

REGIONAL UNIVERSITIES FORUM FOR CAPACITY BUILDING AGRICULTURE

Quality Assurance Mechanism and Credit Accumulation and Transfer System – QAM/CATS

Handbook for Strengthening Postgraduate
Training and Research Programmes in Eastern,
Central and Southern Africa

2011



RUFORUM SECRETARIAT, KAMPALA

QUALITY ASSURANCE MECHANISM AND CREDIT ACCUMULATION AND TRANSFER SYSTEM – QAM/CATS

A Handbook for Strengthening Postgraduate Training and University Research in Eastern, Central and Southern Africa

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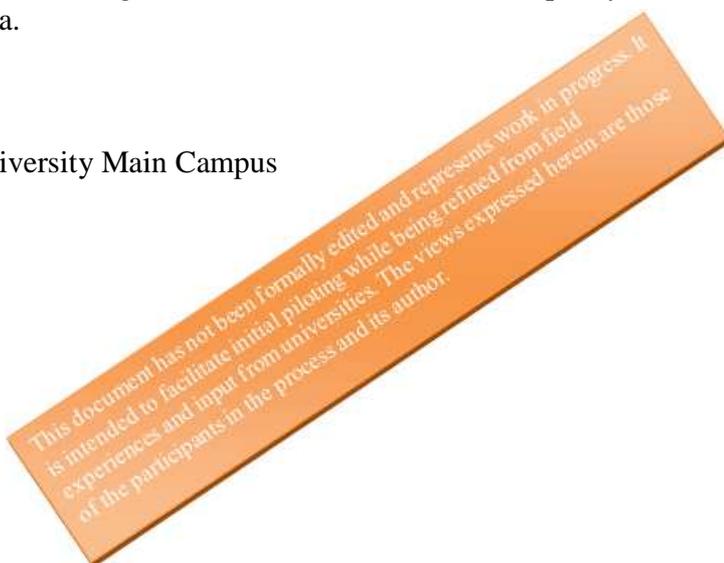
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We are especially grateful to the Project Partners and Associates and the QAM Project Steering Committee. The input and support from SupaAgro and Agrinatura and the input from the universities visited in Europe greatly helped to inform the content of this Handbook. We also acknowledge the support of the RUFORUM Partner Universities (Egerton University, Jomo Kenyatta University of Agriculture and Technology, Makerere University, University of Malawi and University of Nairobi) and the overall leadership and coordination provided by the RUFORUM Secretariat Staff.

RUFORUM Secretariat

Forward

This handbook builds on the renewed commitment by African governments to re-vitalize Higher Education in the continent to support Africa's development agenda especially under the frameworks for the Second Decade of Higher Education in Africa (2006-2015) and the Comprehensive African Agricultural Development Programme (CAADP). The two frameworks provide guidelines for re-invigorating higher education in the continent to respond better to the critical need for quality and skilled human resource and for universities to engage more pro-actively and effectively in the continent's development process. The Booklet also responds to the EU-ACP EDULINK thrust of promoting international and regional collaboration in the field of Higher Education in the ACP and EU regions.

African Universities are responding to the above issues and opportunities. The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), a Network of 29 African Universities in the Eastern, Central and Southern Africa (ECSA) region, has committed itself to strengthening quality of Higher education in the agricultural sciences and has aligned its agenda to the CAADP and the Framework for implementing CAADP Pillar 4 (FAAP-Framework for African Agricultural Productivity). The FAAP outlines principles for Strengthening Tertiary Agricultural Education in Africa, including improving quality and relevance of Higher Education in Agriculture. Additionally, as part of the agreement among RUFORUM member Universities, the organisation is keen to strengthen quality of graduate student training through implementation of demand-driven regional postgraduate programmes underpinned by a robust Quality Assurance Management (QAM) system for both teaching and research.

The RUFORUM Network is also keen to promote staff and student exchanges and this requires putting in place a harmonized grading system and Credit Accumulation and Transfer System (CATS). With the support of the EU-ACP EDULINK Project "Strengthening Capacity of Universities in Eastern, Central and Southern Africa to offer Quality Graduate Programmes – Grant ID: 9ACP RPR 12#33", RUFORUM with support of Agrinatura/SupaAgro, the Inter-University Council of East Africa (IUCEA), the Higher Education Quality Management Initiative for Southern Africa (HEQMISA) and five of its member Universities (Egerton University, Jomo Kenyatta University of Agriculture and Technology, Makerere University, University of Malawi and University of Nairobi) initiated activities to develop a Regional QAM/CATS Handbook for postgraduate training in the ECSA region. While the initial focus was on the RUFORUM supported regional postgraduate programmes being implemented as joint regional training programmes, ultimately the idea was to provide a generic framework to management of Quality Assurance issues for postgraduate training in the region. The Handbook has attempted to meet this demand. It provides guidelines for management of quality assurance issues (chapter 4), credit accumulation and transfer (chapter 4) and for Benchmarking within and across the member universities and with other leading global universities (chapter 5). The Handbook draws heavily from the European systems, but also borrows lessons from other systems elsewhere.

No doubt there is still room to improve the content of the Handbook, and for obtaining final approval and adoption at the 2012 Annual Vice Chancellors meeting slated for September 2012. In the meantime preliminary assessment of the implementation of the Handbook has been initiated.

Professor Adipala Ekwamu
Executive Secretary, RUFORUM
31 July 2011

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Executive Summary

Higher education in the universities (both public and private) in Sub Sahara Africa (SSA) countries witnessed a long period of neglect and stagnation in the recent past resulting in a decline in quality of teaching and research and by implication poor products. This decline occurred at the time when these universities were experiencing tremendous increase in enrolments against rapid declining resources, quality of some lecturers, staff attrition, ageing staff, brain-drain, deteriorating infrastructure as well as equipment, and a decline in the quality of teaching and research activities. In particular, there is wide concern that increased number of students, while resources remain unchanged or diminishes including other concerns raised by the Forum for Agricultural Research in Africa (FARA) and the studies by the World Bank above have grossly compromises the quality of the universities' visions, missions, core values and the quality of teaching and research.

These have led to limited visibility of especially higher education in the development agenda, until recently. There is however today a greater realisation of the crucial role of higher education in supporting and driving Africa's development agenda, resulting into new initiatives by the African Union, National governments and development partners to revitalize Higher Education in Africa. A key endeavour is to ensure the quality of higher education and products emerging from Universities and other Tertiary Education Institutions. This requires, among others, attaining systematic and comprehensive quality assurance systems and other support systems that enhance vibrancy in higher education especially having in place a harmonised credit accumulation and transfer systems. Additionally, the need for a structured and coherent implementation of Quality Assurance Management System (QAMS) and Credit Accumulation and Transfer Systems (CATS) within African Universities has increased. The demand for mobilityof academic staff and graduate students within the ECSA region has increased tremendously. The working population wanting a staggered training to enable them keep their full time or part time jobs at the same time could thus benefit from the CATS system.

Individual country's Commissions for Higher Education have been granting the universities greater institutional autonomy without necessarily increasing their financial autonomy. Furthermore, accreditation of these public and private universities does not necessarily guarantee quality assurance throughout their continued existence. Thus, periodic review of programmes, using well established assessment tools is thus required. While national Commissions for Higher Education in Kenya, Tanzania and Uganda attained the responsibility for external accreditation of the Universities, with the Inter-University Council of East Africa (IUCEA) assisting in the establishment of quality assurance, the responsibility for ensuring quality of institutional services, teaching and research lies with the individual universities. On the other hand, in the Southern Africa region, only a few countries have the Commissions for Higher Education but a few with support of the Higher Education Quality Assurance Management Initiative for Southern Africa (HEQMISA) have recently initiated the process of establishing their Commissions. The institutions must be accountable for the use of public resources and the quality of their outputs to their stakeholders, including the government, students, and employers of graduates as well as to the general public. However, the lack of clear guidelines for implementing quality assurance mechanisms and knowledge of methodologies for performing self-assessment of programmes and institutional services often leads to an inadequate formulation of general development objectives. This, in the long-term, has an adverse effect on the quality of delivered services and

results in insufficiently qualified graduates. These challenges have been emphasized by recent initiatives and reports of the Association of African Universities (AAU) which prioritized quality assurance and accreditation issues in African universities as well as the need for capacity development in this area as “key strategies for the development of credible and effective education in emerging knowledge societies” (AAU, Strategic Plan for 2003-2010).

Especially in the Eastern, Central and Southern African (ECSA) region, there is a lack of a clear and structured approach to quality assurance. The fact that quality assurance measures have been for a long time applied in ad hoc fashion and only by individual Higher Education Institutions (HEIs), without national or regional bodies to rationalize and coordinate the activities between them, have resulted in the following consequences:

- Uncoordinated establishment of the universities meeting neither the social demand nor the labour market expectations for the growing local and global economy;
- Proliferation of academic awards by universities;
- Inadequate information to employers and potential students and/or other beneficiaries on the quality of academic programmes in the universities; and
- Un-standardized and incoherent academic designations of staff (academic or otherwise) in these public and private universities.

Thus, the RUFORUM QA/CAT system for postgraduate training booklet is intended to increase awareness for internal and external quality culture. It has been developed through wide stakeholder consultations involving universities in the ECSA and Europe, National Commissions of Higher Education, and consumers of University products. The involvement of the IUCEA, HEQMISA, African Union and the Association of African Universities (AAU) through AfriQAN programme, and other partners especially Agris Mundus and Agrinatura informed the process and enabled sharing of good practices in implementing quality culture and networking in the ECSA region and beyond. The Handbook thus contributes to national and regional policies and implementation plans for Quality Assurance and Credit Accumulation and Transfer system in the region. The book serves solely as a reference manual, complementing those already developed by IUCEA and HEQMISA. The regulatory function is the responsibility of the respective National Commissions of Higher Education, while implementation modalities and specificities will vary depending on each university’s operation structures and procedures.

Chapter One: Introduction

Background

African Universities are more than ever being challenged on the quality and relevance of University education. There is however general realisation that the non prioritisation given especially to higher education in Sub-Saharan Africa (SSA) over the last two decades, has not only resulted into low quality education, but a myriad of problems ranging from dilapidated infrastructure (borrow from AfriQUnits), and overall decline in factor productivity and stagnated economic development in sub-Saharan Africa. Consequently, the African Union has identified quality assurance as one of the key focus areas in its Plan of Action for the Second Decade of Education in Africa (2006-2015). Among the priority action points is the development of a robust quality assurance and credit transfer system that has led to establishment of AfriQAN by AU-AAU and the Inter-University Council for East Africa (IUCEA). In East Africa, National Commissions for Higher Education have been established and are serviced by the Inter-University Council of East Africa (IUCEA). Similar efforts are also under way in Southern Africa, and the Higher Education Quality Management Initiative for Southern Africa (HEQMISA) has been established and is working towards establishing National Commissions of Higher Education in the Southern Africa region.

In the East African region, IUCEA jointly with the National Commissions have developed Quality Assurance Mechanisms (QAM) and Credit Accumulation Transfer (CAT) frameworks. These efforts have largely targeted undergraduate training, with pilot programmes in ICT and Business Management. The IUCEA is keen to advance these efforts to postgraduate training, especially in Agricultural Sciences, because of the significance of Agriculture sector to the livelihoods of the majority of the population and overall economic development. HEQMISA has similar aspirations for Southern Africa.

With respect to the agricultural sector, approximately 80% of Africa's population depends directly or indirectly on agriculture for their livelihood. The agricultural sector provides 70% of Africa's full time employment, one third of total GDP, and 40% of total export earnings. However, the productivity of the sector is very low, leading to rampant food insecurity and widespread poverty. Accordingly, the African Union Heads of States and Governments through the New Partnership for the Development of Africa (AU-NEPAD) has developed a continent wide programme, the Comprehensive Africa Agricultural Development Programme (CAADP) which aims at achieving a 6% annual growth in the agricultural sector by especially strengthening *agricultural research and training, technology development, dissemination and adoption*. Attainment of this goal requires a strong human resource base to drive agricultural innovations and development process, but this is a grossly weak area in Africa. African Universities and their networks, with support of their national governments and development partners are currently engaged to re-build Africa's human and institutional capacity at various levels. This is being undertaken for example through the postgraduate training programmes in both public and private universities under the ministries of Higher Education, Science and Technology.

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), a network of 29 African Universities in the Eastern, Central and Southern Africa (ECSA), is undertaking

several human capacity strengthening processes in support of CAADP, one of them being strengthening quality and relevance of postgraduate training so that Africa has adequate capacity to drive its own innovations and the CAADP programme. This involves intensification of postgraduate programmes, development of new market training programmes and putting in place mechanisms that support staff and student movement across the region and ensure high quality training and research. This requires putting in place a robust Quality Assurance (QA) and Credit Accumulation and Transfer (CAT) Systems).

Fortunately, there are already pilot initiatives under the IUCEA which targets undergraduate studies, and HEQMISA upon which a broad framework for QAM/CATS can be developed for the ECSA region. Such a framework would need to be benchmarked and draw lessons from other well established global systems such as the European Quality Assurance and Credit Accumulation and Transfer Systems and eventually have an ISO certification such as for the Agri-Mundus Programme. This booklet outlines a proposed Regional QA/CAT system for the ECSA region and will link to others especially by the Association of African Universities (AAU) Africa Quality Assurance Network (AfriQAN) and the framework provided by the African Union Commission (AUC). It focuses on promoting/ensuring high quality postgraduate training and research, with particular emphasis on agricultural sciences. However, the framework is adaptable to other disciplines.

Overall and Specific Objectives

Overall Objective

The overall objective of the RUFORUM QAM/CAT system is to contribute towards achievement of implementation of a coherent quality assurance and credit transfer culture within the ECSA region universities.

Specific Objective

The specific objectives are:

1. To build institutional and human resources capacity to conduct quality graduate training and implement Quality Assurance Mechanisms (QAM) and credit accumulation and transfer system (CATS) among the RUFORUM member universities.
2. Strengthening the foundation for the systematic implementation of a coherent quality assurance and credit transfer culture within ECSA universities for the benefit of the post graduate students and these institutions as well.

Organization of the Handbook

The handbook, as a reference guide, is organized into seven chapters. This first chapter gives the rationale for the proposed regional QA/CATS system which targets postgraduate training and in particular agricultural sciences. The second chapter reviews what is in place in Africa in terms of national and regional QA/CAT systems. It also provides an overview of similar institutional systems elsewhere in the world and draws particular attention to the European QA/CATS which other regions especially Asia has borrowed from. This chapter informed the proposed RUFORUM Regional QA/CATS development. The third Chapter presents the proposed RUFORUM regional QA systems, Chapter 4 the proposed CAT system and Chapter 5 discusses Benchmarking. Chapter six highlights some of the implementation issues that need to be considered in implementing the proposed regional framework. The final section, Chapter 7,

provides some indication of the progress made towards operating regional QAM/CATS even though the system has not yet been fully adopted. It is hoped that the guidelines will provide a framework for strengthening of physical infrastructures in relation to the structures responsible for the implementation of quality assurance mechanisms and the establishment of effective credit accumulation and transfer system and necessary information system within the ECSA universities.

Rationale for a regional Quality Assurance System

Many universities in Africa, like in other parts of the world are facing challenges of escalating enrolments, declining resources, academic brain-drain, and deteriorating infrastructure which are affecting the quality of their service delivery as well as the quality of graduate training and graduates. Many stakeholders including the African Union and its agencies such as the New Partnership for African Development (NEPAD), Association of African Universities (AAU) and the Forum for Agricultural Research in Africa (FARA) have prioritized the need to address the challenges of training high quality human resource at graduate level to ensure Africa has a pool of well trained scientists and change agents to champion the continent's development agenda. This requires that the continent has the required institutional structures that promote quality education and impactful research.

A key ingredient is establishment of a robust quality assurance and accreditation systems in African Universities. In the ECSA region, IUCEA and HEQMISA are committed to promoting quality assurance mechanisms and qualifications at the ECSA regional level. The IUCEA has been actively involved in promoting quality assurance in East African Universities by collaborating with national regulatory agencies (Commissions for Higher Education) in the quality assurance processes. To this end, IUCEA piloted QA system in **47 universities** specifically; **15 universities each in Kenya, Uganda, Tanzania and one each in Rwanda and Burundi in East Africa**. Since then seven (7) universities namely University of Nairobi, Makerere University, Kenyatta University, Moi University, Egerton University, Sokoine University of Agriculture and Jomo Kenyatta University of Agriculture and Technology (JKUAT) have adopted the IUCEA QA systems. Apart from these seven, other universities in the ECSA region are at different stages of establishing quality assurance systems. They have been employing various mechanisms to ensure the quality of their research, academic standards and the graduates.

These include establishing:

- Rules and regulation on conduct of academic activities (course delivery, assessment, examinations, etc);
- Rules and regulations governing the qualifications and other criteria on student admissions;
- Rules and criteria on academic staff appointments, appraisal and promotion systems;
- Student evaluation of lecturers and of course delivery;
- External examination evaluation processes and reports system;
- Stakeholders, Students and Alumni participation in curriculum review;
- Regularized curriculum reviews in some universities;
- Academic audits in some universities; and
- Tracer Studies through alumni, among others.

The above notwithstanding, the culture of ensuring quality assurance has been facing some challenges, including:

- Resistance / inertia among some staff, students and management;
- Inadequate Quality Assurance personnel ;
- Inadequate university funding for QA activities;
- Heavy teaching and administrative workload for staff assigned quality assurance responsibilities;
- Quick turn over among students and high staff attrition;
- Absence of appropriate Quality Assurance policies in some universities; and
- Absence of units with quality assurance responsibilities.

While efforts are underway to strengthen quality assurance of training programmes, there is still lack of guidelines for assessing and ensuring quality of research. Yet research is a key component of any graduate training programme. Indeed ranking of universities world-wide, is strongly depended on the quality and social impact of research outputs. Thus, efforts need to be initiated in this area.

The RUFORUM QAM/CAT system was embarked upon to strengthen the institutional capacity of African Universities in support of policy, management and planning at national and regional levels in order to meet accountability needs and growing development demands. Specifically, the RUFORUM aims to reach this objective through the development of sustainable Quality Culture and Capacity building in Internal Quality Assurance in ECSA Universities. The quality assurance measures would cover both training and research. Since the ECSA region has generally limited experience on quality assuring research, the system being developed will rely heavily on external experiences, especially the European Quality Assurance and Credit Transfer Systems.

Currently the RUFORUM universities are jointly running five (5) demand-driven PhD programmes. These programmes were developed after wide stakeholder consultations and are implemented at a regional level by selected RUFORUM member universities namely: **1.** Plant Breeding and Seed Systems at Makerere University, in Kampala Uganda; **2.** Dry Land Resource Management at University of Nairobi in Kenya; **3.** Aquaculture and Fisheries Science at Bunda College of Agriculture, University of Malawi in Lilongwe, Malawi; **4.** Agricultural and Rural Economics at Bunda College of Agriculture, University of Malawi in Lilongwe, Malawi; and **5.** Soil Fertility and Water Management at Sokoine University of Agriculture in Morogoro, Tanzania. ***In addition, three Regional MSc Programmes were developed and implemented, namely: 1.*** MSc Plant Breeding and Seed Systems at Makerere University, in Kampala, Uganda and at the University of Zambia, in Lusaka, Zambia; ***2.*** MSc in Agricultural Information and Communication Management at Egerton University, Njoro and University of Nairobi, both in Kenya, and at Haramaya University in Ethiopia; and ***3.*** MSc in Research Methods at Jomo Kenyatta University of Agriculture and Technology at Juja, Kenya. Two other regional PhD Programmes (Agricultural and Rural Innovations and Food Science and Technology) are to be launched probably during the 2012/13 academic period. These training programmes have specific emphasis on;

- Building capacity for the agricultural and related sectors through MSc and PhD training in line with RUFORUM's mandate;
- Integrating university quality training and research into national, regional and international research for development (R4D) agenda; and
- Building, rationalizing and sharing regional capacities and resources in agricultural training and research.

Successful implementations of these regional training programmes are constrained by the following key issues:

1. The need to have in place harmonized Quality Assurance Mechanisms (QAMs) and Credit Accumulation and Transfer systems (CATs);
2. The need to marshal additional resources for quality training and research, for example, through partnerships with other knowledge centres such as universities in Europe;
3. The need to broaden the perspectives of the students and lecturers, to improve their movement and competencies in teaching and research skills; and
4. The need to innovatively manage the programmes for efficiency, relevance, productivity, competitiveness and attractiveness to all stakeholders.

The RUFORUM approach is meant to develop Quality Assurance Mechanisms for the RUFORUM universities and other universities in the region, and rationalize the limited resources (human and infrastructural) use for impact, cost reduction, quality post graduate research and training thereby increasing the visibility and competitiveness of ECSA Universities nationally, regionally and internationally in the fields of Agricultural Science and Technology. The regional approach addresses the following key issues:

- Limited funding for quality graduate training and research *by providing scholarships and training in research grant proposal writing to attract adequate funds for research;*
- Weak research infrastructure in the universities *by marshalling resources for high quality training and research through shared programmes and equipment in centres of excellence especially in emergent sciences and development paradigms;*
- Limited access to other knowledge centres of the world *by linking ECSA universities to European universities and other global knowledge centres so that they benefit from advances in science and technology;*
- Weak national and regional programmes *by mobilising national and regional scientists to engage in high quality teaching and research that generate national and regional public goods; and,*
- Limited mechanisms for assessing quality of training and research in the region *by developing and integrating some of the best QA/CATS practices for the ECSA universities.*

On the other hand, the setting up of CATS will make it possible for inter-university and cross border mobility of students, a situation where credits earned at one university will be recognized by other universities nationally, regionally and internationally. This would also create room for breaking away from the rigid time schedules of university programmes of study by allowing students to accumulate credits over longer periods. Setting up such a system will auger well with mature/adult learners who may want to learn and at the same time keep their part time/full time job. Such a student may even choose to learn under different delivery modes during different

stages of the academic career. This will also help in eliminating duplication of learning and effort, which not only demoralizes learners but also wastes resources and time.

In this regard, the RUFORUM QAM/CAT system emphasize the need for structured academic programmes and relevant high quality research for development (R4D) in the ECSA universities' systems, that are responsive to the national, regional and international environment which mainly focus on:

- a) Promoting student and staff mobility among universities, other higher education institutions within countries, regionally and where possible and appropriate internationally;
- b) Establishing appropriate systems of credit accumulation and transferability among universities/other higher education institutions within the countries, regionally and beyond regional boundaries;
- c) Adopting a system which is easily accessible, readable, and has comparable qualifications and understandable within the country, region and globally;
- d) Promoting national and regional higher education dimensions through the evolvement of attractive national and regional higher education areas;
- e) Promoting lifelong learning and e-learning systems;
- f) Promoting accountability to all relevant stakeholders;
- g) Promoting graduate employability in the existing and emerging job market opportunities, nationally, regionally, and internationally; and
- h) Promoting comparability of higher education quality standards, mechanisms and systems at national, regional and international levels.

Chapter Two: Review of Relevant QAMS/CATS

Introduction

As part of the process to develop this handbook, RUFORUM has consulted widely to learn from best practices in other parts of the world. RUFORUM also conducted scoping studies in the ECSA region to identify current status of QAM/CATS processes in the region. Internationally, this QAM/CAT system drew lessons from successful on-going joint training programmes by European Universities to provide quality PhD training, research and cross-cutting perspectives for PhD students and young (new) lecturers in the Nordic and Balkan States.

Rationale for Developing RUFORUM QA and CAT Systems

The internationalization of higher education and cross border education prompts the need for countries and regions to demonstrate and ensure the quality and standards of their higher education systems and programmes are maintained. This has also made it necessary to attach greater emphasis to higher education academic values in driving international competitiveness and cooperation in exchanging students, academic expertise and the labour force. In this regard, emphasis continues to grow on the need for structured academic programmes and higher education systems, including quality assurance mechanisms that are responsive to the national, regional and international focus.

Consequently, there have been sub-regional efforts to develop common higher education areas through structured quality assurance mechanisms, which include quality assurance guidelines, procedures and standards. These developments require appropriate systems that adhere to nationally, regionally and internationally recognized higher education benchmark standards, guidelines and procedures, in the form of systematic quality assurance mechanisms comprising of credit accumulation and transfer systems, qualifications frameworks, benchmark standards, among others.

Furthermore, the mobility of students, teachers, and researchers is one of the important topics in the context of internationalization of higher education. The promotion of internationalization in general and of international mobility of students in particular, is regarded as important elements of higher education policies globally. This applies to individual higher education institutions, national governments and even more to regional levels. Mobility should be seen in terms of recognition of previous study to facilitate ease of movement and opportunities for student and staff mobility. However, all these require appropriate systems of facilitating, including form of systematic quality assurance mechanisms comprising of credit accumulation and transfer systems, qualifications frameworks, benchmark standards, among others.

This is of significant importance for RUFORUM QAM/CAT system which aims to promote cross-border mobility of students and staff within the ECSA sub-region and beyond. However, this requires an easily accessible readable system of defining and packaging study programmes into modules or subjects which carry discrete weights in terms of research/learning/teaching/practical/seminar credit hours or units including Grade Point Average (GPA) system that are mutually recognized between sending and receiving institutions and how the basic knowledge, competencies and skills are packaged for similar programmes to be easily

comparable. This is what the RUFORUM QAM/CAT system wants to achieve in the ECSA region for the MSc and PhD graduate training.

The challenges facing universities and higher education institutions in SSA, including the ECSA region, is that there are significant discrepancies on how programmes are constituted in terms of credit hours/units/GPAs and expected learning outcomes. The variations in structural aspects of the programmes and the asynchronous academic years as well as the non-existence of learning outcomes and assessment criteria stand as major impediments to the implementation of a fair student mobility scheme. Thus, there is a need to develop a more uniform system not only in terms of programme structures, volumes and levels of learning but also regarding the availability of learning outcomes and assessment criteria. This is a major challenge identified by the RUFORUM QA/CAT system which is likely to derail the gains already made to date.

It is against the above background and considering the vision, mission and objectives of RUFORUM towards capacity building in agriculture and economic development of countries throughout SSA that RUFORUM is working to put in place a harmonized regional QA/CAT system for postgraduate training in the ECSA region. To do this, RUFORUM has partnered with IUCEA and HEQMISA, both being strategic regional quality assurance institutions operating in the region. As part of this process RUFORUM also partnered with Agrinatura, through Supra-Agro, to infuse in lessons from Europe. These efforts hopefully will facilitate and enhance the quality of postgraduate programmes in the ECSA, facilitate mobility of staff and students while enhancing the transparency of the programmes offered. Importantly, the initiative adds value by providing guidelines for quality assurance of university research, an aspect not well addressed by existing QA frameworks in the region.

The Proposed Regional QAMS for ECSA

The proposed ECSA (RUFORUM's) Quality Assurance Mechanisms (QAMs) so established are expected to complement the existing Quality Assurance and Quality Management systems established by the various Universities Qualities Assurance Directorates, National Commissions for Higher Education and Regional Quality Assurance institutions (IUCEA and HEQMISA).

The proposed frameworks aim to ensure that the following QAMs are adhered to:

- Standardized admission requirement for quality postgraduate students and other students from related higher learning institutions;
- Academically/technically competent, highly dedicated research, teaching and support staff;
- Adequate training and research facilities for postgraduate students;
- Well equipped laboratories for teaching and research;
- Adequate ICT infrastructures for management purposes, training, research and outreach;
- Well stocked libraries with modern internet facilities and on-line resources like HINARI, AGORA and the library in the box (TEEAL) etc;
- Functioning websites and institution email for both staff and graduate students;
- Information sharing, mentorship and team building among staff and graduate students;
- Learning, Teaching and Assessment Strategy are in place;
- Regular courses and class reviews by the students;
- Quality and impact of university research are regularly assessed;
- There is regular peer review of university training and research programmes; and

- Mechanism for national, regional and international comparability are in place

RUFORUM Recognizes Country and Regional Benchmark Standards

- RUFORUM QAM/CAT systems recognise the standards set by each country's Commission for Higher Education (CHE). RUFORUM QA/CAT system therefore works to complement the standards set by the various CHEs and ensures that RUFORUM standards do not fall below the set benchmarks.
- RUFORUM QAM/CAT system requires that each participating university extracts the standards set in Commission for Higher Education's (CHE) documents in their home countries.
- RUFORUM QAM/CAT system recognises the standards set by each regional quality assurance institutions (HEQMISA and IUCEA). The system therefore works to complement the standards the ECSA universities should operate or abide by benchmarks set by these two Regional Quality Assurance Institutions and ensures that the QA standards do not fall below the set benchmarks.
- RUFORUM QAM/CAT system requires that each participating university extracts the standards set in HEQMISA and IUCEA Quality Assurance documents in the respective region.

Continental and International QAM and CATS Situation

African Continental Initiatives

The African Union (AU) has identified quality assurance as one of the key focus areas in its Plan of Action for the Second Decade of Education for Africa (2006-2015). Thus, the AU Commission for Human Resource and Science and Technology is undertaking a process of developing a framework for harmonization of Higher Education Programmes in Africa. The rationale for this is based on the belief that such an initiative will help to foster cooperation in information exchange, harmonization of procedures and policies, attainment of comparability among qualifications, and possibly the standardization of curricula, so as to facilitate professional mobility for both employment and further study.

Furthermore, the process of regional economic cooperation and integration and the focus on higher education is underlined in meetings of the AU and its operating arm, the New Partnership for Africa's Development (NEPAD). There is also increasing focus on higher education as a catalyst for high-level human resource development on the continent. One area of focus of AU in the harmonization of higher education is synchronization of systems and standards, programmes, registration, research, language, accreditation including cross-border benchmarking/quality assurance, grading, etc. to facilitate comparability and compatibility.

Implementation of the AU strategies is carried out through the Regional Economic Communities (RECs). Some of the initiatives at continental level are carried out by the Association of African Universities (AAU) under which the African Quality Assurance Network (AfriQAN) was established. The objectives of AfriQAN include the following:

- Promote a culture of quality assurance in higher education in Africa;
- Foster collaboration and linkages among quality assurance bodies within Africa;
- Advance good practice in the enhancement and maintenance of quality higher education in Africa;

- Collaborate with quality assurance bodies in Africa in capacity building;
- Facilitate research into the practice of quality assurance in higher education for purposes of improving the quality of higher education in Africa;
- Provide advice and expertise for the development of new national and sub regional quality assurance bodies in Africa;
- Assist members of the Network to articulate standards of institutions operating in member countries;
- Foster harmonization of standards for quality assurance across countries in Africa;
- Facilitate international recognition of qualifications to enhance mobility of staff and students in Africa; and
- Promote the interests of Africa in other networks and international organizations with related focus.

European Bologna Process

The European Union (EU) driven by the movement for greater integration, considered development of mechanisms to formally recognize and validate the academic achievements of its students not only in the completed higher education qualifications but also in parts of study programmes. The importance of education and educational co-operation in the development and strengthening of stable, peaceful and democratic societies is universally acknowledged as paramount and the European Union (EU) in the Sorbonne Declaration of 25th of May 1998 stressed the universities' central role in developing European cultural dimensions. While emphasizing on the creation of the European area of higher education as a key way to promote citizens' mobility and employability and the region's overall development, the Sorbonne Declaration focused on improving the international transparency of courses and the recognition of qualifications by means of gradual convergence towards a common framework of qualifications and cycles of study.

The Sorbonne Declaration led to the signing of the Bologna Declaration in June 1999 by ministers responsible for higher education in 29 European countries. This latter Declaration became the primary document used by the signatory countries to establish the general framework for the modernization and reform of European higher education. The resulting process of reform, called the Bologna Process, is the most important and wide ranging reform of higher education in Europe in recent times. It has put in motion a series of reforms needed to make European Higher Education more compatible, comparable, competitive and attractive for European students and for scholars from other continents.

The three priorities of the Bologna Process are:

- Introduction of the three cycle system (Bachelor/Master/Doctorate);
- Ensuring that Quality Assurance is maintained at all levels; and
- Recognition of qualifications and periods of study.

According to the findings of the Bologna Process stocktaking in 2007, there has been good progress in the Bologna Process and that the outlook for achieving the goals of the Bologna Process by 2010 was promising, although there were some obstacles to be overcome.

European Credit Transfer System (ECTS)

The European Credit Transfer System (ECTS) was developed to provide a way of measuring and comparing learning achievements, and facilitating their transfer from one institution to another. Its aim was to make study programmes in Europe easier to read and compare. The ECTS is based on the principle that 60 ECTS credits are equivalent to the learning outcomes and associated workload of a typical full-time academic year of formal learning. In everyday practice, two UK credits are equivalent to one ECTS credit. For the award of ECTS credits, the learning outcomes of a qualification must be consistent with the relevant outcomes set out in the Dublin Descriptors. The UK Higher Education Europe Unit has provided a detailed explanation of the relationship between national arrangements for credit in Higher Education in England and the ECTS.

Asia Pacific Region

The Asia Pacific region is the fastest growing region on the globe and universities and higher education is experiencing a dramatic surge in demand and a reform by governments wanting higher education to drive change. The region is experiencing an increased demand for academic and labour mobility as well as the issue of recognizing qualifications and quality assurance. Assessing the value of a qualification has become more complicated because of a diversification of programmes, delivery modes and the growth of cross-border provision.

The University Mobility in Asia and the Pacific Credit Transfer Scheme (UCTS)

A regional level institution called University Mobility in Asia and the Pacific (UMAP) that comprises the countries and territories of the Asia Pacific region has been established in order to coordinate mobility of students. UMAP has decided to adapt the European Credit Transfer System (ECTS) model for its own university credit transfer schemes (UCTS). The UCTS was introduced in 1999 as a pilot scheme to assist in improving the recognition of study programmes in the UMAP institutions. The system is currently used by Australian universities for student exchanges in the Asia-Pacific region.

The major components of the UCTS scheme are:

- Staff, in the home and host institution, negotiating and overseeing the student study program;
- The UCTS Record of UMAP Study form;
- The UCTS credit point scale, for use as a conversion scale to record the student workload at the host institution in a form suitable for conversion to the home institution workload measure;

Latin American Countries

Presently, there are several regional initiatives on quality assurance and harmonization of higher education. These include ARCU-Sur (formerly, MEXA), which is an agreement among the MERCOSUR countries (Argentina, Brazil, Paraguay, Uruguay) plus Bolivia and Chile. In this framework of agreement, the countries have:

- Generated shared criteria for evaluation of programmes in medicine, engineering, agronomy; dentistry, veterinary medicine, nursing, architecture;
- Agreement on procedures of evaluation and accreditation applied by national agencies;
- Mutual recognition of accreditation decisions;

- Recognition of degrees awarded by accredited courses; and
- Accreditation as fast-track to mutual recognition of degrees (bilateral agreements).

There is also an initiative known as RIACES (Ibero-American Network for Quality Assurance and Accreditation of Higher Education), the purposes of which include:

- Capacity building;
- Harmonization of standards and procedures following the lead of ARCU-Sur; and
- Guidelines for QA agencies, handbook for self assessment of agencies, and external reviews.

On regional credit transfer system, new tools have been developed to help create a common academic credit system in Latin America. This is implemented through SICA and CAT, which stands for Sistema de Creditos Academicos (System for Academic Credits) and CAT is an abbreviation for Complemento al Titulo (Complement to the Title). Both of these tools are part of the 6x4 UEALC (European Union and Latin America and the Caribbean Common Space for Higher Education) project—a "bottom-up initiative" of higher education institutions and organizations from across Latin America. UEALC is a specific project that sought to analyze six professions in four axes with the aim of proposing operating conditions that foster greater consistency and convergence of higher education systems in Latin America and the Caribbean and their comparison with those of rapprochement and the European Union.

The project's four major areas of work include the creation of:

- Strategies to describe and evaluate competency-based learning;
- A region wide academic credit system;
- A common reference framework for integrating the evaluation of competencies into quality assurance and accreditation systems; and
- A list of key competencies for research and innovation and related training strategies.

The basic concept of SICA is based on the total amount of work that a student completes during a specific academic period in order to achieve the learning objectives and outcomes. A fundamental assumption is that an academic credit measures all of the work the student has completed including contact teaching hours with an instructor in classes, seminars, laboratories, or field work, as well as independent study time in the library, group or individual work, and preparation for exams.

The *CAT—Complemento al Titulo* is a document that provides data on the student; the name, level, and function of the qualification; the results obtained, the program of study, and the institution that is awarding the qualification and/or where the studies took place.

The intended purpose of CAT is to increase the transparency and comparability of different qualifications within and between countries in Latin America and to expedite the recognition of qualifications for further academic studies and/or professional purposes.

Chapter Three: Proposed Regional Quality Assurance Mechanisms (QAMS) for Postgraduate Training in the ECSA region

Introduction

This is the overall policy document on institutional instruments on Quality Assurance related to among others, strategic plan, policy issues, teaching and learning processes, assessment methods, research Policy, students admission, promotion criteria, Intellectual Property Right, Gender Policy, Distance learning policy, staff development and retention and other similar instruments as approved for guiding management and staff on strategic and sustainable running of the institution.

The proposed quality manual therefore describes the scope of the University Quality Management System and interactions of its educational and support processes. Before the development of the Quality manual, there are a series of steps that one has to go through.

Identification of the QAMS Gaps in ECSA region

As stated in Chapter 2, the scoping studies carried out by RUFORUM in the ECSA sub-region established that there was significant discrepancy on how programmes were constituted in terms of credit hours/units/GPAs and expected learning outcomes. The variations in structural aspects of the programmes and the asynchronous academic years as well as the non-existence of learning outcomes and assessment criteria stand out as major impediments to the implementation of a fair regional student mobility scheme.

Furthermore, there were no common flexible grading systems in the ECSA universities. Therefore, RUFORUM through this handbook aims at establishing a common flexibly grading system in the ECSA participating universities. This handbook will also include mechanisms for student/ staff exchange in ECSA universities, as well as mechanisms for approval and accreditation of collaborative training programmes to assist the participating ECSA universities in this regard.

Objectives of the proposed REGIONAL QAMS

The RUFORUM QAMS Handbook is being developed in order to promote quality culture in participating universities on the following aspects, among others:

- Institutionalization of quality assurance mechanisms;
- Standardized admission requirement for regional postgraduate programmes;
- Well equipped and adequate training and research facilities for postgraduate students;
- Academically/technically competent, highly dedicated research, teaching and support staff;
- Adequate infrastructure on ICT;
- Well stocked libraries with modern internet facilities and on-line resources like HINARI, AGORA and TEEAL etc;
- Functioning websites and institution email for both staff and graduate students;
- Information sharing, mentorship and team building among staff and the graduate students;
- Learning, Teaching and Assessment Strategies are in place;
- Regular courses and class reviews by the students; and,

- Regular peer review of training and research

The Quality Assurance Management System

Quality Assurance in Higher Education

Each stakeholder in higher education will appreciate different aspects of quality because of their own ideas and expectations there from. It can be said therefore that quality is a matter of negotiation between the academic world and the stakeholders. In this negotiation process, each stakeholder needs to formulate, as clearly as possible, his/her requirements. The organisation (faculty or department) as supplier of the academic training must try to reconcile all these different wishes and requirements. As far as possible, the requirements of all stakeholders should be translated into the expected learning outcomes of the programme.

Components of Quality Assurance

The Quality Assurance system in higher education at an institutional level generally comprises of internal and external elements.

- The internal quality assurance mechanisms include monitoring instruments, evaluation instruments and activities aiming at improvement.
- External quality assessment, including benchmark activities, external audit or external quality assessment
- A specific element in the quality assurance system is accreditation, which is a process of formal recognition of a University, University College or other degree granting institution, or study programme having met predetermined benchmark standards. This is normally carried out by the designated competent external agency or authority in a country or region to carry out such functions of regulating, monitoring and enhancement of quality assurance

What is a Quality Assurance Management System (QAMS)

A QAMS can be described as a sum of the continuous activities and information the provider, in this context, higher education uses to enable it to:

- Better and more consistently deliver products and services
- Meet and exceed the needs and expectations of its customers and beneficiaries,
- More cost effectively and cost efficiently, today and in the future

Most important to note is that quality management is not a concept that can be applied to one aspect of the organization only. It is a total, encompassing strategy that effects the whole organization, and must be developed/implemented within the greater structure of the organization

Purpose of a Quality Assurance Management System

The purpose of a QAMS in an organization is to create a system, which allows an organization to:

- Say what you do and do what you say
- Document what you do, do what you document
- Maintain consistency, transparency and quality in the above
- Create a quality culture of a “PDAC” cycle (Plan, Do Check, Act)

- Establish a clear basis from which continuous improvement can be achieved

Therefore, QAMS should be developed for the organization to maintain good practice. If the organization has no ownership over the QAMS, it will fail, and become an administrative burden on the organization

Broad components of a QAMS

A higher education institution should include policy statements and procedures regarding the following, among others:

- Strategic planning, development, management and review of the QAMS
- Managing learning programme design, development, implementation
- Managing assessment and moderation practices
- Managing administration, record keeping and reporting
- Managing staff recruitment, management, development and retention
- Managing teaching-learning processes, programmes provision, employers/professional bodies' partnerships and learner support.

The concept of Compliance versus Conformance

A higher education institution must aim for **conformance** (best practice) in his/her educational provision of QAMS. That is, the QAMS must first and foremost state its organizational requirements for best practice. This refers to institutional Vision, Mission, goals and objectives. It also refers to Quality as 'fitness for purpose' in relation to specified mission within an institutional or national framework that encompasses differentiation and diversity.

In addition to fitness of purpose, an alignment should also aim at **compliance** to existing regulatory legal framework of a regulatory body/accreditation body. This refers to Quality as 'fitness of purpose' which tries to fit within a framework based on national goals, priorities and targets of education and the minimum benchmark standards.

Institutional management of QAMS

Quality management is NOT a concept that can be applied to one aspect of the organization only and it is not supposed to be a responsibility of one person such as a designated Director of Quality Assurance of an institution. Since it is a total encompassing strategy that effects the whole organization, it must be developed and implemented within the greater structure of the organization by all staff including academic and administrative.

Strategic Planning for Quality

There is need to promote increased innovation, efficiency, strategic thinking and ideas for self-improvement through development and adoption of a long-term strategy for quality assurance at an institution. This should involve the development of strategic quality plans and Quality Procedure Manuals too guide implementers or practitioners in the institution to adhere to set standards and procedures. The strategies will include the formulation of a Quality Assurance Policy for the institutions, which should be well circulated and disseminated among the various stakeholders in the institution. The Strategic Plan for Quality Assurance should encompass Policy Statement and Guidelines that include:

- The institution’s strategy for quality and standards;
- The organization of the quality assurance system;
- The responsibilities of departments, schools, faculties and other organizational units and individuals for the assurance of quality;
- The involvement of students in quality assurance;
- Involvement of key stakeholder groups in quality assurance; and
- The ways, in which the policy is implemented, monitored and revised.

Operationalization

There must be clear processes that show how the policy statements will be implemented, and normally includes a “by who”. This will require the responsibilities on the implementation of policy statements be accorded to institutional structures in all academic units, namely department, faculty/school, college and central university level.

Administrative

There should be a culture of developing and documenting supporting documents to be used in the process of implementation – whether it is learning material, registration forms, assessment guides, moderator reports, codes of conducts and information brochures, among others. This aspect is very critical to provide quality indicator evidence on all aspects that are carried out.

The Quality Cycle

There are several Quality Cycles that are used globally in the implementation of QAMS. Among the most widely used tools for continuous improvement is a four-step quality model—the **plan-do-check-act (PDCA) cycle**, also known as **Deming Cycle** or **Shewhart** (Fig. 3.1)

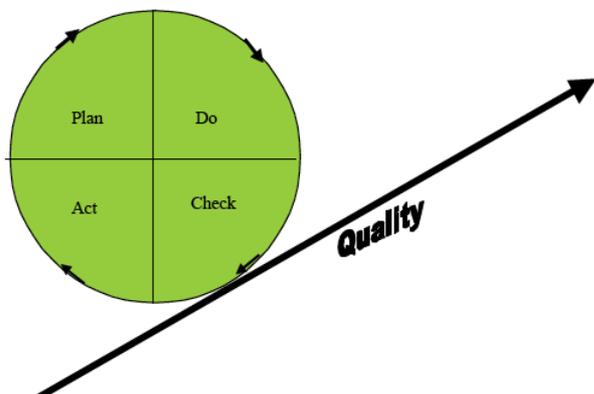


Fig. 3.1: Deming Cycle

Thus, the implementation of any Quality Management System is a continuous cycle, which broadly requires the following actions:

- **Plan the QAMS:** Planning, scoping, design and development;
- **Do the QAMS:** Implement the policies, processes and supporting documentation;
- **Check the QAMS:** Check actual practice against proposed QMS and evaluate implementation; and
- **Act the QAMS:** Align practice to policy, or policy to process – whichever will allow for best fit for purpose conformity and compliance.

QMS Policy Areas and Purpose

The following table is a broad description of the nature of the content of the QAMS Policy. (In accordance with organizational requirements, the QAMS Model may contain more or less policy areas - this serves as a guide only).

No	Area	Description
1	QMS Policy	Policy and process on the establishment and maintenance of the QMS
2	Learning Programme Management	Policy and process on the design, development, implementation and evaluation standards aligned to both teaching and research programmes
3	Assessment & Moderation Management	Policy and process on the assessment and moderation of standard aligned teaching and learning programmes
4	Administration Management	Policy and process on the administrative management of learner, assessment / moderation and learning programme records within the accredited provider environment
5	Programme Management	Policy and process on the implementation and management of the teaching and learning within the accredited provider environment.

The purpose of the QAMS is that it is an overarching policy of the whole QAMS – it forms the “binding umbrella” under which all other policy areas function.

It captures the purpose and scope of the overall QAMS, the organizations’ commitment to QAMS and its undertaking / plan on how to maintain and communicate the QAMS, thereby keeping it as a living, breathing entity rather than a document on the shelf.

3.3.13 The QAMS Policy Areas

The following table is a broad description of the nature of the content of the QAMS Policy.

No	Area	Description
A. QMS Overview		
1	QMS Vision and purpose	This should provide a clear vision and mission that captures the degree of excellence that the provider aspires to attain Should define scope of delivery / assessment within a defined area of expertise Should provide a clear purpose of the QAMS
2	QMS Principles and ownership	Has clear value principles been defined? Who will be responsible for maintaining the QAMS system? Has the academic programme QAMS been incorporated into your HR strategy?
B. QAMS Manual		

3	Standard QAMS Document Register		This should provide a guide and register of standard documents that are used in the QAMS (For example learner registration and achievement form, assessment guide format, appeals form, standard agenda and minutes template etc)
C. QAMS Maintenance			
4	Compliance Legislation	–	The policies should comply with those of regulatory/accreditation agency Should also spell out how the QAMS policies will be evaluated And how often and by whom. Should specify who is authorized to amend policies in your organization
5	Access & Distribution	&	Is there a clear policy / process on the access of policies, processes and standard documents? Is there a clear process of distribution of policies and processes and standard documentation?
6	QMS development & update	– &	Is there a clear process and ownership in the development and maintenance of the QAMS?
D. QMS Review			
7	Audits - Internal & External	&	Is there a structured system to review your QAMS on a regular basis? Does the audit process include partnership / collaboration with external providers or practitioners, i.e., to ensure that agreement is reached with contracted partners and practitioners on the implementation of QAMS principles?
8	Non-Conformance		Are there set criteria in defining and identifying non-conformance? Is there a set process in managing non-conformance? Is prevention of non-conformance built into the QAMS?

Principles of the proposed QAMS

The Internal Quality Assurance (IQA) is a system aiming at setting up, maintaining and improving the quality and standards of teaching, scholarship (student learning experience), research, and service to community and also support system or services in the university. Therefore the overall objective is to continuously promote and improve the quality of the core activities and the institution as a whole

The requirements of an effective IQA can be summarized as follows:

Policy and procedures for IQA

An institution should have a clear policy and associated procedures for the assurance of the quality and standards of their programmes and awards. The university should commit itself

explicitly to the development of quality culture and quality awareness. To achieve this, the university develops and implements a strategy for the continuous enhancement of quality. The strategy, policy and procedures should have a formal status and be publicly available. They should also include a role for students and other stakeholders.

A monitoring system for academic

An institution should have a structured monitoring system to collect information about the quality of its activities. At least the monitoring system should include:

- Student evaluations
- A student progress system
- Structured feedback from the labour market
- Structured feedback from the alumni

Periodic review of the core activities

These include core functions of a higher education institution, which includes teaching and learning, research and outreach/community service.

Therefore, an institution should have formal mechanisms for periodic review or evaluation of the core activities: The programmes and degrees, the research activities (if applicable) and community service.

Quality assurance of student assessment

An institution should have clear procedures to assure the assessment of students. Students are assessed using published criteria, regulations and procedures, which are applied consistently. There are clear procedures to assure the quality of the examinations

Quality assurance of teaching staff

An institution should have ways of satisfying itself that the staff members are qualified and competent to conduct the core activities of the institution: teaching and learning, research and community service.

Quality assurance of facilities

An institution should have clear procedures to ensure that the quality of the facilities needed for student learning are adequate and appropriate for each programme offered.

Quality assurance of the student support

An institution should have clear procedures to assure the quality of the student support and student counselling.

Self-Assessment

An institution should conduct regular self assessment of its core activities as a whole, at least once every 5 years, to learn about the strengths and weaknesses. This self-assessment will lead to development of a quality improvement plan. The self-assessment aims at finding evidence that the institution is meeting the quality criteria. Therefore, one has to look at the criteria and try to find indications of meeting the criteria:

- Give a description of the state-of-the-art of the aspect

- Make a critical analysis of the state-of-the-art. (Is one satisfied with it or not?)
- Describes the strengths and weaknesses concerning the mentioned aspect
- What evidence is there that you are meeting the criteria?
- If there are problems or if you are not satisfied, what actions are planned to overcome the shortcomings?

The planned actions to overcome the shortcomings require development of an improvement plan in order to address the weaknesses.

Organization of Self-Assessment

The university should determine how self-assessment is carried out. However, it is good to make use of experiences gained elsewhere. On the basis of IUCEA and universities in East Africa experiences on self-assessment some suggestions may be made that can facilitate the process (IUCEA: **Volume 1- Handbook of Quality Assurance in Higher Education: A Roadmap to Quality**):

- Self-assessment should never be the work of one single person.
- Make a group responsible for the self-assessment.
- This group should consist of some three to five people, chaired by a coordinator appointed by the faculty. Students should be involved in the self-assessment.
- A clear timetable should be set up, assuming a total amount of time available of about five to six months between the moment of the formal announcement and the actual visit.
- The topics that have to be considered in the self-evaluation should be distributed among the committee members and each member made responsible for collecting information, and for analysing and evaluating the data from the self-assessment.
- The draft results should be discussed on the largest scale possible. It is not necessary to have consensus concerning the report; it is, however, necessary for as many people as possible to be aware of its contents.

The Self-assessment Report (SAR)

After finishing the self-assessment of the Internal Quality Assurance system one will write down the outcomes of the assessment in a Self Assessment Report (SAR). The SAR is an important document. On one hand it contains the basic information for the external expert team that will come and assess the quality of the programme. On the other hand it is the basic document for the institution's formulation of an action plan or quality plan for the coming years.

The content of the SAR follows the lines of the aspects discussed during the self-assessment process. For each aspect to be treated one should:

- Clearly describe the state-of-the art. An outsider must understand the situation.
- Analyse the situation. What is your opinion about it? Satisfied or not? If not, why not?
- Describe how far you meet the formulated criteria. What evidence can you provide?
- Describe the weakness and the strengths.

Content of the self-assessment report

Table 2 provides the contents of the self-assessment report. Be sure that the report is discussed within the faculty/school and ensure that everybody is able to recognise himself/herself in this picture.

Table 1: Content of a self-assessment report for Internal Quality Assurance (adopted from IUCEA Roadmap to Quality)

<p>Introduction Short description of the university How was the self-assessment carried out?</p>
<p>Chapter 1: Policy and procedures for Internal Quality Assurance</p>
<p>Chapter 2: The Monitoring instruments 2.1 Student progress 2.2 Pass rates and drop out 2.3. Programme organisation 2.4 Feedback from labour market + alumni 2.5 Research performance</p>
<p>Chapter 3 Evaluation instruments 3.1 Student evaluation 3.2 Course and curriculum evaluation 3.3. Research evaluation 3.4. Community Outreach/Service evaluation</p>
<p>Chapter 4: Specific Quality assurance processes 4.1 Quality Assurance of student assessment 4.2 Quality Assurance of staff 4.3. Quality assurance of facilities 4.4. Quality assurance of student support 4.5. Self assessment of research</p>
<p>Chapter 5: Specific instruments 5.1 Self-assessment/SWOT analysis 5.2. Inter-collegial audit/peer review 5.3. Information system 5.4 Quality Assurance handbook</p>
<p>Chapter 6: Follow-up activities</p>
<p>Chapter 7 Strengths-weaknesses analysis 7.1 Summary of strengths 7.2 Summary of weaknesses 7.3 Quality plan for the coming years</p>

These quality indicators can also be considered as part of the proposed RUFORUM QAMS because some universities offering RUFORUM programmes have already mainstreamed into the

institutional QAMS of the IUCEA Quality Assurance Framework. These include Makerere University in Uganda, Sokoine University in Tanzania, Egerton University, Jomo Kenyatta University of Science and Technology, Kenyatta University and University of Nairobi in Kenya.

A Quality Assurance Handbook

An institution should have a QA handbook, where all regulations, guidelines, processes and procedures concerning Quality Assurance are documented. All people concerned (i.e., stakeholders) should publicly know the existence and contents of this handbook. The presence of a QA handbook shows the maturity of the institutional IQA system.

The Handbook should clearly define the institutional IQA. Although there is no Internal Quality Assurance system that fits all universities, common good practice shows that it is possible to develop an analysis model for a well functioning QA-system. This includes the following elements:

Monitoring instruments

The monitoring instruments are needed to keep track of performance and developments. This is why it is important to collect data about:

- The student progress
- Dropout and pass rates
- Feedback from labour market and alumni
- Research performance

As long as the data are in line with the targets the Institutions and their Networks have set, there is no reason to worry. If there are deviations, it might be necessary to take action and analyse the situation.

Evaluation instruments

Evaluation instruments that a university may use include the following, among others:

- **Student evaluation:** A university should carry out student evaluations. In fact this should be a regular activity in the institution to learn what students think about the quality of a programme, the staff, the delivery methods, etc.
- **Course and curriculum evaluation:** Although the students will evaluate the course during the student evaluation, there might also be a need to include other stakeholders in the evaluation process such as alumni, employers and professional bodies.
- **Research evaluation:** An institution should have a mechanism to evaluate the quality of research by staff members whether funded internally or externally and ensure that researchers have opportunities to disseminate the research findings and to have the same peer review. A separate section on Quality Assurance of University research is presented in the later part of this chapter. Suffice to say that this is an important aspect of QA but is still largely at infancy in the ECSA.
- **Community service evaluation:** An institution should have a system for regular review of the community outreach. The institution should regularly evaluate if it achieving what it wants to achieve in community service. Indeed, Universities have social responsibility

to society and for research, it is important to assess the impact/benefits of research output to society.

- Evaluation does not make sense if there are no actions to enhance the quality and to overcome the shortcomings. Therefore, it is necessary to have opportunities for staff development and staff training.

Specific QA-processes

There are some specific QA processes within the scope of IQA that are important for assuring the quality of some activities:

- Quality assurance of the student assessments
- Quality assurance of the staff
- Quality assurance of the facilities
- Quality assurance of student support.
- Quality assurance of the research process and outputs and outcomes

Specific instruments for IQA

There are some specific instruments for Internal Quality Assurance, which may include Self-assessment or SWOT-analysis. This might be at institutional level, faculty, department or programme or at the level of the core activities. Self-assessment is a powerful instrument for discovering about quality and finding an answer to the following questions:

- Are we doing the right things?
- Are we doing the right things in the right way?
- Are we achieving our goals?

These instruments may be used once every five years and may be combined with external assessment or accreditation.

External Quality Assurance

Quality assurance is the responsibility of everyone in an educational institution, though the top management sets the policies and priorities. Thus, assuring quality should be a continuous and on-going process involving all staff, academic and administrative.. It should not be considered as a one-time activity for accreditation alone though, accreditation is part of external quality monitoring.

Some of the best practices across the world on external quality assurance encompass the following:

- Self Assessment Report (SAR) by a unit to be evaluated;
- Peer review by a panel of experts, usually including at least some external panel members
- One or more site visits;
- Analysis of statistical information and/or use of performance indicators or the best practices benchmarking;
- Surveys of students, graduates, employers, professional bodies; and
- Assessing the knowledge, skills and competencies of students

External quality monitoring/assessment undertaken cover the following stages:

- Identifying pre-determined criteria for assessment;

- Preparation and submission of the self-study report by the unit to be assessed;
- On-site visit of the peer team for validation of the report and recommendation of the assessment outcome.

Report of External Evaluation/Peer Review

Since the main input to the External Evaluation is the SAR, the contents or structure of the peer report henceforth covers the quality attributes that are in SAR. In addition, the Peer Review team is expected to make recommendations based on their evaluation of the report and site-visits that will help a respective academic unit to develop an improvement plan.

Improvement Plan

The improvement plan will be based on the diagnosis made based on the assessment instruments and the report prepared by the Peer Review Team. The Internal assessment is expected to identify and prioritize the areas for improvement that will be improved. This will lead to the development of an Improvement Action Plan.

Recommended core values and attributes of the proposed RUFORUM QAMS

In order to give legitimacy and reputation of the QAMS, the following are recommended as core values and attributes:

- That transparency and openness within the system and among all concerned parties are absolutely necessary;
- That evaluation is a learning and development opportunity, as well as a reflection process for all concerned;
- That participation of students and alumni as major stakeholders in quality assurance procedures is crucial;
- Key aspects of Quality Assurance ensure that:
 - Memoranda of Understanding (MoUs) are in operation throughout the participating RUFORUM universities in ECSA region leading to:
 - A harmonized Quality Assurance Mechanisms (QAMs) framework for the Post graduate programmes is operational; and
 - Those QAMs minimum standards are operational and maintained through a rigorous periodic participatory monitoring and evaluation.

Other Important Strategies

In order to promote the establishment of a Sustainable Quality Assurance Culture in ECSA Universities, the following strategies are proposed:

- Establishment of Managerial, Administrative and Technical Infrastructure for Quality Assurance
- Human resources for quality assurance should not be restricted to the technical personnel tasked with ensuring quality, but should involve the whole spectrum of the university structure. A culture of quality in any institution should therefore start with the leadership of the University. There is therefore the need to enhance managerial and administrative staff capacity in implementation of internal quality assurance and evaluation techniques through extensive staff trainings; strengthening of managerial, administrative capacities and technical infrastructure within the institutions.

- Clear strategies and guidelines for Quality Assurance of university research, and assessment of research impact.
- A reward system to promote good performance and excellence.

Funding and Development of Human Resources for Quality Assurance

Universities in ECSA region should commit funds and other resources to the training of Quality Assurance personnel. There is a dire need of trained quality auditors for institutional self-assessment and national and regional accreditation programmes.

Development and sensitization of Appropriate Training Tools for Quality Assurance

There is need to develop a system of ensuring the importance of quality is disseminated to all academic and administrative units through training of both academic and administrative staff on tools related to assessing, monitoring and ensuring the quality of the

- (a) *Inputs*: Educational programmes, teaching organization, human resources (academic, administrative and service staff) and material resources (classrooms, workspaces, laboratories, workshops and experimental spaces, library and documentation)
- (b) *Educational processes*: Teaching, research and community engagement
- (c) *Outputs/results*: These include the quality of graduates, research outs, and publications, among others

Establishment of Quality Units

Universities in the region should strive to establish Quality Assurance Units for the implementation of their quality assurance mechanisms. The QA Unit should work to ensure that the university have a quality assurance policy and the associated procedures for the assurance of the quality and standards of their programmes and awards. Through this unit, universities should commit themselves explicitly to the development of a culture, which recognizes the importance of quality, and quality assurance, in their work. To achieve this, institutions should develop and implement a strategy for the continuous enhancement of quality. The Quality Assurance Unit should help the university to develop strategies, policies and procedures for both internal self-assessment and external assessment procedures.

Strategic Plans for Quality Assurance

There is need to promote increased innovation, efficiency, strategic thinking and ideas for self-improvement through development and adoption of a long-term strategy for quality assurance at the Universities in the ECSA region. This will involve the development of strategic quality plans and a Quality Procedure Manuals. The strategies will include the formulation of a Quality Assurance Policy for the institutions, (that cover both teaching and research) which should be well circulated and disseminated among the various stakeholders. The Strategic Plan for Quality Assurance should have Policy Statement and Guidelines that will include:

- The institution's strategy for quality and standards;
- The organization of the quality assurance system;
- The responsibilities of departments, schools, faculties and other organizational units and individuals for the assurance of quality;
- The involvement of students in quality assurance; and
- The ways in which the policy is implemented, monitored and revised.

Networking and collaboration

Universities in the region should promote regional cooperation through networking for quality assurance. This will help to strengthening the cooperation between the institutions and national/regional accreditation agencies. It will lead to sharing of good experiences and interchanging of peers and experts among the Universities in the region. While the primary responsibilities of quality assurance lie with the individual institutions themselves, the collaboration is necessary to be able to keep up with the new emerging trends in quality assurance in the world.

This indeed is the spirit of regional networks such as RUFORUM, the IUCEA for East Africa and HEQMISA for the Southern African Region and the Association of African Universities in promoting capacity building in Quality Assurance. This spirit needs to be further encouraged in Africa.

Quality Assurance in Research (QAR)

Quality Assurance in Research (QAR) is the system which the University/Institution provides to guide and support researchers in relation to meeting the requirements of research governance that are appropriate to their particular field. QAR also provides the mechanism for assuring external funders of research, stakeholders and the University itself, that the universities meet the standards that they set for themselves.

The mechanisms may include, among others:

- Transparent on conceptualisation and development of research projects, proposal write-up, project planning and development;
- Training and skill enhancement for research staff including graduate students and technical support staff;
- Quality of research facilities and equipment;
- Documentation of procedures and method used in research;
- Research records, data collection, data analysis and publication/dissemination;
- Is the research relevant in addressing the social-economic needs?
- Are methods used validated as fit for purpose?
- Is the data produced and reported of known quality and reliable?
- Is the research reported in leading citation indexes?

Generally, there has been less attention given to monitoring quality assurance issues of research in the ECSA region, outside the individual university assessment of theses. The subsequent section draws heavily from European Quality Assurance System and the European Credits Transfer System (ECTS). However, universities such as Makerere have also initiated processes for quality assurance of research. In fact Makerere has benchmarked this effort against three other leading universities (in South Africa and Sweden). But this effort needs to be scaled up to follow up on citation of the research outputs in international indexes, assessing the social impact of the research and establishing a reward system such as done in the output financing system of the Netherlands (see Annex 3 on Report of scoping visit to selected European Universities).

University-based research is critical to the relevance and visibility and constitutes a key component in overall university assessment and ranking systems. Quality research is paramount in this instance and this QAM proposes a comprehensive methodological approach. The overall objective is to guide research management processes in universities and promote and contribute to the development of proven methodologies designed to facilitate the assessment of quality of university-based research. This would ensure that there is credibility and support from funders of research as well as the various users (or potential users) of research outputs. It will also facilitate universities in show-casing their research protocol, methodologies in line with existing international assessments / ranking systems. In the end the impact of research will be in tandem with multidimensional methodological approach addressing the various user needs, interests and purposes, and identifying data and indicator requirements for quality assurance.

This research quality assurance guide, while premised on the conviction that the purpose and objectives of a given QA exercise should be seen in context of the institution and country, assumes that quality assurance in research:

- Covers all key agricultural and related disciplines and, crucially, trans-, multi-, and interdisciplinary work, as well as research in emerging fields;
- Includes research carried out in bilateral partnerships, in partnerships with nonacademic organizations, and in African and international networks.
- Is cognizant of the diverse profiles, missions, histories, and resources of Eastern, Central and Southern African universities and higher education systems;
- Recognizes the different dimensions of research, namely input, process, output, outcome, and impact;
- Recognizes the whole spectrum of research, including fundamental, applied, and practice-based research;
- Takes account of social, economic, environmental, and cultural impact and benefits;
- Takes into account the diverse outputs and outlets through which research outcomes are transmitted and disseminated;
- Takes into consideration, as appropriate, research tailored to specific local, regional and national contexts and / or published in different outlets for different audiences;

Assessing Quality University-led Research

This QAM handbook takes note of the need for flexibility in the application of relevant procedures and indicators in assessment quality of research in universities. While this flexibility is encouraged, adherence to the minimum standards and benchmarks is paramount as in the QA practices for postgraduate programmes. This section presents insights in the different characteristics and dimensions of indicators, and their use in QA processes. There is no single set of indicators capable of capturing the complexity of research and research assessment. All in all indicators must be fit for purpose and verifiable.

The choice, interpretation, and weighting of indicators are of utmost importance in any QA process or system for university – led research. Annex # provides, in table format, a comprehensive overview of the most commonly used indicators, relating each indicator to the measurement of a specific aspect or dimension of research, pointing out its strengths and weaknesses. It is adopted from the Research Policy Document “*Assessing Europe’s University-Based Research*” (EC, 2010).

Characteristics of Research Quality

This section outlines the basic principles which underpin the approach to research quality assurance and assessment. It includes an inclusive definition of research and a broad understanding of differences between agricultural research practices.

Defining 'Research'

Over the decades research understanding has progressed from simple to complex knowledge production systems as seen in the emergence of new multi-disciplinary research approaches, disciplines, methodologies and ways of thinking, transforming societies and the way in which knowledge is created and used. Traditionally, research (simply put the pursuit of new knowledge) is divided into two major functions, basic and applied. In agriculture and more increasingly, today, the boundaries between basic and applied research are blurring, and more and more fundamental research is conducted in the context of application, both within and outside universities.

Use-inspired research can be of a basic or fundamental nature. Universities have been the primary organization for this type of research. In agriculture, however both basic and applied research are key and universities are playing an increasing role. In either case new understandings of knowledge production, university led research is a continuum, involving the whole process of discovery and spanning the spectrum from curiosity-driven to user-led, from blue-sky to practice-based investigation. Quality assurance issues flag standards in terms of the conceptualization, planning, design, implementation, management, outputs, dissemination and evaluation of research processes.

Cross-Disciplinary nature of Agricultural Research

There have been simple basic distinctions of research as STEM (science, technology, engineering and medicine) versus HASS (humanities, arts and social sciences). This does not cater for the complexity that abounds in agricultural research owing to the dynamic and inter-linkages from the social, economic, environmental, scientific and technological perspectives therein. Research quality assessment considers all forms of research thus:

- *Mono-disciplinary* research that primarily is conducted within the boundaries of a specific discipline and contributing to the advancement of knowledge in that specific discipline;
- *Trans- or multi-disciplinary* that bring together two or more disciplines without integration; and
- *Inter-disciplinary* that blends the approaches of two or more disciplines often leading to the creation of a new discipline.

Agricultural research is conducted in contexts that are seldom bound by borders or discipline and its complex nature requires an interdisciplinary, collaborative and inter-locking innovation systems approach that any quality assurance process must acknowledge

University Research Outlets

The outputs of university-based research should be disseminated to the right end-user as professional and ethical obligation. The quality of such publicly validated outputs is critical to university leadership in providing solutions to societal problems.

The likely target users of research may include:

- *HE Governance and Management including* Governing Bodies or Councils, HE Executives and Management and HE Research Groups
- *Governments* – national, regional and local concerned with value for money invested in research
- *Other Government Agencies*
- *Academic Organisations and Academies*
- *Individuals* – including graduate students, staff,
- *Peer HEIs*
- *Industry and other partner organizations*
- *Civil Society and Civic Organizations*
- *Sponsors and Private Investors*
- General public

Assessing Quality of University-Based Research

In assessing the quality of university led research, special attention must be given to indicators as metrics of various components of research activity, including inputs, process, outputs, outcomes and impact and benefits. The indicators chosen should include

- *Input* indicators that measure resources, human, physical and financial, devoted to research.
- *Process* indicators that measure how research is conducted, including its management and evaluation.
- *Output* indicators that measure the quantity of research products such as number of papers published or the number of PhDs delivered.
- *Outcome indicators* that measure the level of performance, or achievement, for instance the contribution research makes to the advancement of scientific-scholarly knowledge.
- *Impact and benefits indicators* that measure the contribution of research outcomes for society, culture, the environment and/or the economy.

Research Ethics

Research should always be conducted in a way which promotes and promulgates good ethical practice, emphasizes integrity and rigour and sustains a culture in which the following guiding principles are understood and observed:

- Honesty, Openness and Fairness
- Confidentiality
- Conflict of Interest
- Respect for Human Subjects
- Respect for Animal Subjects
- Assessment of Risk and Benefits

Quality research should follow ‘good practice’ with respect to avoiding plagiarism, accurately documenting results, securely storing primary data, acknowledging the role of collaborators and

other participants, and ensuring professional behaviour between supervisor and research students.

Social and Economic Impact and Benefits

Research quality assessment should not only focus on quality of input, process and output but must also reflect on the quality of response to the wider role and responsibility of university-based research. Thus, attention must be paid to outcome and benefits, especially the social, economic, cultural and environmental impact. Assessing quality research impact gauges the contribution that university-based research makes to society and the economy. This may take the form of evidence for policymaking, social improvements or the translation of research into cost-effective, practical, policy- and technology-based interventions that improve people's lives.

The benefits may include:

- *Economic Benefits*, e.g. improved productivity; adding to economic growth and wealth creation; enhancing the skills base; increased employment; reduced costs; increased innovation capability and global competitiveness; improvements in service delivery; as well as unquantifiable economic returns resulting from social and public policy adjustments.
- *Social Benefits*, e.g. improving people's health and quality of life; stimulating new approaches to social issues; changes in community attitudes; influence upon developments or questions in society at large; informed public debate and improved policy-making; enhancing the knowledge and understanding of the nation; improved equity; improvements in health, safety and security; improved social attachment; and improvements in the level and security of political rights.
- *Environmental Benefits*, e.g. improvements in environment and lifestyle; reduced waste and pollution; improved management of natural resources; reduced consumption of fossil fuels; uptake of recycling techniques; reduced environmental risk; preservation initiatives; conservation of biodiversity; enhancement of ecosystem services; improved plant and animal varieties; and adaptation to climate change.
- *Cultural Benefits*, e.g. supporting greater understanding of where we have come from, and who and what we are as a nation and society; understanding how we relate to other societies and cultures; stimulating creativity within the community; contributing to cultural preservation and enrichment; and bringing new ideas and new modes of experience to the nation.

Indicators of Research Quality

The indicators are categorised according to what they aim to measure:

- Research Productivity;
- Quality and Scholarly Impact;
- Innovation and Social Benefits;
- Sustainability and Scale;
- Research Infrastructure.

Monitoring and Evaluation of Quality Assurance

Purpose and Objectives

A key responsibility of QA system is the monitoring of the training and research programmes. The quality assurance mechanism is also monitored and evaluated purposefully. This provides evidence and advice on:

- The performance of the QAM and CAT system, with respect to available performance indicators
- The progress being made towards achieving quality training and in relation to agricultural tertiary education goals as well other equity and human resource development goals and measures

RUFORUM has an elaborate M&E system which embodies a framework for the monitoring and evaluation of regional post graduate programmes as well as research activities. The QAM/CATS implementation procedures are guided by an M&E strategy that help to:

- Direct responsibility of stakeholders to provide advice to universities and RUFORUM on quality assurance and credit transfer matters;
- Generate information and analysis that could be of use for the effective steering by of the implementation and improvement of QAM/CATS
- Produce, as required by the RUFORUM MoU with member universities in general and host institutions in particular, reports on the state of QA that comprehensive and analytical

In the pursuit of these objectives the RUFORUM has developed a framework within its overall M&E system to monitor and evaluate whether, how, to what extent and with what consequences the vision, policy goals and objectives of the transforming graduate training in agriculture being realized at a systemic and at an institutional level through the QAM/CATS. In this regards the QA component of the RUFORUM Monitoring and Evaluation System is geared to:

- Describe and analyse the state of QA in relation to the implementation of the postgraduate programmes and research;
- Establish the direction in which the QA practices are moving in relation to the goals and objectives set;
- Establish the role and efficacy of policy, structures, instruments/tools, strategies and processes in the implementation of QAM/CATS; and
- Establish and analyse the form and pace at which quality improvement occurs as well as outcomes and impact of QA strategies in training and research at postgraduate level.

The M&E framework for the development and implementation of QAM/CATS requires a conceptualisation of monitoring and evaluation which is not based on mere collection of data but on the interpretation of the data on QA available both within and without universities and RUFORUM network and its explanation through further research. The purpose of the M&E system is thus to:

- Generate knowledge about how university training and research transformation takes place;
- Sharpen of learning and advocacy for QA in agricultural tertiary education;
- Improve postgraduate training and research through the application of new knowledge on systemic and institutional transformation in QA; and
- Disseminate the analysis and interpretation of data and information to spur innovation in quality training and research

As stipulated in the RUFORUM M&E strategy, QAM/CATS implementation must be guided by monitoring, performance indicators and evaluation as an integral part of demand for accountability, efficiency, effectiveness, impact and internationalization. Accompanying this is the need, ideally, for a management information system (MIS) and a performance indicator system (PIS) that facilitate strategies for:

- Monitoring progress towards meeting QA goals.
- Monitoring changes in QA system in relation to specific goals and demands.
- Monitoring the efficiency and effectiveness of the QA system as well as the technical prospects therein
- Informing the development and implementation of the QA funding strategy.
- Monitor quality and standards of the QA system.
- Monitor the quality and effectiveness of institutional governance and management of training and research

Alongside these monitoring roles, the M&E strategy also recommends clear and purposeful execution of timely evaluations but building on the monitoring data and guide judgments on the achievements or contribution of the QA systems to overall university performance. A clearly distinction is made between monitoring, evaluation and research in order to establish how they contribute to the deepening of QA practice in the region

Institutionalizing QA M&E

RUFORUM recommends institutional Quality Assurance through Monitoring and Evaluation that looks at the effectiveness of the university, programme or unit in its entirety, particularly, the development of an institutional system that ensures the quality and standards of training and research programmes. There is need to Institutionalize M&E in the implementation of QAM/CATS as a mechanism for monitoring and evaluation of the outcomes of the programmes, processes, and services provided by both public and private Philippine Higher Education Institutions.

The monitoring and evaluation cover key QA result areas that include programme governance and management; quality of teaching and research; support for students; relations with the wider community; and management of training and research resources and facilities. It considers the effectiveness of an institution in its entirety, particularly, the development of institutional QA systems that ensure the quality and standards of programs.

M&E of Quality of University Based Research

It is critical to implement focused M&E for university based research just like for the training programmes. In this regard, M&E activities should focus on:

- *Strategy and direction:* The basic plan that the university-led research project/programme/institution is following in order to reach its research vision.
- *Research Management:* The systems and processes that the project/programme/institution has in place in order to ensure that the overall strategy is carried out and that high-quality research is produced (e.g. systems of peer/user review, quality assurance, planning cycles, etc).
- *Outputs:* The tangible technologies, goods and services that a research project/programme/institution produce (e.g. inventions, manuals, guidelines, working papers, journal articles, policy briefs, website, meetings, events, networks, methodologies, tools, etc).

- *Uptake*: Direct responses to the research project/programme/university (e.g. technologies are adopted by farmers, up-scaled by research, extension, private sector, civil society, its research is mentioned in a government policy paper, on a range of websites, referred to in a newspaper article, etc).
- *Outcomes and impacts*: Changes in behaviour, knowledge, policies, capacities and/or practices that the research has contributed to, directly or indirectly (e.g. a change in government policy implementation, a change in working practices among NGO practitioners, a reduction of poverty in a certain area, strengthened livelihoods, strengthened civil society input into policy processes, etc).

Best practice checklist and approach for QA/CATS M&E

The appropriate M&E approach for the QAM/CATS will depend on the university teaching and/or research scale, timeframe, budget, aims, and any conditions set by donors. Any M&E approach can be used at institutional level for as long as it is manageable and aligned to RUFORUM performance management and learning system. Examples of possible combinations of approaches are:

- Designing a Logframe for the QA process, and monitoring the Logframe indicators at designated learning points
- Designing an institution change/transformation theory, and then revising and strengthening QA procedures by using the quality Impact Pathways model at designated times
- Using QA Outcome Mapping complemented with appropriate internal and external reviews to check quality and performance of QAM/CATS

Suggested Procedure

Step 1: Lay the foundations

Ensure that the foundations for QA M&E are laid upfront through (for instance):

- Holding appropriate consultative meetings to design a Logframe, theory of quality transformation, etc
- Outlining the QA programme intent (e.g. purpose, activities, outputs, stakeholders; outcomes and work plan with milestones and budget).
- Outcome Mapping process (Vision; Mission; Identify Boundary Partners; Identify Outcome Challenges; Identify QA Progress Markers; QA Strategy Maps; Organisational QA Practices).

Step 2: Set up quality assurance mechanisms across all projects

Ensure that some quality assurance mechanisms are in place across all training and research projects/programmes from the beginning. This may include appropriate peer review or user-review processes; ex-ante reviews or similar mechanism and independent external assessments.

Step 3: Coordinate QA institutional, project or programme M&E

A decision should be made on combination of university-wide, research/training programme QA M&E. This may be achieved, through, for instance a flexible relationship, where units carry out their own QA M&E but feed into institutional QA M&E processes

Step 4: Choose an appropriate mixture of self-assessment and external evaluation

Decide on an appropriate combination of self-assessment and external evaluation. Also decide on

how the self-assessment will feed into the external evaluation

Step 5: QA programme evaluation

Many factors will determine the choice of evaluation timing and approach for QAM/CATS including the actual M&E approach chosen, the requirements of partners including donors for the research/training programme, and the M&E budget. Ideally any evaluation must feed into QA system improvement and future programming

All in all QA implementers should:

- Chose appropriate mix of the institutional M&E (decentralised or centralised)
- Decide on a mixture of self-assessment and external evaluation
- Establish whether quality assurance and uptake of outputs are monitored regularly in the university
- Capture impacts including through case studies (RUFORUM has designed a simple guide to case study documentation)

Chapter Four: Proposed Credit Accumulation and Transfer Systems

Introduction

A Credit Accumulation and Transfer System has an increasingly important role to play in recording student achievement and providing support for students and their progression both into and within the Universities systems and other Higher Educational Institutions. It is a key tool for promoting lifelong learning and student mobility. Thus, CAT system can serve a number of functions. It is fundamentally a tool for describing the comparability of learning achieved in terms of its volume and intellectual demand. It can also help Higher Education providers to design modules/programmes in different disciplines and contexts, which are similar in volume and intellectual demand. Furthermore, it also provides a basis for recognizing learning achieved in other institutions or elsewhere and give information about the amount of learning and academic demands of that learning.

The RUFORUM acknowledges that within its network, only a few universities incorporate Credit Transfer Systems for post Graduate Studies within their programmes or individual countries. Certainly, there was no established regional harmonized such system for postgraduate training in especially the agricultural sciences. This view also emerged from the scoping studies where even within the same country there was lack of uniformity among the universities in terms of standards. In this regard RUFORUM QA/CAT system handbook will hopefully serve to harmonize Credit transfer guidelines and their implementation in the ECSA region.

The Purpose and Benefits of Credit Accumulation and Transfer Systems (CATS)

Credit Accumulation and Transfer System will assist in the following areas:

- Acknowledge, codify and provide clarity about the relative demand and level of diverse Higher Education and professional development qualifications;
- Provide a 'route map' showing progression routes to enable students to navigate personal learning pathways more easily;
- Facilitate the accreditation of small amounts of measurable learning which can build confidence and encourage further learning;
- Enable students to interrupt their studies and/or transfer more easily between and within institutions, while maintaining a verified record of achievements (credit transcript) to date;
- Provide a common language supporting curriculum development within and between the universities and other Higher Education Institutions;
- Support the achievement of consistent student workloads across programmes within different disciplines;
- Encourage and facilitate partnerships between the universities and other higher education institutions;
- Facilitate students' entry to an international education arena where national credit has similar weightings internationally; and
- Provide a framework that can be recognized as a passport to students' mobility.

RUFORUM CATS Principles

The proposed Credits Accumulation and Transfer Systems (CATS) by RUFORUM are based on the principles that:

1. **Learning outcomes:** will be described as sets of competences, expressing what the student will know, understand or be able to do after completion of a process of learning, long or short period.
2. **Definition of Credits:** Credits will be allocated to all educational components of the study programme (such as modules, courses, placements, research, dissertation work, etc.) and will reflect the quantity of work each component requires in relation to the total quantity of work necessary to complete a full year of study in the programme considered.

Credit Hours

The PhD candidate requires a minimum of 45 credit hours and not more than 60 per year/programme. This means that the candidate might spend all year attending to course work and allow the other years to be dedicated to quality research and development of well written dissertation/theses.

3. **Total credits:** Each PhD programme provides a measure of the workload of a full-time student during one academic year. It is proposed that each student should undertake a minimum of 45 credits for course work per year. Each credit shall be equivalent to about 15 contact hrs for course work and 30 to 45 hrs for tutorials and practical respectively or its equivalents. The corresponding total credit hours for MSc study should not be more than 30 per year/programme.
4. **Qualification for Credits transfer:** Credit transfer can only be obtained after completion of the work required and appropriate assessment of the learning outcomes achieved. There shall be no credit transfer for incomplete work on a prescribed programme.
5. **Transferable credits:** Only a maximum of 40% of the credits earned in one institution may be transferred to the next institution. The candidate is expected to obtain at least 60-% of the credits for the degree in the institution to where the candidate has transferred

Harmonized Grade Point Average System for ECSA region

Currently the various universities in ECSA operate diverse grading system, suited to each university historical set-up. To help in comparability and transfer of grades across the region, and for comparability with grading systems, the ECSA universities will work towards a common grading system based on the Grade Point Average (GPA) System outlined below. The common grading will be based on letter classification, but the mark range under each letter grade will be defined by each University. However, under the ECSA system, the pass mark will be a 'C' which will be equivalent to 'B' such as used in North American system. Details of the proposed ECSA GPA classification are outlined in the Table below.

Table ...: Proposed Grade Point System for the ECSA region

Marks	Letter grade	Grade point	Interpretation
90-100	A+	5	Exceptional
80-89	A	5	Excellent
75-79	B+	4.5	Very good
70-74	B	4	Good
65-69	C +	3.5	Fairly good

60-64	C	3	Pass
55-59	D+	2.5	Marginal fail
50-54	D	2	Clear fail
45-49	E	1.5	Bad fail
40-45	E-	1	Qualified fail
Below 40	F	0	Qualified fail

In this grading system all the decimal points on marks awarded by examiners have been eliminated. The departmental examiners committee should, therefore, ensure that marks are rounded up to the nearest whole number.

Grading descriptions

The examiners should be guided by the following grading descriptions;

- i) A+ Exceptional: thorough knowledge of concepts and/or techniques and exceptional skill or great originality in the use of concepts/techniques in satisfying the requirements of an assignment.
- ii) A excellent: thorough knowledge of concepts and/or techniques together with a high degree of skill and /or some elements of originality in satisfying the requirement of an assignment/course.
- iii) B+ Very good: thorough knowledge of concepts and/or techniques together with a fairly high degree of skill in the use of those concepts/techniques in satisfying the requirement of an assignment/course.
- iv) B Good: Good level knowledge of concepts and /or techniques together with considerable skill in using them to satisfy the requirement of an assignment or course.
- v) C+ Fairly good: acceptable level of knowledge or concepts and/or techniques together with considerable skill in using them to satisfy the requirements of an assignment or course.
- vi) C Pass: slightly better than minimum knowledge of the concepts /or techniques together with some ability to use them using them to satisfy the requirements of an assignment or course. The student has some basic knowledge and a limited understanding of the key aspects of the subject area and can attempt to solve familiar problems albeit inefficiently and with limited success.
- vii) D+ Marginal fail: minimum knowledge of the concepts /or techniques together with some ability to use them using them to satisfy the requirements of an assignment or course. Suggest that the student;
-Has familiarity with the general subject area;
While unable to solve problems; can at least formulate a problem from information given in a sensible way.
- viii) D: Clear fail: poor knowledge of concepts /or techniques together with some ability to use them using them to satisfy the requirements of an assignment or course.
- ix) E,F and E: bad qualified fail: lack of understanding of knowledge of concepts or techniques

Calculation of Cumulative Grade point Average (CGPA)

The cumulative grade point average at a given time shall be given by:

- Multiplying the grade point obtained in each course by the credit units assigned to the course to arrive at the weighted score for the course.
- Adding together the weighted scores for all the courses taken up to that time.
- Dividing the total weighted score by the total number of credit units taken up to that time.

Chapter Five: Benchmarking

Development of Programme Benchmarks

The demand for quality of comparable university education has necessitated the establishment of an environment of harmonized standards within the East African region. It is with this consideration that the RUFORUM as a regional institution operating in the Eastern, Central and Southern Africa (ECSA) region aspires to develop benchmarking standards for agricultural postgraduate programmes offered in the sub-region. Benchmark is seen as a means to provide guidance to instructors; identify and overcome barriers to effective teaching/research; facilitate collaboration with and among member countries; facilitate mobility of students and staff while enhancing student learning, retention and program completion.

Agriculture related courses and Business Studies programs, having been depicted as the most popular and diverse programmes within the region were given foremost consideration in the benchmarking endeavours in the ECSA region. This need was further qualified by the results of a survey on these programmes that revealed that there was vagueness of programme objectives; confusion in the formulation of expected learning outcomes; differences in the organisation of the programmes into content areas of general, foundational, basic core, specialization and internship/final essay courses; variations in content in terms of intensity, number of courses and duration of the programs in the region; and varying regulations in the offering of internship, research project work and/or final thesis as part of the programs.

Importance of Benchmarking in Quality Assurance

Purpose of bench marking

This defines the evolution path for the programmes (setting, maintaining minimum standards, growth and progression of the programmes) it also provides background information on the programme. The process is used to clearly articulate the following.

- How good are we?
- How good can we be?
- Who else is doing better than us and what makes them perform better?
- How do we get better?

Some of the objectives of benchmarking will include among others:

- To measure and promote excellence in university functionality and management;
- To identify and promote best practices;
- To share ideas;
- To increase awareness of alternative approaches;
- To benefit from national, regional and international base of experience and innovation;
- To learn from others what works and what does not work and in what circumstances; and
- To compare for improvement on quality assurance activities.

The intention is not to merely copy best practices, but to adopt them to some of the university practices/programmes and re-apply some of the operational principles that stem from them.

Internal Benchmarking

The first step to start a self-assessment process is to get the commitment from the University management team and especially from the Chancellor and Vice-Chancellor. Thereafter the

university needs to identify which service unit will have to participate in the assessment; this could be done based on a strategic analysis of the university priorities or on voluntary bases for the service to participate.

This approach is used to learn lessons from within each university by comparing between different sections of the same institution (e.g. faculties, departments, programmes, campuses). It is up to the universities to look at their own institution and benchmark with the identified successful faculty/department/programme.

External Collaborative Benchmarking

This approach dwells on comparisons that are made among participating RUFORUM universities in the same sector (inter-institutional - not for immediate competitors). This will be more important where the programmes are being offered by two ECSA universities as well as collaborating institution from Europe and other continents. It is recommended therefore that such institutions check on the possibilities of this external collaborative benchmarking in order to have programmes that are internationally recognized.

External competitive benchmarking

Here the comparisons should be made with competitors (e.g. faculty in another institution). This is very important in light of the wish for the programmes to be recognized internationally. It is the wish of RUFORUM that the ECSA universities should strive to have programmes that are more attractive to students from other countries and regions in the world.

Implicit benchmarking

This is going to be utilized **where** the knowledge and practices generated by other sectors of ECSA region do influence the actions of university and other relevant institutional decision makers. This might take a few years to implement but it is worth noting its existence and a possibility of using it in future.

Entry Standards for Graduate Courses

The minimum grade should be agreed as a B (60%) or GPA of 3.00 and above at undergraduate degree for entry into an MSc programme and a relevant MSc for the PhD postgraduate programme. It is assumed that the undergraduate programmes the applicants were exposed to had undergone some degree of harmonization of grading system.

Qualifications of Academic Staff

This requires a competence at preferably Senior Lecturers, Associate Professors and Professors grade but lecturers without PhDs in the relevant/specialized (e.g. Medicine, Engineering etc) needed areas may be considered in some supporting courses.

Class Size and Postgraduate Student Supervision

The class size at postgraduate level should have a maximum of 20 postgraduate students. For effective supervision, a staff member is recommended to have maximum number of 5 MSc and 3 PhD students. This will ensure that the staff member is not overwhelmed by the increased number of students. It also gives the students enough time to meet and discuss with their

supervisors. This will also ensure that students have enough time to undertake quality research for development (R4D) with the help of the supervisors.

Infrastructure

Well equipped laboratories with modern facilities/equipment will be required for the MSc and PhD programmes. The lecture rooms should hold a maximum number of 20 students. The RUFORUM PhD programmes require strong research orientation and this require good facilities and equipment in the laboratories and the fields.

Information and Communication Technology

RUFORUM recommends that the ECSA universities should have adequate internet connectivity and associated equipment for the students to access relevant information during their studies. The participating RUFORUM universities and others in the ECSA should take advantage of the fibre optic cable which is currently laid very close to these institutions. Reasonably cheap connectivity that has recently come to the region to connect with GEANT, EASY etc that are used for academic and research purposes in Europe, USA and Australia is recommended.

ICT will also help ease the access to the information on the following key areas to the QA/QM:

Credit Hours

The PhD candidate requires a minimum of 45 credit hours and not more than 60 per year/programme. This means that the candidate might spend all year attending to course work and allow the other years to be dedicated to quality research and development of well written dissertation/theses. RUFORUM also recommends that a PhD graduate student in ECSA universities should publish at least two papers in refereed journal before graduating.

On the other hand, MSc candidates require a minimum of 30 credit hours and not more than 45 credit hours per year/programme.

Credit Transfer

Only up to 40% of the credits earned in one institution may be transferred to the next institution. The candidate is expected to obtain at least 70% of the credits for the degree in the institution to where the candidate has transferred.

Thesis/Dissertation

This is a mandatory requirement for a PhD programme. The candidate is expected to carry out research and write-up the findings. This will later be defended at an arranged gathering. The university will set rules and regulations for the thesis/dissertation. However, the rules and regulations will be harmonised using agreed upon RUFORUM guidelines.

Information sharing, mentorship and team building among staff and the graduate students

Internet should be well developed in the participating RUFORUM universities and in addition, these institutions should have well organised seminars and tutorial groups.

Learning, Teaching and Assessment Strategy that are well established

Curriculum and Courses will be reviewed every 4-5 years. Peer review mechanism involving a team of experts in the field of study, relevant stakeholders such as employers or professional bodies and alumni should be used as part of the process of programme review.

Every course and programme should be regularly evaluated through student Feedback, Course/programme and class monitoring evaluation questionnaires.

External Examiners Reports and Reviews

RUFORUM recommends that external examiners be invited annually for postgraduate programmes. The external examiners are encouraged to meet academic staff and share the reports with a view to improving the quality of post graduate training and research.

Institutions are encouraged to develop mechanisms for External Evaluation and certification standards for International recognition.

The external reports should be shared widely as recommended by RUFORUM (VC; Principals; Deans; HOD; QA Coordinator; Directors of Graduate Schools; staff and students).

Pedagogical Courses

Pedagogical short courses should be conducted for academic staff periodically, annually or as need arise. This will improve the quality of the delivery of teaching for the academic staff.

Research policy for the postgraduate courses

Each university is encouraged to develop and implement uniform research policy in the ECSA region. Implementation of the policy should be through both the Directorates of QA office, and postgraduate school to ensure compliance and harmony with the institutional and regional requirements.

Publishing in national/regional/ international recognized journals

At least one paper should be published in an international journal by a PhD student before graduation. Alternatively, there should be two papers published in at least a national/regional refereed journal(s) by each PhD student before graduation. The above listed benchmarks should be continually evaluated for their conformity to Quality management standards. Evaluations ensure conformity and continued improvement in Quality Management which includes ensuring sustainable structures that allows for:

- Verifying that procedures for achievement of educational objectives are fully implemented.
- Verifying that quality management system requirements have been achieved.
- Verifying that sufficient resources have been provided to achieve quality objectives.
- Verification of achievement of quality records as stated in the quality management system.
- Verification of the activities of the organization personnel that affect quality.

Improvement Action should be undertaken continuously, especially after audit reports on conformities and non conformities. Undertaking improvement plans ensures probability of enhancing satisfaction of customers and other interested parties. The execution of preventive action serves in eliminating the cause of potential non-conformity and other potentially undesirable situations. It also ensures the improvement of quality management system processes by reviewing the quality policy, objectives and standard while adding value to products; services to customers and setting-up subsequent higher organizational targets.

Chapter Six: Implementation Strategy

Implementation of RUFORUM QAMS and CATS Systems

RUFORUM Secretariat in Kampala Uganda will host and coordinate the implementation of the QAM/CATS system in the participating ECSA universities. A Steering Committee (SC) with membership from participating RUFORUM universities will guide the implementation processes. A rigorous Participatory Monitoring and Evaluation (PM&E) Framework will be inbuilt and mainstreamed to guide the implementation processes as well as comprehensive evaluation of the QAM/CAT systems.

The critical auxiliary problems likely to arise during the implementation phase might include issues related to training such as quality assurance mechanisms, credit accumulation and transfer systems, resource mobilization, reduced funding for quality research and training activities, competitiveness of the graduate training programmes and the need for new teaching delivery including management methods that emphasise facilitation, mentoring and team building. To achieve the main objective of the QAM/CAT system, the following activities are recommended to be undertaken for the successful implementation in the ECSA region:

1. **Planning Meeting for Implementation (PMI):** The meeting shall be held to refine implementation strategy. This will involve a face to face meeting and e-conferencing of the partners, associates and other key stakeholders to agree on partnership arrangements and roles, target beneficiaries, knowledge management framework, target communication audience, target milestones with indicators and potential synergies with other similar initiatives. The outputs of the PMI meeting should be refined. The implementation plan, institutionalization of the Steering Committee (SC) to oversee implementation and an initial inventory of opportunities, threats/weaknesses and gaps through ECSA regional scoping studies. Measures to deal with potential risks and conflicts shall be identified, discussed and agreed upon. Consultations with key stakeholders such as relevant Government Ministries, NGOs, private sector, civil societies and policy makers especially in fields of Agriculture and related Science and Technology should be initiated to garner support and buy in.
2. **Mobilization of the Qualified Staff:** This activity shall involve mobilizing qualified staff who will handle the various aspects of QAM/CATS in the ECSA region. Deliberate effort will be made to partner and build synergy with national regulatory bodies and regional agencies especially IUCEA, HEQMISA and AAU as needed. In this regard there will be need to lesson share with other regions which have well established systems.
3. **Harnessing Global Partnerships.** RUFORUM will use its networking function to broker partnerships among ECSA universities and with especially AGRINATURA universities in Europe and others such as American Public Land Grant Universities. These partnerships are important for back-stopping the high quality PhD training programmes envisaged in the ECSA Universities, for lesson sharing, maintaining quality standards in research and training and ensuring sustainability of the ongoing system.

4. ***Regional Learning Platforms.*** The AAU, IUCEA and HEQMISA regional Quality assurance institutions should be used to provide adequate platform or forum for lesson learning, sharing experiences from the RUFORUM QA/CAT system activities with other similar initiatives, to bring wholesome and up-scaling of lessons learnt for the benefit of the wider universities in the ECSA region.

CHAPTER Seven: Progress in Implementation of the RUFORUM QAT/CAT Systems

The implementation of the RUFORUM QAM/CAT system has already resulted in the enhancement of capacity to integrate quality processes into a broader perspective of quality management and development through assessment of the performance of the ECSA universities. As a result, the Universities have initiated processes to perform continuous assessments and monitoring of their performance, with regard to their services offered, programmes and products.

The RUFORUM QAM/CAT system has benefited the universities through recognition by senior management staff of the participating ECSA Universities. The involvement of the top-level management staff in project activities, in particular through their participation in QA trainings and workshops has resulted in the strengthening of their managerial capacity. Hopefully, these efforts will enhance embedding quality processes at all levels within the universities. However, further internal consultations at each university to clarify responsibilities and develop transparent frameworks for implementation and follow up of internally organized quality assurance reviews, setting directions for change, communication of the strategy to staff members, students and external stakeholders is still needed. Already, the QAM/CAT system has enhanced the senior leadership's interest, role and capacities in the monitoring and integration of quality and monitoring results, embracing credit accumulation and transfer system in the decision-making process and the overall development of university wide QAM/CATS. There is visible evidence in some Universities (Egerton, Kenyatta University, Makerere University and University of Nairobi) systems which have established and are strengthening Directorates of QA in their institutions.

As part of QAM/CATS design process, targeted training was provided to various levels of managers of QA Directorates and other University managers such as Deans and Principals. In this way, the technical, managerial and administrative capacity of the staff and in particular of the QA-directorates has been enhanced. In addition, assessment of the implementation of the QAM/CATS has been piloted for four regional postgraduate programmes (MSc Plant Breeding and Seed Systems and PhD Plant Breeding and Biotechnology, both at Makerere University; MSc in Agricultural Information and Communication Management at Egerton University; and PhD in Dryland Resource Management at the University of Nairobi. Additionally, the two regional academic programmes at Makerere University have gone through rigorous accreditation processes and have been officially accredited by the Uganda Council for Higher Education. The two programmes will be externally evaluated after five years (during the 2014/2015 academic period).

Direct participation of the representatives of the IUCEA and HEQMISA in development of this Handbook and development of the activities for the implementation of quality assurance mechanisms culture within Eastern Central and Southern African universities ensures that they can act as dissemination platforms and generate further awareness of good practices for quality culture and self-assessment mechanisms for the ECSA region and beyond. In this context, further beneficiaries such as the Ministries of Education and country National Commissions for Higher Education (CHEs) can benefit using the RUFORUM QAM/CAT system experience as a pilot action for the promoting quality culture within their universities thereby producing the much

needed well trained manpower to help address the AU NEPAD, FARA-SCARDA and CAADP initiatives. In addition, from the proposed harmonized approaches, these ministries and the CHEs may identify and use quality indicators as reliable information to determine the quality of the Universities, their programmes and products stemming from the self-assessments.

Finally, the setting up of a Credit Accumulation and Transfer System (CATS) will make it possible for inter-university and cross border mobility of students within the ECSA universities. This is a situation where credits earned at one university will be recognized by other universities nationally, regionally and internationally. This will also create room for breaking away from the rigid time schedules of university programmes of study by allowing students to accumulate credits over longer periods. This augers well with mature/adult learners who may want to learn and at the same time keep their part time/full time jobs. Such a student may even choose to learn under different delivery modes during different stages of the academic career. This will also help in eliminating duplication of learning and effort, which not only demoralizes learners but also, waste resources and time. In the long run this will also help in synchronizing the term or semester dates in the ECSA universities for ease of collaboration and management of the CAT system.

Recommendations

For sustainability of quality culture, the following are recommended:

- RUFORUM, IUCEA and HEQMISA should regularly conduct trainings/short workshops on QA culture for the Vice Chancellors and other University managers of the participating ECSA universities to create awareness and help to institutionalize the QAMS/CATS culture in those institutions. As much possible, representatives of CHEs should participate in such workshops/meetings.
- The ECSA Universities should lobby for political support of the QA systems policies. The handbook has included the formulation/adoption of self-audit guidelines in all the participating ECSA universities.
- In view of the lack of QA regulatory bodies such as Commissions for Higher Education in some of the ECSA countries, it is recommended that RUFORUM Secretariat and the Regional Quality Assurance institutions namely the IUCEA and HEQMISA lobby and assists those countries to establish QA regulatory bodies such as the Commissions of Higher Education .
- The establishment of internal and external benchmarking was generally absent in most ECSA universities. It is important that these mechanisms be established so as to propel these universities to seek excellence in their performance.
- The RUFORUM identified inadequate resource allocation for the QA Directorates and activities where they existed in the participating ECSA universities. In addition, some of the universities lacked Directorates of QA. Therefore, participating Universities should work towards e establishing QA Directorates and lobby for adequate funding of these units.
- External review (peer review) is missing in the majority of ECSA. In this era of global competitiveness, it is important for ESCA universities to have regular external reviews beyond those of Visitation Committees.

- The ECSA Universities should regularly conduct tracer studies of their graduates, and keep in close contact with their alumni, and engage alumni in all QA activities and impact assessments to help in maintaining quality work.

Annexes

Appendix 1: LIST OF ACRONYMS

AAU	Association of African Universities
ACP	African, Caribbean and Pacific
AfriQAN	African Quality Assurance Network
AU	African Union
AUC	African Union Commission
CAADP	Comprehensive Africa Agricultural Development Programme
CAT	Complimento al Titolo (Compliment to the Title)
CATS	Credit Accumulation and Transfer Systems
CGS	Competitive Grant System
CHE	Commission for Higher Education
DVC	Deputy Vice Chancellor
ECSA	Eastern Central Southern African
ECTS	European Credit Transfer Systems
EU	European Union
FARA	Forum for Agricultural Research in Africa
GPA	Grade Point Average
HEI	Higher Education Institution
HEQMISA	Higher Education Quality Management Initiative for Southern Africa
ICT	Information Computing and Technology
IQA	Internal Quality Assurance
ISO	International Organization for Standardization
IUCEA	Inter-University Council for East Africa
MoU	Memoranda of Understanding
NEPAD	New Partnership for African Development
NGO	Non Governmental Organization
PDAC	Plan, Do Check, Act
PM&E	Participatory Monitoring and Evaluation
PMI	Planning Meeting for Implementation
QA	Quality Assurance
QAM	Quality Assurance Mechanisms
QAMS	Quality Assurance Management systems
QAR	Quality Assurance in Research
QM	Quality Measurement
R4D	Research for Development
REC	Regional Economic Communities
RIACES	Ibero-American Network for Quality Assurance and Accreditation of Higher Education
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SAR	Self Assessment Report
SC	Steering Committee
SCARDA	Strengthening Capacity for Agricultural Research and Development in Africa
SICA	Sistema de Creditos Academicos (System for Academic Credits)
SSA	Sub Saharan Africa

SWOT	Strengths, Weaknesses/Limitations, Opportunities, and Threats
UCTS	University Mobility in Asia and the Pacific Credit Transfer Scheme
UEALC	European Union and Latin America and the Caribbean Common Space for Higher Education
UMAP	University Mobility in Asia and the Pacific
VC	Vice Chancellor

Annex 2: Glossary of Terms

ACADEMIC INFRASTRUCTURE: Academic infrastructure is the name given to the array of quality-related processes and practices in the United Kingdom

ACADEMIC RECOGNITION: Academic recognition is a set of procedures and processes for the acknowledgement and acceptance (subject to conditions), between institutions and countries, of higher education qualifications.

ACADEMIC YEAR: The academic year is:

1. The duration of a specific Programme of study (which may not last a complete 12 months and is divided into terms, semesters or quarters).
2. The start and finish dates of the annual cycle of a university or national higher education system.

ACCREDITATION: Accreditation is the establishment of the status, legitimacy or appropriateness of an institution, program or module of study.

ACCREDITATION BODY: An accreditation body is an organization delegated to make decisions, on behalf of the higher education sector, about the status, legitimacy or appropriateness of an institution, or programme.

ALUMNUS: An alumnus (plural alumni) is a graduate of an institution.

ASSESSMENT OF STUDENT LEARNING: Assessment of student learning is the process of evaluating the extent to which participants in education have developed their knowledge, understanding and abilities.

ASSESSMENT OF TEACHING AND LEARNING: Assessment of teaching and learning is the process of evaluating the quality and appropriateness of the learning process, including teacher performance and pedagogic approach.

ASSURANCE: Assurance of quality in higher education is a process of establishing stakeholder confidence and provision (input, process and outcomes) fulfils expectations or measures up to threshold minimum requirements.

AUDIT: Audit, in the context of quality in higher education, is a process for checking that procedures are in place to assure quality, integrity or standards of provision and outcomes.

BENCHMARK: A benchmark is a point of reference against which something may be measured.

BENCHMARK STATEMENT: A benchmark statement, in higher education, provides a reference point against which outcomes can be measured and refers to a particular specification of program characteristics and indicative standards.

BENCHMARKING: Benchmarking is a process that enables comparison of inputs, processes or outputs between institutions (or parts of institutions) or within a single institution over time.

BEST PRACTICE: Best practice refers to effective, ideal or paradigmatic practice within an organization that others would benefit from adopting or adapting.

BOLOGNA PROCESS: The bologna process is an ongoing process of integration and harmonization of higher education systems within Europe.

CERTIFICATION: Certification is the process of formally acknowledging achievement or compliance: it can be used to signify the achievement of an individual, such as a student, or an institution.

CLASSIFICATION: Classification is the process of identifying types of institutions based on their core functions or economic status.

CREDIT: Recognition of a unit of learning, usually measured in hours of study or achievement of threshold standard or both.

CREDIT ACCUMULATION: Credit accumulation is the process of collecting credit for learning towards a qualification.

CREDIT TRANSFER: Credit transfer is the ability to transport credits (for learning) from one setting to another.

CRITERIA: Criteria are the specification of elements against which a judgment is made.

CRITERIA-REFERENCED ASSESSMENT: Criteria-referenced assessment is the process of evaluating (and grading) the learning of students against a set of pre-specified criteria.

EUROPEAN CREDIT TRANSFER SYSTEM (ECTS): ECTS is a system for recognizing credit for learning and facilitating the movement of the recognized credits between institutions and across national borders.

EXTRENAL EVALUATION: External evaluation is:

1. a generic term for most forms of quality review, enquiry or exploration
2. a process that uses people external to the program or institution to evaluate quality or standards

EXTERNAL EVALUATION TEAM: External evaluation team is a group of people, including persons external to the program or institution being reviewed, who undertake the quality evaluation.

FITNESS OF PURPOSE: Fitness of purpose evaluates whether the quality-related intentions of an organization are adequate.

FITNESS FOR PURPOSE: Fitness for purpose equates quality with the fulfilment of a specification or stated outcomes.

HIGHER DEGREE: A higher degree is an award beyond the basic-level higher education qualification.

IMPACT: Impact in the context of quality in higher education refers to consequences that the establishment of quality processes (both external and internal) has on the culture, policy, organizational framework, documentation, infrastructure, learning and teaching practices, assessment/grading of students, learning outcomes, student experience, student support, resources, learning and research environment, research outcomes and community involvement of an institution or department.

INSTITUTIONAL ACCREDITATION: Institutional accreditation provides a license for a university or college to operate.

INTERNAL EVALUATION: Internal evaluation is a process of quality review undertaken within an institution for its own ends (with or without involvement of external peers).

INTERNAL INSTITUTIONAL AUDIT: Internal institutional audit is a process that institutions undertake for themselves to check that they have procedures in place to assure quality, integrity or standard of provisions and outcomes across the institution.

INTERNAL SUB-INSTITUTIONAL AUDIT: Internal sub-institutional audit is a process that an institution has for checking that procedures are in place to assure quality, integrity or standards of provision and outcomes within a department, faculty or other operational unit or that specific issues are being compiled with across the institution.

INTERNAL QUALITY MONITORING: Internal quality monitoring (IQM) is a generic term that refers to procedures within institution to review, evaluate, assess, audit or otherwise check, examine or ensure that quality of the education provided and/or research undertaken.

MANAGEMENT AUDIT: Management audit, in higher education, is a process for checking that management structures and abilities are appropriate for assuring quality, integrity or standards of provision and outcomes.

MONITORING: Monitoring has two meanings:

1. the process of keeping quality activities under review;
2. a generic term covering all forms of internal and external quality assurance and improvement processes including audit, assessment, accreditation and external examination.

MUTUAL RECOGNITION: Agreement between two organizations to recognize each other's processes or programs.

PEER REVIEW: Peer review is the process of evaluating the provision, work process, or output of an individual or collective who is operating in the same milieu as the reviewers.

PERFORMANCE INDICATORS: Performance indicators are data, usually in quantitative form, that provide a measure of some aspect of an individual's or organization's performance against which changes in performance or the performance of others can be compared.

PERFORMANCE AUDIT: Performance audit is a check on the competence of someone to undertake a task.

PROGRAM ACCREDITATION: Program accreditation establishes the academic standing of the program or the ability of the program to produce graduates with professional competence to practice.

REGIONAL ACCREDITATION: Regional accreditation is recognition of an institution within a regional context: it is much the same as national accreditation but is not restricted to national boundaries.

REGULATORY BODY: A regulatory body, in the context of higher education, is an external organization that has been empowered by legislation to oversee and control the educational process and outputs germane to it.

RESEARCH ASSESSMENT EXERCISE (RAE): The RAE is a process, in the UK and Hong Kong that assesses the quality of research to enable the higher education funding bodies to distribute public funds on the basis of research quality ratings.

REVIEW:

1. Review is a generic term for any process that explores the quality of higher education.
2. Review refers to explorations of quality that do not result in judgments or decisions.

Review team: The review team is the group of people undertaking a quality monitoring or evaluation process.

Annex 3: Guideline for Quality Assurance Case Studies



GUIDELINES TO CASE STUDIES ON QUALITY ASSURANCE

Background

Globally, reviews of quality initiatives in higher education are becoming a regular part of academic life throughout the western world. In Africa, it is pertinent for higher education institutions to improve performance of graduate and research programmes in line with national, continental and global standards and benchmarks. The Regional Universities Forum for capacity Building in Agriculture (RUFORUM) (<http://www.ruforum.org>) has agreed consultatively designed a Quality Assurance Mechanism (QAM) and Credit Accumulation and Transfer System (CATS) to facilitate the coordination of quality graduate programmes and research in agriculture among its member universities. The QAM/CATS guidelines are contained in a manual (<http://www.ruforum.org/resources/qualityassurance/qamcatshandbook.pdf>)

The world wide phenomenon to address issues of quality assurance has been evident in the higher education systems in Africa with concerted efforts by governments, universities and university networks during the past ten years to set standards and facilitate implementation and learning. International comparisons of institutions, the utilisation of ISO standards, the interest in cross-institutional and cross-national analyses are examples of such interest. In line with these RUFORUM is working very closely with more experienced regional quality assurance organizations Inter-University Council of East Africa (IUCEA) and the Higher Education Quality Management Institute of Southern Africa (HEQMISA) to further the practice and improvement of quality assurance procedures in its member university. This is in support of on-going postgraduate training and research programmes.

Member universities through their respective institutional arrangements and graduate schools, an in line with their national commissions or councils of higher education, implement the procedures to ensure comparability and adherence to standards. RUFORUM, as part of the quality assurance requirements, encourages learning and sharing of good practices, lessons and challenges in the implementation of the recommendations in the guidelines. In carrying out a case study of QAM, RUFORUM and its member universities use flexible and context based approaches to document the purpose, methods, intended outcomes and impacts of quality assurance practices

This guide is aimed at providing a template for use by member universities and other partners in documenting cases of quality assurance initiatives in member universities with regard to post graduate level training and research in agriculture and related sciences.

Objective of Cases Studies

The objective of submitting the QA case studies to document and share innovative approaches, practices, achievements and lessons from on-going and completed initiatives in QA in RUFORUM member universities. The case may include policies and institutional structures, methods and tools, challenges and interventions addressing specific quality assurance concerns, application of QAM in specific programmes and processes.

Template for Case Study

A.	Profile of the initiative you wish to do a case study on	Number of words
a)	Title of the initiative	As required
b)	Name(s) of University	As required
c)	Initiative Timeframe (if completed when it began and ended; if ongoing, whether a program or when it began and when will it end)	As required
d)	Scale of the initiative: a) Departmental level, b) faculty/division level, c) disciplinary level, or d) post graduate/undergraduate Level of the initiative: a) institutional b) national, c) regional (e.g., between two or more adjoining countries), d) regional, or e) international	As required
e)	Other partners involved in the initiative?	As required
B.	Case study (Good Practices)	Number of words (indicative only)
1	Background: Any relevant information and institutional context that gives rationale and background to will help the reader understand the context of the QA intervention	About 500 words
2.	Problem(s)/issue (s)/challenge(s) to be addressed?	About 350 words
3.	Actions (or approach) taken to address the QA problem(s)/issue(s) /challenges outlined in 2 above? Specific QA processes, procedures, tools, frameworks, approaches used	About 250 words
4.	How did (has) the QA approach addressed the problems/issues/challenges outlined in 2? State the outcomes/impacts, supported by qualitative or quantitative data wherever possible. How the QA approach was implemented to address to address the problem	About 500 words
5.	If there is one thing/idea that has emerged from this initiative, something that has actually worked, something that can be replicated or up-scaled, what would that be? (This would be something like a good practice.)	About 350 words
6.	Lessons learned (in bullet points) . Successes of intervention and how to assure them .Challenges of intervention and how to circumvent them	About 200 words
7	Next Steps (bullets) Acknowledgements: including donor support	
7.	References Project URL and other Online resources on the initiative (URLs, etc) and/or references	About 150 words
8.	Name of the organisation and/or person who can furnish more information on this initiative, including contact email address(es)	As required

Annex 4: Assessment Tool for Piloting Quality Assurance Measures in Postgraduate Programmes

Name of University:

Department:

Programme Assessed: e.g. PhD Plant Breeding and Biotechnology

PART A: Assessment of Academic Programme

This assessment process closely follows the guidelines set by AfriQ'Units¹ and the Inter-University Council for East Africa (IUCEA)² with modifications in the assessment of academic programmes as detailed in the table 1 below. Each criterion will be evaluated and graded as follows:

Each criterion will be evaluated and graded as follows: A, excellent; B, good; C, average; D, deficient; and E, insufficient evidence or the existence of some proposal but without this having been initiated. The information will be used in writing the assessment report and to provide the final recommendations.

Table 1: Assessment of M.Sc./PhD Programmes

CRITERION OF ASSESSMENT	GRADE					Observations
	A	B	C	D	E	
1. REQUIREMENTS OF STAKEHOLDERS. The Faculty/Department has a clear idea						
• about the relevant needs and requirements of the government						
• about the relevant needs of the labour market						
• about the relevant needs and requirements of the students/parents						
• about the relevant needs and requirements of the academic world						
• about the relevant needs and requirements of the society						
Overall opinion						

¹Guide for the Promotion of the Quality Culture in East African Universities AfriQ'Units – *Sustainable Quality Culture and Capacity Building in Internal Quality Assurance in East African Universities*. Project financed by the European Commission and implemented by the ACP – EU Cooperation Programme in Higher Education Grant Contract identification number 9-ACP-RPR-12 # 25.

²Inter-University Council for East Africa- Roadmap to Quality

2 AIMS OF THE EDUCATIONAL PROGRAMME						
<ul style="list-style-type: none"> The aims of the educational programme are defined and include knowledge and skills that the students should have when they finish their studies 						
3.EXPECTED LEARNING OUTCOMES						
<ul style="list-style-type: none"> The program has clearly formulated learning outcomes 						
<ul style="list-style-type: none"> The program promotes learning to learn and life-long learning. 						
<ul style="list-style-type: none"> The expected learning outcomes cover generic skills and knowledge as well as specific skills and knowledge 						
<ul style="list-style-type: none"> The expected learning outcomes clearly reflect the requirements of the stakeholders 						
Overall opinion						
4. PROGRAM SPECIFICATION						
<ul style="list-style-type: none"> The educational programme specifies the admission profile that students must fulfill 						
<ul style="list-style-type: none"> Has mechanisms in place that make it possible to know the admission profile of the new students 						
<ul style="list-style-type: none"> The university uses program specifications/program description 						
<ul style="list-style-type: none"> The program specification shows the expected learning outcomes 						
<ul style="list-style-type: none"> The program specification is informative for the stakeholders 						
Overall Opinion						
5. PROGRAM CONTENT						
<ul style="list-style-type: none"> The program content shows a good balance between general and specific skills and knowledge 						
<ul style="list-style-type: none"> The program reflects the vision and mission of the university 						
<ul style="list-style-type: none"> The expected learning outcomes have been adequately translated into the program. 						
<ul style="list-style-type: none"> The contribution made by each course to achieving the learning outcomes is clear. 						
Overall Opinion						
6.THE ORGRANISATION OF THE PROGRAM						
<ul style="list-style-type: none"> The curriculum is coherent and all subjects and courses have been integrated-The 						

curriculum shows breadth and depth						
<ul style="list-style-type: none"> The curriculum clearly shows the basic courses, intermediate courses, specialist courses and the final project (thesis, etc.) activities 						
<ul style="list-style-type: none"> The educational programme is communicated and published 						
<ul style="list-style-type: none"> The organization of the teaching fits in with the aims of the educational programme 						
<ul style="list-style-type: none"> The results of the educational programme, the graduate results, the academic staff results and the results in society are taken into account in the improvement and review of the educational programme 						
<ul style="list-style-type: none"> The curriculum is up-to-date 						
7 EDUCATIONAL PROCESS						
<ul style="list-style-type: none"> Student Assistance and Integral Training during delivery 						
<ul style="list-style-type: none"> Student Capture is in line with the admission profile 						
<ul style="list-style-type: none"> Student welcome actions orientate them to the functioning and organization of everything related to the educational programme 						
<ul style="list-style-type: none"> Support programmes are developed that are orientated towards improvement in student learning 						
<ul style="list-style-type: none"> The student professional orientation programmes facilitate graduate insertion into the labour market 						
<ul style="list-style-type: none"> The tutorial action programme orientates and motivates the student in matters related to the educational programme and the organization of their curricular itinerary 						
<ul style="list-style-type: none"> Activities for the integral training of the student are consistent with aims of the educational programme and help it to achieve its aim 						
<ul style="list-style-type: none"> The methods and techniques used in the teaching-learning process allow the aims of the educational programme to be achieved 						
<ul style="list-style-type: none"> The learning evaluation process is consistent with the aims of the educational programme and with the-learning methodology 						
<ul style="list-style-type: none"> The professional internships in companies and institutions are consistent with the aims of the educational programme 						
<ul style="list-style-type: none"> The periods of time that the students spend in national and international institutions are 						

consistent with the aims of the educational programme and recognized in curricular terms						
Overall Opinion						
8. DIDACTIC CONCEPT/TEACHING/LEARNING STRATEGY						
<ul style="list-style-type: none"> The staff have a clear teaching/learning strategy 						
<ul style="list-style-type: none"> The teaching/learning strategy enables students to acquire and manipulate knowledge academically 						
<ul style="list-style-type: none"> The teaching/learning strategy is student oriented and stimulates quality learning 						
<ul style="list-style-type: none"> The curriculum stimulates active learning and facilitates learning to learn 						
Overall Opinion						
9. STUDENT ASSESSMENT						
<ul style="list-style-type: none"> The assessments reflect the expected learning outcomes and the content of the program-overall course grades 						
<ul style="list-style-type: none"> Student assessment uses a variety of methods 						
<ul style="list-style-type: none"> The criteria for assessment are explicit and well-known 						
<ul style="list-style-type: none"> The standards applied in the assessment are explicit and consistent. 						
<ul style="list-style-type: none"> The assessment schemes, the assessment methods and the assessment itself are always subject to quality assurance and scrutiny. 						
Overall Opinion						
10. QUALITY OF THE ACADEMIC STAFF						
<ul style="list-style-type: none"> The staff is qualified and competent for the task. 						
<ul style="list-style-type: none"> The staff are sufficient to deliver the curriculum adequately 						
<ul style="list-style-type: none"> Recruitment and promotion are based on academic merits 						
<ul style="list-style-type: none"> Duties allocated are appropriate to qualifications, experience, and skills. 						
<ul style="list-style-type: none"> Time management and incentive systems are designed to support the quality of teaching and learning. 						
<ul style="list-style-type: none"> Accountability of the staff members is well regulated 						
<ul style="list-style-type: none"> There are provisions for review, consultation and redeployment. 						
<ul style="list-style-type: none"> Termination, retirement and social benefits are planned and well implemented. 						
<ul style="list-style-type: none"> There is an efficient appraisal system 						

<ul style="list-style-type: none"> The academic staff has adapted to the aims of the educational programme and to its requirements and disciplines 					
<ul style="list-style-type: none"> The academic staff is involved in research, development, and innovation activities , and these have repercussions in the educational programme 					
<ul style="list-style-type: none"> The administration and services staff involved in the educational programme are appropriate to its requirements 					
Overall Opinion					
11. THE STUDENT					
<ul style="list-style-type: none"> The selection of entering students (if there is selection) is adequate 					
<ul style="list-style-type: none"> There is an adequate intake policy 					
<ul style="list-style-type: none"> There is an adequate credit points system 					
<ul style="list-style-type: none"> The actual study load is in line with the calculated load 					
Overall Opinion					
12. STUDENT ADVICE AND SUPPORT					
<ul style="list-style-type: none"> There is an adequate student progress system 					
<ul style="list-style-type: none"> Students get adequate feedback on their performance 					
<ul style="list-style-type: none"> Coaching for first-year students is adequate 					
<ul style="list-style-type: none"> The physical and material environment for the student is satisfactory 					
<ul style="list-style-type: none"> The social and psychological environment for the student is satisfactory 					
Overall Opinion					
13. FACILITIES AND INFRASTRUCTURE					
<ul style="list-style-type: none"> The lecture facilities (lecture halls, small course rooms) are adequate 					
<ul style="list-style-type: none"> The computer facilities are adequate and up-to-date 					
<ul style="list-style-type: none"> Environmental Health and Safety standards should meet the local requirements in all respects. 					
<ul style="list-style-type: none"> The space used for student work and study, as well as the necessary equipment for these tasks, is appropriate to the number of students and the activities programmed in the educational programme 					
<ul style="list-style-type: none"> The spaces and equipment are appropriate for developing and coordinating the functions of the academic staff and administration and services staff 					
<ul style="list-style-type: none"> The contracted infrastructures used for external practices are appropriate to the number of students and activities 					

programmed in the educational programme					
<ul style="list-style-type: none"> The laboratories, workshops, experimental space as well as the equipment necessary for working is appropriate to the number of students and programmed activities in the educational programme 					
<ul style="list-style-type: none"> The Library and reading rooms infrastructures are correctly furnished and have sufficient space and timetables to satisfy the needs of the educational programme 					
<ul style="list-style-type: none"> The quality, quantity and accessibility of the information contained in the library and document banks are appropriate to the needs of the educational programme 					
Overall Opinion					
14. STUDENT EVALUATION					
<ul style="list-style-type: none"> Courses and curriculum are subject to structured student evaluation 					
<ul style="list-style-type: none"> Student feedback is used for improvement 					
<ul style="list-style-type: none"> The department provides the students with feedback on what is done with outcomes-structured systems for feedback from departments 					
Overall Opinion					
15. CURRICULUM DESIGN AND EVALUATION					
<ul style="list-style-type: none"> The curriculum was developed as a joint enterprise by all the staff members 					
<ul style="list-style-type: none"> Students are involved in the curriculum design 					
<ul style="list-style-type: none"> The labour market is involved in the curriculum design 					
<ul style="list-style-type: none"> The curriculum is regularly evaluated 					
<ul style="list-style-type: none"> Revision of the curriculum takes place at reasonable time periods 					
<ul style="list-style-type: none"> quality assurance of the curriculum is adequate 					
Overall Opinion					
15. STAFF DEVELOPMENT ACTIVITIES					
<ul style="list-style-type: none"> There is a clear vision on the needs for staff development 					
<ul style="list-style-type: none"> The staff development activities are adequate to the needs 					
Overall Opinion					
16. BENCHMARKING					
<ul style="list-style-type: none"> The faculty/department uses the instrument of benchmarking to get a better view on its performance 					
<ul style="list-style-type: none"> The faculty/department uses the instrument 					

of benchmarking for curriculum design						
Overall Opinion						
17. ACHIEVEMENTS/THE GRADUATES						
• The level of the graduates is satisfactory						
• The pass rate is satisfactory						
• The dropout rate is acceptable						
• The average time for graduation is in line with the planned time						
• The graduates can easily find a job. The unemployment rate is at an acceptable level						
• The student finishes his/her studies in time planned within the educational Programme						
• The student is satisfied with the educational programme						
• The profile of the graduate matches the graduate profiles outlined in the educational Programme						
• The academic staff involved is satisfied with the academic education programme						
Overall Opinion						
18. FEEDBACK STAKEHOLDERS						
• There is adequate structural feedback from the labour market (employers)						
• There is adequate structural feedback from the alumni						
Overall Opinion						
19 RESULTS IN SOCIETY						
• The satisfaction of employers and other groups of interest, with the knowledge and skills of the graduates						
• The activities that link the educational programme with society in the national and international realm produce results						
Overall verdict						

Annex 5: Overview of Indicators, and Some Positive (pro/potentialities) and Negative (con/limitations) Features³

INDICATORS	DESCRIPTION	PRO/POTENTIALITIES	CON/LIMITATIONS	WHAT DEVELOPMENT IS REQUIRED
RESEARCH PRODUCTIVITY				
Research publications and outputs	A count of publications and other research outputs.	Depending on purpose only selected types of publications can be counted. Publishing is vital for progress in science scholarship.	Different disciplines produce different types of research outputs. Emphasis on quantity of publication.	Suitable data bases for a variety of disciplines and research related outputs, especially in social sciences and humanities.
Research outputs per 'Research Academic' staff	Number of publications and other research outputs per academic staff or full-time equivalent (FTE).	Supports cross-institutional comparisons, adjusted for scale of institution.	Comparable definition of 'Academic Staff' and 'Research Time' can be difficult.	Agreement on definition of 'Research Academic'.
QUALITY AND SCHOLARLY IMPACT				
Number and percentage of publications in top-ranked, high impact journals	The number or percentage of journal articles published in the top-ranked, high impact journals for the fields of research.	In the exact sciences, peers tend to consider citation impact a relevant aspect in assessments of research performance. Widely used, especially in the exact sciences which tend to be well covered. Data must be accurate and verified.	Although one of the most popular indicators, it is not always the most appropriate one. Especially in social sciences and humanities, expert rankings do not correlate very well with impact factors. In these fields and in engineering, other sources are important as well (books, proceedings).	Discipline specific journal rankings, especially in social sciences and humanities, based on expert opinion in combination with indicators. Value of developing a ranking or hierarchy of scientific-scholarly publications.
Citations	Citation data are derived from citation indexes, i.e. databases that do not only contain meta data on included	In the exact sciences, peers tend to consider citation impact a relevant aspect in	Citations reflect intellectual influence but do not fully coincide with research quality.	Expansion of existing databases and creation of new databases (e.g. based on data from institutional repositories) will

³ Adopted from EUROPEAN COMMISSION (2010). Assessing Europe's University-Based Research Expert Group on Assessment of University-Based Research. Research Policy. Luxembourg: Publications Office of the European Union, 2010

INDICATORS	DESCRIPTION	PRO/POTENTIALITIES	CON/LIMITATIONS	WHAT DEVELOPMENT IS REQUIRED
	publications but also their reference lists. Principal indexes are Web of Science, Scopus and Google Scholar.	assessments of research performance. Widely used, especially in the exact sciences which tend to be well covered, although the most popular indicators are not always the most appropriate ones. Data must be accurate and verified.	Are of limited value in disciplines not well covered by the citation indexes, especially certain parts of social sciences, humanities and engineering.	improve the value of this indicator and coverage of disciplines. Theoretical research into the meaning of citations (clusters) in social sciences and humanities.
Number Keynote Addresses at Nat'l/Int'l Conferences	A count of the number of invited and keynote addresses given at national and international conferences	Used as proxy for quality, impact and peer-esteem. Data can be verifiable by conference programme.	No agreed equivalences that apply internationally and facilitate comparison across disciplines.	This will probably require direct entry by researchers. A list of internationally comparable items for different disciplines might help a lot.
Number Prestigious Nat'l/int'l Awards and Prizes	A count of the number of prestigious national and international prizes won either in total or per academic staff.	Used as an indicator of research quality and impact. Data is verifiable.	No agreed equivalences that apply internationally and facilitate comparison across disciplines.	Unless lists are publically available this will require direct entry by researchers. A list of internationally comparable items for different disciplines might help a lot.
International Visiting Research Appointments	A count of the number of visiting appointment at other academic and/or non-academic agencies and organisations.	Visiting Appointments provide indication of peer esteem or support by the academic community. Numbers are verifiable.	No agreed equivalences that apply internationally and facilitate comparison across disciplines.	Will probably require direct entry by researchers.
Editorial and Refereeing for Prestigious National/International journals/publishers	A count of the number of national and international appointments as editor, member of editorial board or as reviewer	An indicator of the extent to which the researcher's opinion is highly regarded by the academic community. Data is verifiable	No agreed equivalences that apply internationally and facilitate comparison across disciplines.	Unless lists are publically available this will require direct entry by researchers. A list of internationally comparable items for different disciplines might help a lot.

INDICATORS	DESCRIPTION	PRO/POTENTIALITIES	CON/LIMITATIONS	WHAT DEVELOPMENT IS REQUIRED
INNOVATION AND SOCIAL BENEFIT				
External research income	Level of funding attracted by researchers and universities from external sources, including competitive grants and research income from government, industry, business and community organisations.	Comparable data, verifiable through audit, is useful for comparing research performance across the system and within universities. Willingness of industry to pay for research is a useful indicator of its anticipated contribution to innovation and the economy.	Levels of external funding vary greatly across disciplines. For example, in countries where over half the total pool of funding is allocated to medical research, universities that do not have Medical Faculties will inevitably secure less funding than those with Medical Faculties. Data collection may be difficult in case of funding by end users because this information is not known to the University administration.	Agree international comparative data base.
Number and percentage competitive grants won	Level of funding won competitively – this is a sub-set of the indicator above.	Comparable data, verifiable through audit, is useful for comparing research performance across the system and within universities.	Levels of external funding vary greatly across disciplines. See above.	Agree international comparative data base.
Research income per academic staff or FTE	Research income per academic staff or FTE supports cross-institutional comparisons, adjusted for scale of institution.	Important measure of research activity.	Comparability is dependent upon institutional mission, context and discipline.	Data needs to be adjusted to scale and mission of university.
Employability of PhD graduates	Industry employment of PhD graduates can be an indicator of the contribution of research to the highly	Used to measure the quality of the graduates, and impact of research on	Employability can be sensitive to other factors, such as the regional or national economy.	Important to develop methods to track graduate employability and career paths. Harmonise the stage(s) post-graduation at

INDICATORS	DESCRIPTION	PRO/POTENTIALITIES	CON/LIMITATIONS	WHAT DEVELOPMENT IS REQUIRED
	educated & skilled workforce.	teaching.	Career paths and opportunities can differ for different disciplines.	which data is collected.
Commercialisation of research-generated intellectual property (IP)	Provides measure of the extent of income from commercialisation of intellectual property created through patents, licences or start ups.	This is an area of increasing significance to policy makers. Indicator is an important link between IP, commercialisation and economic benefits.	Patents are a very poor indicator of commercialisation. They are sensitive to national context – and to discipline.	Databank on university related inventions should be developed.
End-user Esteem	Includes policy, technical or commissioned reports; consultancy and external contracts; architectural or design awards; etc.	Willingness of external stakeholders to use and/or pay for research is a useful indicator of its anticipated contribution to innovation and the economy.	Different opportunities for different disciplines. Lack of agreed basis of capturing data and comparability could undermine legitimacy.	Agree basis of international comparability and verifiability.
Number and percentage funding from End-users (e.g. industry, professions, government, community)	Provides measure of the extent of income from external-commissioned or contracted work.	This is an area of increasing significance to policy makers. Indicator is an important link between research and social and economic benefits.	Different opportunities for different disciplines. Lack of agreed basis of capturing data and comparability could undermine legitimacy.	Agree basis of international comparability and verifiability.
SUSTAINABILITY AND SCALE				
Postgraduate Research Student Load	The ratio of research students (or PhD students) per academic staff or per 'Research Active' staff.	Key indicator of research intensity, indicating the scale of the research enterprise.	Practices differ across disciplines – large research teams are a common feature of the bio- and medical sciences.	Agree basis of international comparability and verifiability.
Involvement of early career	Number or percentage of early stage researchers involved in research	An indicator of research intensity, the scale of the	Practices differ across disciplines – large research	Agree definition of 'early career researcher', and basis of international

INDICATORS	DESCRIPTION	PRO/POTENTIALITIES	CON/LIMITATIONS	WHAT DEVELOPMENT IS REQUIRED
researchers in teams	activity.	research enterprise, and future activity.	teams are a common feature of the bio- and medical sciences.	comparability and verifiability.
Number of Collaborations and Partnerships	A count of national and international collaboration with other universities and/or with public-private and NGOs, etc.	Because research is increasingly conducted in collaborative teams, nationally and internationally, this is an important indicator of research involvement and scale of activity.	Can be difficult to capture and verify the data due to lack of clarity as to what is being measured.	Agree precise definition, inter alia: university-university, university-external stakeholder, national, European or international.
Doctoral Completions	The number PhD and equivalent research doctorates and, as appropriate, research Masters degree completions.	Data is verifiable by universities although there can be a time lag.	Rates of completion may differ across disciplines. Different disciplines may prioritise masters and PhD activity.	Require common standard for doctorates
RESEARCH INFRASTRUCTURE				
Research active academics	Number or equivalent full-time (FTE) of 'research active' academics employed by a university. 'Research active' is established by setting threshold levels of performance for a specific period.	Important indicator of research capability.	No clear definition of 'Research Active'.	Common definition and international comparability of 'Research Active'.
Percentage 'Research Active' per total academic staff	Ratio of the number of 'Research Active' per total academic staff.	Indicator of research intensity.	No clear definition of 'Research Active'.	Common definition and international comparability of 'Research Active'.
Total R&D investment	Total investment in university-based R & D (research and development) from all sources, including external research income and university resourcing of research, including	Investment in research is a strong predictor of research performance.	Difficult to get valid, comparable institutional data, even within the same institution.	Agree basis on which to calculate full cost of research investment.

INDICATORS	DESCRIPTION	PRO/POTENTIALITIES	CON/LIMITATIONS	WHAT DEVELOPMENT IS REQUIRED
	salaries and overheads.		Can be difficult to fully calculate university resourcing of research.	
Research Infrastructure and Facilities	Number of research laboratories, Books in the library and/or electronic journal access, super-computing access, etc.	Information provided at the level of the institution.	Difficult to get valid, comparable data. Favours older, well-endowed universities.	Develop appropriate comparative indicators.
Research Ethics	Comprehensive process ensuring good ethical practice is promoted and promulgated.	Important measure of research rigour and integrity, and the effect and purpose of the research. Peer Review would be most useful.	Ethical statements regarding the use of research and the source of research funding, e.g. tobacco or armaments, can be very controversial.	Develop appropriate indicators to ensure good ethical practice is promoted without interfering in processes of discovery.

Annex 6: Guidelines for Graduate Students to Assess Quality of Programmes and their Delivery

Please Complete this Sheet

Department:

Programme:

Semester:

Academic year:

Please grade your Lecturer with marks ranging from one to **5**, the latter being the highest and **1** the lowest

Key: 1=Unsatisfactory 2=Below average 3=Average/good 4=Very good 5=Excellent NA= Not applicable

The course	1	2	3	4	5	NA
Aroused my intellectual curiosity						
Was pertinent to my major field of study						
Challenged and engaged my attention						
Seemed unimportant and insignificant for my academic needs						
Provided significant insights and helped me grow as a professional (academician)						
Requires re-structuring and revision						
Entails an outline with specific goals and objectives						
Readings were too difficult to assimilate						
Readings were appropriate in length and stimulated thinking						
Requires re-structuring and revision						
Modules on the Programme were satisfactory						
The Programme was well organized and timetabled						
The assessment requirements were clearly explained						
Feedback on assessment was timely, informative and promoted learning						
The intended learning outcomes were clearly explained						
The assessment schedule was well organized						

Learner participation and involvement was effective						
The Lecturer input was satisfactory						

Comments

What changes would you like to make in the course?

What are topics whose content you would like to change and why?

What aspects are you satisfied with and why?

What aspects of this course do you dislike and why?

Information was readily available on;	1	2	3	4	5	NA
College facilities and services						
College policies and procedures						
Learner responsibilities and requirements						
Progression requirements and routes						
Career opportunities						
Assessment rules, regulations and grading						
Class representation was effective						
Please detail any comments you would like to make or suggestions you may have						

Resources and Services	1	2	3	4	5	NA
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The College Lecture rooms were satisfactory						
The College laboratory were adequate						
Library accommodation was sufficient						
Library service was satisfactory						
Recommended reading material was easily available						
Other relevant material was easily available						
Access to appropriate on-line service was reasonable						
Computer service was satisfactory						
Access to computer was reasonable						
Technical support for users was efficient						
Details on career guidance and academic progression was informative						
Self-Development	1	2	3	4	5	NA
Increased levels of self confidence						
Enhanced communication skills						
Developed interpersonal skills						
Please detail any comments you would like to make or suggestions you may have						

The Instructors	1	2	3	4	5	NA
1. Are always punctual and prepared						
2. Clearly explains the objectives of the course and has a good sense of instruction						
3. Have very good grasp of the subject matter						
4. Provides opportunities for student participation and involvement						

5. Successfully communicates the subject matter and clearly explains the assignments						
6. Familiar with current methods of instruction						
7. Have very good grasp of the subject matter						
8. Sensitive to individual differences and encourages personal opinions						
9. Provides immediate and meaningful feedback to student efforts						
10. Dependable and commands respect						
11. Effective and efficient						
12. Lectures too often and does not evoke thought						
13. Mumbles and speaks so softly that I hardly hear a word						
14. Give out a reading list of up to date references						

Comments

What weakness did you notice in the instructors?

How do you think they could change their weaknesses?