FACT SHEET

Masters in Agricultural Information & Communication Management (AICM)

Rationale

Development of the programme at postgraduate level was strongly supported by the findings of a training needs assessment undertaken by RAIN in 2005. Firstly, it was established that agricultural professionals of all cadres in the ASARECA region with AICM skills are few or lacking. More specifically, agricultural researchers, educators and technologists in national agricultural research institutes, universities and extension services lack skills that can make them self-sufficient in meeting basic information needs to generate and disseminate technology. Secondly, agricultural research results are not known or effectively transmitted to the international research community. As a result, African concerns do not drive the international research agenda. African research is not published and does not feature in international research abstracts. Thirdly, later studies established that existing university programmes did not have adequate ICT/ICM content, explaining the low ICT/ICM competency among graduates. Fourthly, programmes focusing on AICM training at university level did not exist in the ECSA region. There is moreover a growing recognition that ICM is emerging as a 'new' profession in development.

Decision on hosting of AICM

The decision on which University was to host the AICM programme was informed by a gap analysis study and assessment of the readiness of the various possible host universities which was carried out in the ASARECA region in 2007 / 2008. Egerton University in Kenya was selected, and also mandated to train for the ASARECA region. Other universities were expected to launch and host subsequently. The RUFORUM Secretariat and selected member universities participated in the training needs analysis and the development of the MSc AICM curriculum. In 2008, following a request from ASARECA, RUFORUM accepted to spearhead the implementation of AICM within its network.

Host Institution

Egerton University, Kenya, University of Nairobi, Kenya, Haramaya University, Ethiopia, Makerere University, Uganda (to launch in 2014)

www.haramaya.edu.et

Training the Next Generation of Scientists for Africa   www.ruforum.org

Programe Objectives

The overall goal of the postgraduate programme is to enhance the competency of agricultural information professionals, agricultural researchers and other development workers in AICM while strengthening the capacity of universities to provide higher-level education and research services in this field. Specifically, the programme aims to produce AICM experts at the MSc. level with competence to:

i. Develop and operate agricultural information systems, carry out research to identify the needs and problems of the different agricultural information users, and provide professional AICM support to the agricultural and related professionals.

ii. Facilitate the re-tooling of agricultural researchers, trainers, development experts and agricultural information support staff by providing mid-career postgraduate diploma training to enhance their proficiency in agricultural knowledge and communication management.

iii. Enhance the ICT/ICM content of existing MSc programmes in agricultural sciences to produce graduates who understand the importance of agricultural knowledge and communication management in developing and using agricultural technology, and will be self-sufficient in meeting their AICM needs.

iv. Introduce other forms of AICM interventions that will, in general, benefit researchers, academicians, students, policy makers and any other members of civil society in enhancing their professional careers and competency in AICM.

v. Strengthen the capacity of universities to train AICM professionals and to provide research and consultancy services in technology diffusion and uptake.

Graduate Profile

Graduates of the MSc programme in AICM have skills and knowledge in:

i) Identification and application of ICT tools, media and techniques in collecting, organizing and disseminating agricultural information products and services.

ii) Design and development, management and evaluation of computer-based agricultural information and knowledge systems.

iii) Packaging and repackaging agricultural information content for different audiences.

iv) Development, selection and use of appropriate media, ICT tools and techniques to communi-

cate agricultural information and technologies to suit different audiences.

v) Assisting with scientific editing and publishing.

vi) Facilitating sharing agricultural knowledge, including indigenous knowledge.

Program duration

The programme takes not less than 18 months and not more than 36 months to complete.

Curriculum structure and content

The programme consists of coursework and thesis or project. The thesis option consists of course work and a thesis. The non-thesis option consists of an expanded course work and a project.

The coursework

a. The course work of the thesis option consists of 24 credit hours of core and, in universities that allow more credit hours of course work for an MSc degree, a range of elective course units are available.

b. The course work of the non-thesis option consists of 24 credit hours of core, 9 credit hours of specialization courses, and elective courses totaling 6 credit hours.

c. There are five streams of specialization for the non-thesis option students, namely, Agricultural Knowledge Management, Agricultural Communication Management, Records and Archives Management, Web Resources Management, and Scholarly Publishing. Two course units of three credit hours each and a project are offered under each cluster or stream of specialization. The coursework is structured into two remedial courses for those without agricultural or ICT background, eleven core courses and two electives. All candidates are required to take and pass all core courses and at least 2 electives to proceed to their research work.

The following are the remedial, core and elective courses:

Remedial courses

The remedial course units for students without agricultural background are:

- •Principles of Crop and Livestock Production (3 credit hours)

• Natural Resources Management (3 credit hours)

The remedial course units for students without ICT background are:

• Fundamentals of Computer Programming (4 credit hours)

• Fundamentals of Computing and Networks (4 credit hours)

Core Courses (11 + Thesis)

AICM 701	Fundamentals of AICM	2
AICM 702	Statistical Methods in AICM	2
AICM 703	Research Methods for AICM	2
AICM 711	Management of Agric Information & Comm Systems	3
AICM 712	Information System Analysis and Design	3
AICM 713	Database Design and Management	2
AICM 715	Web Content Design and Management	2
AICM 716	Agricultural Knowledge Management	3
AICM 721	Communication for Innovation	3
AICM 753	Farming Systems and Rural Livelihoods	2
AICM 797	Seminars	

Total Credit Hrs 24

AICM 799 Thesis 15

Electives

Each student takes at least 2 electives, each equivalent to 3 credit hours. The electives are selected from the following specialization areas:

I.   Agricultural Knowledge Management

II.   Agricultural Communication Management

III.   Records and Archives Management

IV. Web Resources Management, and Scholarly Publishing

Mode of delivery – Spill over to E-learning

The curriculum is delivered face to face at all the universities, on a semester basis. Now that 15 AICM courses have been developed as e-courses the program is delivered using a blended approach. The University of Nairobi has expressed an interest to implement MSc AICM using the distance learning approach combined with e-learning. Makerere University will use the blended approach as they will benefit from the e-courses when they launch their program in 2014.

Method (s) of assessment

Coursework

Each course is examined by a 2 or 3 hour written paper at the end of the semester. The overall evaluation of a candidate comprises of continuous assessment accounting for 40% and final examination accounting for 60%. The pass mark for each course is 50%. However, the candidate must obtain a "B" average (60%) to be eligible for the award of the degree of MSc in AICM. A candidate must pass all the courses before graduating. A student who fails to obtain the pass mark is required to take a resit (only once). As part of quality assurance, the universities use external examiners.

Thesis

Each student conducts a research project with a strong component of AICM, as partial fulfillment of the requirements for the award of a Masters in AICM. The examination of the thesis project is done according to Senate-approved regulations of the hosting university, and has two components:

(i). Thesis evaluation, and

(ii). An Oral examination (*viva voce*).

Implementation progress and achievements

The MSc. AICM program was launched in 2008 at Egerton University and the University of Nairobi. Subsequent cohorts of students reported in 2009, 2010, 2011, 2012, 2013, 2014 and 2015. Haramaya University commenced implementation in 2010 and has had subsequent cohorts in 2011 up to 2015.

Student numbers

The Tables below give a summary of student statistics in the three universities hosting the programme.

Table 1: Egerton University, Kenya

Name of University	Intake No and Year	Total No of Students	No of Females	No of Males
Egerton University	1st - 2008	14	5	9
	2nd - 2009	9	5	4
	3rd - 2010	3	1	2
	4th - 2011	2	1	1
	5th - 2012	3	1	2
	6th—2013	2	1	1
	7th—2014	2	1	1
	8th—2015	1	0	1

Regional Representation: DRC, Ethiopia, Kenya, Tanzania, Sudan, Uganda, Zimbabwe

From the 2nd intake was Kenyans only

Total Graduated: Eleven from the 1st intake have graduated to date

Funding Profile: The 1st intake was financed through the DFID funded SCARDA project managed by RUFORUM. The second and third intakes were funded from other means identified by the students.

Delivery of Program: MSc AICM Programme delivered as a full-time regular semester programme. Participants are fresh post Bachelor students or employees on study leave.

Table 2: University of Nairobi, Kenya

Name of University	Intake No and Year	Total No of Students	No of Females	No of Males
University of Nairobi	1st - 2008	10	4	6
	2nd − 2009	12	4	8
	3rd - 2010	11	4	7
	4th - 2011	13	6	7
	5th - 2012	12	7	19
	6th - 2013	1	3	4
	7th - 2014	4	2	6
	8th - 2015			

Regional Representation: All Kenyans – One Ugandan admitted in 2012

Total Graduated: Eight graduated in 2011

Funding Profile: Students are self –sponsored

Delivery of Program: MSc AICM Programme delivered as a part-time weekend and or evening pro gramme. Participants are full time employees.

Table 3: Haramaya University

Name of University	Intake No and Year	Total No of Students	No of Females	No of Males	Dropouts
Haramaya University	1st - 2010	13	2	11	2
	1st - 2010	13	1	12	4
	2011	3	1	2	0
	2012	4	0	4	0
	2013	7	0	7	0
	2014	3	0	3	17
	2015	17	11	6	

Regional Representation: Ethiopians, Tanzanians, Ugandans, Botswana, Kenya

Graduated: 20 (6 female)

Funding Profile: Students are sponsored by the Ethiopian Government and some by RUFORUM

Delivery of Program: MSc AICM Programme delivered in two ways: as a full-time regular semester programme and also as summer vacation programme. Some of the participants are full time employees.

Where the graduates are going / what they are doing

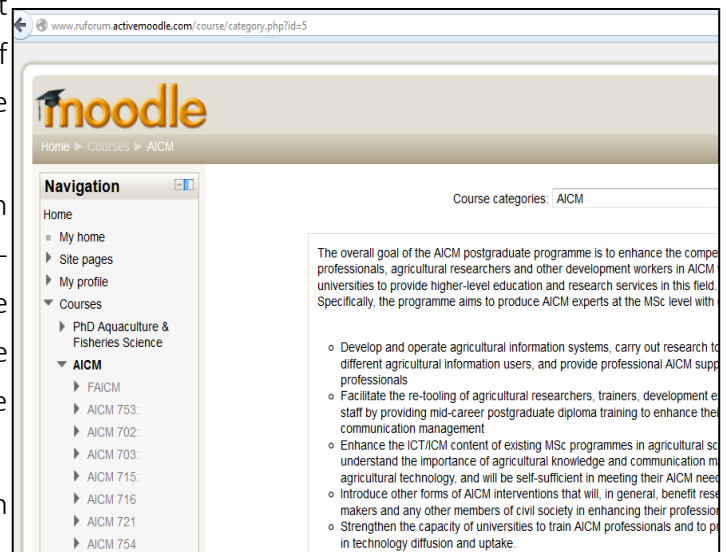The graduates from the program have immediately been absorbed into the job market. Examples include

the following;

1. **Pauline Mburu***, 1st cohort University of Nairobi has returned to the Kenya Agricultural Research Institute as an agricultural librarian*

2. **Nada Siddig Abdalla Musa***, Egerton University AICM alumni from Sudan. She has returned to the Agricultural Research Coporation in Sudan and supports the ICT function within the ARC*

3. **Willard Zendera** *is an Egerton University AICM alumnus from Zimbabwe. He returned to Africa University in Zimbabwe to lecture.*

4. **Milkyas Hailu** *was part of the first intake in 2010 at Haramaya University. He has recently been appointed as the Director of Libraries at Haramaya University.*

5. **Victoria Mbigide** *was part of the 1st intake at Egerton University and now works for the Women of Uganda Network as the Information Officer*

6. **Moses Yiga** *was part of the 1st intake at Egerton University and now works for the National Research Organisation in Uganda as the Librarian*

7. **Dorine Odongo-Ochieng** *was part of the 1st cohort at the University of Nairobi and works as an Agricultural Research and Information Specialist at the Scinnovent Centre*

Program Outputs

i. The three universities have trained just over 100 AICM professionals. Some of these have graduated and others are at the research phase of their academic work.

ii. Capacity building for universities has been in the area of e-learning and e-content development. To date 15 AICM modules have been converted to e-format and 8 have been uploaded on the RUFORUM moodle system.

iii. CABI and RUFORUM are collaborating in an internship opportunity targeting AICM

iv. Makerere University launched the online MSc AICM course in January 2015

Positive Outcomes: Some Anecdotal Evidence

The demand for AICM programme has spread up to West Africa:

Looking ahead / value proposition

The MSc. AICM programme occupies a unique place within RUFORUM's niche. The programme is far from meeting its intended objectives set forth at launch. There still exists major weakness in AICM capacity in the entire ECSA region, and Africa in general. The demand for the graduates from this programme is evident. All graduates get employed in various sectors and institutions in the region immediately they graduate. The demand for the programme has spread as far as to West Africa.

> On Mar 27, 2013, at 14:25, "Saifudeen Danbaba" <safdan85@gmail.com> wrote:
> I am student of Btech Agricultural Education from Nigeria, trying to enroll in Masters of science in Agricultural Information & Communication Management. I need help with a recommendation of which university to enroll-in among these institutions; Hamaraya University (Ethiopia), Egerton University (Kenya), University of Nairobi (Kenya) and Makerere University (Uganda). Thanks

Intern — Publishing Outreach Officer
CABI — Nairobi, Kenya
Purpose of the role

The purpose of this role is to become familiar with the editorial, marketing and sales processes of CAB Abstracts and CABI Compendia in order to train and show RUFORUM Member Universities how to search and use these products effectively to support their courses.

CANDIDATE PROFILE

You will be a graduate of the RUFORUM Master of Science in Agricultural Information and Communication Management. You will spend a three week induction period in Wallingford, UK working alongside team members within our editorial, marketing and sales teams. You will develop a plan of action to increase access to and usage of CABI Abstracts and CABI Compendia in the

In terms of moving forward, the key areas of focus will include the following:

1. **On-line delivery of the course**: Development of e-learning curriculum so that the reach of the course is enhanced, to capture customers with diverse needs and schedules. The e-learning version can be managed through RUFORUM Secretariat.

2. **Quality Assurance:** it is critical to maintain high standards and assure quality of the graduates coming out of this programme. Further, as one of RUFORUM's regional programme, it carries RUFORUM's "DNA" and therefore Secretariat must have an oversight role in quality assurance, either directly e.g. facilitating skill enhancement for staff and students, facilitating shared lesson learning and communication, tracer studies, or indirectly by providing a regional platform for host universities and other partners to mobilize resources for the programme. This oversight quality assurance role becomes more critical as differ-

ent universities role out the programme using the same curriculum.

3. **Funding to support the programme:** The level of funding has implications on regionality of the programme, number of students coming to the programme, staff exchange, and even rigour and effectiveness of implementation e.g. field supervision and student exposure. In moving forward, and drawing from the lessons learnt there is need to strengthen the engagement with stakeholders for buy-in in order to attract funding in terms of scholarships, infrastructural support and mainstreaming in the national and regional agenda. This approach will also address the low enrollment challenge that universities experience when there is no funding for scholarships. RUFORUM Secretariat is currently in discussion with COMESA Secretariat on the modalities of operationalizing the MoU between the two. The discussions have been centering on lobbying national governments in the COMESA region to invest in RUFORUM regional programmes, and officially ear-mark them as the COMESA approved institutions where national governments will train their staff. The other key point of discussion involves a strategy to consolidate efforts by universities in order to benefit from the EU support (EDF-11) for capacity building that comes through African Union.

4. **Alternative sustainability models:** It will be important for RUFORUM to reflect and learn from its own experiences and that of partners. In view of the realities in the region e.g. the large capacity gaps that still persist, declining funding and student enrollment, and the emerging opportunities such as the dialogue with COMESA and development partners, Secretariat will work with member universities, partners and stakeholders to address the issue of sustainability of the programme in order to meet the intended objectives.

5. **Agricultural Information Management at the core of RUFORUM business:** RUFORUM has responsibility for improving communication and dissemination of agricultural information in 32 Universities in Eastern, Central and Southern Africa. The key target groups include;

6. MSc, PhD and other research students, who are beginning their research career,

7. University and research institute staff who supervise these students,

8. The managers of research organizations, that determine support available to scientists, and

9. Librarians, editors, journalists, policy makers and scientists

10. All these groups have capacity deficiencies, despite their crucial role in contributing to Africa's development through the CAADP. The AICM will thus remain one of RUFORUM's flagship programmes and a key area of investment in order to achieve real impact.