER

Knowledge management (KM) is the concept of finding, gathering, assessing, organizing, and sharing information or knowledge so that tasks and projects can be completed efficiently. Knowledge dissemination (KD) is a crucial part of KM because it ensures knowledge is available to those who need it. KM is also a useful tool to support individuals that have the desired skills necessary to complete those tasks and projects. TT is the process by which technology or knowledge developed in one place or for one purpose is applied and exploited in another place for some other purpose.

Objective:
To effectively manage and disseminate knowledge generated by PAU researchers and facilitate TT

Policy statements:
13.1 Responsibilities of PAU
a) Ensure all PAU institutes organize active KM units with arrangements for patenting and protection of IP.

b) The KM unit should have advisory body, a research, publications and TT officer with the appropriate incubation centres.

c) Assist PAU staff convert their knowledge to formulate enterprises in collaboration with the appropriate entrepreneurs.

d) Make sustained effort to secure contractual project aligned with Africa's needs, monitor and evaluate them so that the delivery of the desired goals is achieved.

e) Conduct annual KM assessment studies to align information in the KM bank according to their usability, identify where knowledge gaps are found and direct human and material resources in accordance to the contemporary needs for knowledge to enhance Africa's development.

f) Assist entrepreneurs, first in developing their business plan, then into growing the business plan into a solid business model.

g) Award excelling researchers based on the knowledge that they are converted to social and development needs of Africa.

13.2 Articles before submission to KM unit and publication

a) Put in place a system to ensure all articles generated from PAU projects properly scrutinized by the RPO of the PAU institute to ensure accuracy, non-duplication and consistency that match the expectations of PAU standards.

b) Every article shall undergo a review for technical and procedural accuracy, which will be performed by commissioned PAU staff that have demonstrated knowledge in the categorized domain. Such a commission will be appointed by the RPO.

c) Every article prepared for publication shall undergo a formal review to check for consistency of word choice, style, voice and tone, and comprehensive technical review.

13.3 Policy regarding PAU staff as researchers and authors

a) PAU staff should familiarize themselves with this Research and Publications Policy in general and the KM Policy in particular.

b) PAU staffs have the duty and responsibility of producing knowledge in their areas of expertise and organize them into articles and in such a way that they are usable by clients of PAU.

c) PAU staffs have the duty and responsibility of submitting the knowledge they created to the respective KM Unit and check out if duplications have not been made.

d) PAU staffs have the duty and responsibility of contributing to the improvement of the quality of the article they develop, and collaborate with the KM unit in the collection of comments from other fellow scientists and stakeholders.

e) Any PAU staff who is processing his/her article with the KM unit should make the necessary assessment where the article fits in the existing knowledge bank or whether it requires a new alignment, thereby paving the way for cataloguing, avoiding duplication.

f) Because at the end of the day KM is community-driven solution, PAU staff should consider that it is their primary duty to serve and benefit from it.

g) Misuse of the KM resources and service by any PAU staff shall be dealt with by the disciplinary regulations of PAU.

13.4 Knowledge dissemination and technology transfer policy

a) Given the KM databases of PAU at all its academic units, knowledge that is to be extended as KD and TT should be ranked as flagship products of PAU.

b) As knowledge generator, PAU aligns the flagship knowledge and technologies for stakeholders, innovators and other diverse enterprises for uptakes and spinoffs.

c) PAU institutes establish incubation centres for the transformation of knowledge into their usable forms, where the tools of transformation could be human experts (e.g. PAU staff, students or technical personnel) who are transferred fully or temporarily into enterprise, scientific research outputs as they were, technological models, and intellectual properties based on specific binding agreements.

d) PAU ensures that the modalities of the KD and TT meet standards of student projects, published materials, outreach products, licenced products and concepts, spinoff companies or enterprise, research contracts, informal contracts and so on.

e) PAU identifies dissemination representatives or agencies that have legal accreditations such as consultants, business promotors, social media, private innovation centres, bottom-up recipient social groups or individuals and such legally viable entities.

f) PAU conducts focussed assessment of recipients of KD and TT through its KD and TT relations experts to ensure that the PAU outputs remain competent to guarantee that furtherance of KD and TT sustainability.

g) The relationships among the various actors in the above policy items, such as the KM units, knowledge generators, incubation centres, dissemination representatives and KD and TT recipients shall be monitored and facilitated by the KD and TT related experts.

h) PAU staffs who are the property owners of the flagship knowledge that are aligned for KD and TT should remain engaged in the process of KD and TT as described above.

i) PAU staffs who have the property rights of the knowledge and technology and who remain engaged in the above processes are entitled to all benefits that come with their rightful products.

j) PAU develops the modalities of remuneration of all involved in the process particularly the property owner PAU academic staff.

14.   RESEARCH MONITORING AND EVALUATION AND IMPACT ASSESSMENT

Monitoring is an ongoing systematic collection of data on pre-defined indicators to check out whether an initiative is on track in achieving set objectives. Evaluation enables an understanding of effectiveness of measures taken over time, as well as the strengths and weaknesses of projects. It is the policy of PAU to conduct periodic M&E of research projects. Research should address national, regional, and continental goals; and be impactful.

Objective:

To assess the progress of an ongoing research project, and evaluate its impact and the effectiveness of the measures taken during the execution of the project and whether set objectives are met

Policy statements:

14.1   Internal assessment

   a) Each PAU Institute shall have its own Internal Research Monitoring-Evaluation and Impact Assessment System (RMEIAS).

   b) RMEIAS shall be established based on criteria set considering the advancement of contemporary research and publications.

14.2 External assessment

   a) Procure merited-organizations to periodically assess and report the conduct of research and its administration at PAU.

   b) Based on external assessments, research activities that are derailed from their target objectives without prior approval must be put back in track.

15.   INTERNATIONAL COLLABORATIONS AND PARTNERSHIPS

PAU fosters collaborative and trans-disciplinary research. It shall have strong links at institutional and individual researcher levels with other academics, both internal and external, and nurture sustainable partnerships beyond academia with industrial, corporate, cultural, civic, public and third sector partners. In so doing, PAU enhances its capacity of building in teaching, research and outreach; organisational and/or institutional development. All international research collaborations and partnerships shall be anchored through formal agreements.

Objective:
To add value through synergistic efforts and work towards international shared goals

Policy statements:
a) PAU institutes shall collaborate with other organizations to synergize their capacity.
b) Establish partnerships with other organizations based on mutual interest, be it in research or teaching/learning and other related activities.

16. DISSEMINATION AND IMPLEMENTATION OF THE POLICY

The ultimate outcome of research activities is dependent on the level of internalization of this Research and Publications Policy by PAU leaders, researchers and the community at large. It is therefore imperative that this policy is disseminated in the most understandable way and implemented by the PAU community and collaborating institutes.

Objective:
To inform all stakeholders about the policy and provide research undertakings with general directions at PAU

Policy statements:
16.1 Dissemination of the policy
a) The leadership at PAU ensures that this Policy cascades to the lowest levels of the research management structure, including to the levels of PIs, individual researchers and technical personnel and it is strictly observed.
b) The structural echelons of PAU shall bear the responsibility of disseminating this Policy to all PAU academic/research staff, students and administrative workers so that all have the same shared understanding and duty of proper implementation of the same.

16.2 Implementation of the policy
a) PAU shall prepare guidelines for effective implementation of this Policy and ensure the culture of good research conduct is observed.
b) PIs and their associates are responsible in the execution of the Policy.

17. UPDATING THIS RESEARCH AND PUBLICATIONS POLICY

As research is dynamic, so is the research policy that gives it direction. As a result, the following pro-active policy directions for upgrading and making the PAU research policy resilient to the changes in the scientific landscape and global research trends have been designed.

Objective:
To keep this research policy dynamic

Policy statements:
17.1 Modalities of updating
a) PAU ensures updating and keeping track of global research trends (including emerging technologies).
b) PAU formulates a standing Policy Advisory Committee (PAC) whose members are renowned researchers from non-PAU host institutes of Africa (one from each of North, South, East, West and Central Africa) to meet every four months at one of PAU host institutes on a rotating basis.
c) The PAC shall have the following responsibilities
   i. Keep abreast with global research trends and new research directions to stir PAU researchers into new directions.
   ii. Facilitate the introduction of new changes in research and modifications of the research policy to fit the new global and hence PAU research directions.
   iii. Advise PAU on upgrading and enhancing research facilities including (virtual ones).

17.2 Authority of policy revision
a) The research policy of PAU can be periodically modified and improved to match the African and global research environment.
b) Faculty members can file their needs for change through their academic units all the way up to the PAU governing board.
c) The PAU governing board or its Senate can also initiate such changes based on the needs of PAU to allow it create more enabling situation for the research of its faculty members and in line with global trends of change.
d) Such changes require consultations of the standing advisory committee for research of PAU and international experts on research policy development and the organization of platforms for consultations and validations.
e) Any modifications of this Research and Publications Policy such as upgrading, inactivation or even deletion of parts of the same shall be approved by the PAU governing body.