Strengthening Capacity for Monitoring and Evaluation of Agricultural Training and Research in Eastern, Central and Southern Africa

FINAL REPORT SUBMITTED TO IDRC, CANADA

GRANT NO: - 106059-001

PROJECT REPORTING PERIOD: MARCH 11 2011 – JUNE 30 2012

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August 2012

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Executive Summary

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) received a grant of CAD 55900 to help design strategies for both short and long capacity strengthening courses and build capacity of universities to track agricultural research and training programs. The small grant was designed as a planning grant support an initial regional planning workshop to scope and design a regional strategy for short and long training in evaluation as well as other capacity strengthening approaches for RUFORUM member universities on both monitoring and evaluation for agricultural research and training. The grant has enabled RUFORUM to collate university specific and regional M&E capacity, capacity needs and demand for conducting M&E as well as for teaching and doing research in M&E and in designing specific strategies for M&E capacity strengthening at the Secretariat and in the member Universities. RUFORUM has also used the grant to design an M&E capacity building strategy as well as curriculum for MSc and short courses in M&E.

Through the project RUFORUM has solidified the central role of learning and M&E in agricultural capacity building and research in Africa as lead by universities. Although the first workshop (20th to 22nd July, 2011) recommended not developing a full MSc course, subsequent work, engagement with universities and studies led to the need to organize a second workshop which developed full MSc curriculum in M&E together with short course modules. The workshop was held in June 2012. The project has revealed that inadequacies exist in the mechanisms, tools and competencies for gathering, managing and disseminating reliable data, information and knowledge for improved regional agricultural knowledge management, learning systems and M&E expertise. Specific strategies have been designed for improving M&E Capacities Structures and Systems of the RUFORUM Secretariat and the Grantees as aligned to effectively managing, monitoring and evaluating small grants, regional post- graduate programs; and effectively use the results of M&E to build evidence based knowledge for dissemination and advocacy. The project has also developed strategies for having M&E established in the universities, and strengthening capacity to do M&E in the universities and the broader agricultural sector.

The main project outputs include clearer understanding and documentation of various aspects and levels of individual and institutional (university) M&E capacities; increased awareness on the M&E capacity gaps, demands and strategies for capacity building; a broad buy-in by university administration and RUFORUM corporate organs of the project; new MSc and short course curriculum in M&E as well as comprehensive strategy for building M&E capacity for RUFORUM and its member universities. RUFORUM has used a variety of dissemination channels to broadcast the outputs of the project. This final report recommends continued engagement with universities, development partners including IDRC to implement components of the strategy and institutionalize sustainable ways of implementing the MSc program in universities on pilot basis. RUFORUM also recommends the convening of specialized M&E skills enhancement courses for universities and roll-out of on-line versions of the courses to widen access by many students, lecturers, administrates and stakeholder.

Problem and Justification

Agriculture remains the main engine for socio-economic development. The sector will remain, into the foreseeable future, critical for reducing hunger and poverty through increased agricultural productivity. Continent-wide master plans like the African Union's New Partnerships for African Development (AU-NEPAD's) Comprehensive African Agriculture Development Program (CAADP) recognizes this and has set the goal of 6% per annum growth for the sector. CAADP is organized around four pillars. Pillar IV focuses on reforms for agricultural research, technology dissemination and adoption efforts. Very robust agricultural performance tracking systems are however lacking in the region. This is coupled with weak agricultural productivity information management systems. Tracking agricultural production, agricultural training, research and extension systems would rely on skills and competencies in professionals and institutions to track processes, quality, achievements and impacts of agricultural production and other development systems. Decades of poverty and neglect for professional performance management and monitoring and evaluation have led to current capacity gaps in the region. There is therefore a need for advancements in monitoring and evaluation and a results-based agricultural productivity management.

All the national development plans and visions, like the CAADP and Millennium Development Goals (MDGs) that have been put in place have somewhat straightforward goals, principles and requisite policies to implement them. What is grossly lacking is the mechanism, tools and competencies to gather, manage and disseminate reliable data, information and knowledge for improved regional agricultural knowledge management, learning systems and M&E expertise. This requires a significant production, from universities and other agricultural tertiary institutions, high caliber professions training in both monitoring and evaluation as well as resident, elaborate and innovative capacity for M&E in various institutions and government systems. The reported inadequate capacity for M&E among agricultural and development experts and researchers calls for a regional approach to monitoring process and impact research in universities; designing and implementing short and long term courses in M&E.

A baseline survey on M&E for agricultural tertiary education in eastern, central and southern Africa by the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM, 2009) established that there exist at varying levels of rudimentary M&E systems. The systems are characterized by an increasing trend towards performance management and growing culture of being accountable to donors and stakeholders. This provides a demand for monitoring data and evaluation information and knowledge information and capacity in the universities and other systems in the region. The university level M&E mainly deals with monitoring activity implementation (resource utilization, activities undertaken and to some extent translation of inputs into outputs) with little if any focus on outcome and impact monitoring. There are, however, no formalized systems for tracking placement and performance of past students. Any tracer studies that have been conducted are but part regular needs assessment drives geared at curricular review. There is also no emphasis on tracking, capturing and reporting of drivers of attainment of outputs and or outcomes, and lessons from implementation experiences. Many universities currently confuse M&E of teaching and learning processes with systems for quality assurance in teaching.

The tracking of research processes (monitoring) and assessment of results (evaluation) are the sole responsibility of individual research implementers in the universities. Although there are units for approving, registering and cataloguing all research projects and coordination of research projects and programs. M&E of research activities is relegated to mere provision of progress reports that is largely activity−based and not so much against performance indicators. The evaluation of university research projects is mostly externally driven and or restricted to donor audience. There is a clear attempt to inventorize research but this information is seldom databased to enhance cross-thematic searching and sharing. There is also no formal M&E training whether at graduate or

undergraduate level. The graduates and research practitioners from the universities are as a result lacking in M&E skills although there are attempts at curriculum review to include aspects of M&E in units related to project planning and management, research methods and rural development.

The capacity challenge is exacerbated by institutional challenges relating to the diverse objectives of agricultural research, training and extension programs as well as the complexity of cause-and-effect attribution of impact of agricultural development programs due to many and diverse external factors. The inherent uncertainty in agricultural research, training and extension outcomes and technology adoption and difficulties in establishing timetables for agricultural technology development life-cycle calls for a dynamic but long-term regional M&E capacity strengthening programs and projects.

Project Objectives

The project was designed to provide strategies for both short and long capacity strengthening courses and build capacity of universities to track agricultural research and training programs. It was designed as a planning grant support an initial regional planning workshop to scope and design a regional strategy for short and long training in evaluation as well as other capacity strengthening approaches for RUFORUM member universities on both monitoring and evaluation for agricultural research and training. The specific objectives were to:

1) Collate university specific and regional M&E capacity, capacity needs and demand for conducting M&E as well as for teaching and doing research in M&E.
2) Design a strategy for short-term M&E capacity strengthening courses.
3) Design a strategy for developing and institutionalizing a long- term M&E training within RUFORUM universities – whether a full Master's course or set of electives, and how that strategy would be developed and rolled out.
4) Design strategies for mobilizing resources for implementing the short-term M&E course as well as the long-term training programs in M&E for agricultural development.

Methodology

Over the implementation period, the project employed various methods to achieve the objectives. These methods have evolved based on both anticipated and unanticipated changes over the implementation period. The key methods were, based on project objectives and activities:

1) To collate university specific and regional M&E capacity, capacity needs and demand for conducting M&E the following procedures were followed:
    a. A situation analysis and preparation of ToR for consultants
    b. Desk review to synthesize the key M&E capacity gaps, approaches and demand in universities
    c. Survey of RUFORUM universities including one conducted online (https://www.research.net/s/2011ruforumm_ecapacitysurvey)
    d. Presentation of survey and training needs findings to two sets of workshops with universities and other non-university experts to validate capacity needs and demands
2) To design a strategy for short-term M&E capacity strengthening, the following was done:
    a. Review of emerging capacity gaps in universities and wider agriculture sector
    b. Review of existing programs in universities and in the wider M&E sector in Africa and beyond

c. Two regional workshops organized to design, review and validate the short course options
d. Consultant hired to finalize the short course capacity building strategy and modules which were peer reviewed

3) To design a strategy for developing and institutionalizing new regional Master's course, the following were carried out:
   a. Assessment of existing postgraduate programs for M&E component and gaps
   b. Two regional workshops to scope for the elements and structure of the MSc programs
   c. Awareness creation among universities – deans, VC, lecturers and researchers on the need for regional and institutional strategies for M&E capacity building
   d. Design of the MSc course
   e. Review of the MSc course and lay out of the roll-out strategy for the MSc course
   f. Workshops to draft modules
   g. Hiring of consultants to finalizes the revised course modules and prospectus

4) The design of strategies for mobilizing resources for implementing course, followed the following course:
   a. Situation analysis to understand the funding needs for RUFORUM-wide M&E capacity building
   b. Scoping for approaches to capacity building during two workshops
   c. Participation in select donor meetings
   d. Awareness creation and lobbying among university administrators to allocate funds and mobilize resources for M&E activities and capacity building
   e. Development of M&E capacity building strategy to be used for resource mobilization
   f. Negotiations with interested development partners including Rockefeller Foundation and Bill and Melinda Gates Foundation
   g. Design of additional proposals for mobilizing funds for implementing the M&E capacity building
   h. Design of a Policy Brief on M&E Capacity Building recommending allocation of resources by universities and encouraging governments and donor community to support M&E capacity building in African Universities

During the implementation of the project, RUFORUM was undergoing restructuring as a new Business Plan was being developed. M&E capacity building has been adopted has major strategic activity and the M&E core area.

Project Interim/Progress Report/Findings

M&E capacity building has been prioritized by RUFORUM and many member universities as a result of the project. Through the project, RUFORUM's advocacy for and recognition of the strong and urgent need for robust agricultural performance tracking systems and human resource has grown. In order to sharpen university role in training, research and development, an M&E capacity building strategy has been developed through the project. The grant from IDRC has facilitated an M&E Training Needs Assessment (TNA) through surveys, scoping studies and regional planning workshops that developed, reviewed and validated a broad based regional strategy for short and long term training in monitoring and evaluation as well as other capacity strengthening approaches for RUFORUM Secretariat and its member universities on both monitoring and evaluation for agricultural research and training. Two workshops were held for this purpose:

I. **First Workshop:** Although initially planned to design short and long term (MSc) courses in M&E, the regional scoping study and workshop revealed that this should follow concrete strategies that the workshop design. The regional scoping workshop on *"Strengthening Capacity for Monitoring and Evaluation of Agricultural Training and Research in Eastern, Central and Southern Africa"* was held from 20th to 22nd July, 2011 in Kampala, Uganda. The workshop reiterated the prevailing low capacity to track agricultural capacity building and research; gather, manage and disseminate reliable data, information and knowledge for improved regional agricultural knowledge management, learning systems; and the limited monitoring and evaluation expertise. It was attended by representatives from twelve RUFORUM member universities, National Research Institutions, private consultants and NGOs. The workshop was organized to:

1. Collate university specific and regional M&E capacity, capacity needs and demand for conducting M&E as well as for teaching and doing research in M&E;
2. Design a strategy for short-term M&E capacity strengthening courses;
3. Design a strategy for developing and institutionalizing a long-term M&E training within RUFORUM universities- whether a full time Master's course or set of electives, and how that strategy would be developed and rolled out; and
4. Design strategies for mobilizing resources for implementing the short-term M&E course as well as the long-term training programs in M&E for agricultural development.

The workshop noted that inadequacies exist in the mechanisms, tools and competencies for gathering, managing and disseminating reliable data, information and knowledge for improved regional agricultural knowledge management, learning systems and M&E expertise. Universities are better poised to produce high caliber professionals in both monitoring and evaluation. The universities and other institutions also need to build resident, elaborate and innovative capacity for M&E. Despite this demand, the baseline survey on M&E for agricultural tertiary education in eastern, central and southern Africa by RUFORUM in 2009 established that there exist at varying levels only basic aspects of M&E.

The workshop discussed and designed specific strategies for improving M&E Capacities Structures and Systems of the RUFORUM Secretariat and the Grantees as aligned to three specific objectives:

- To effectively manage, monitor and evaluate grants (CGS);
- To effectively manage, monitor and evaluate RUFORUM funded regional post-graduate programs; and
- To effectively use the results of M&E to build evidence based knowledge for dissemination and advocacy.

With reference to improving M&E capacities in the Universities, the workshop designed strategies for having M&E established in the universities, and strengthening capacity to do M&E in the universities and the broader agricultural sector under two objectives;

- To build universities capacity to monitor and evaluate their activities for improved performance management and effectiveness in outreach; and
- To build a cadre of M&E professionals within RUFORUM member universities and the broader agricultural sector that is able to manage performance and change.

The full report of the workshop is presented in Annex I. The strategies have been aligned to the RUFORUM business model in especially how support for research and institutional strengthening as well as how capacity building activities feedback into curriculum development. Of importance is the identification of how specialized capacity will be strengthened for emerging such as climate change including monitoring and evaluating how universities will learn from network-wide climate smart agricultural research and

technology development. The workshop outputs have been synthesized and are being used to design a regional strategy for short, medium and long-term training and other capacity strengthening approaches for RUFORUM member universities on M&E for agricultural research and training. The workshop noted the need to streamline resource mobilization for M&E capacity and advocating for common approaches by development partners. The findings of the workshop were further presented to the RUFORUM Deans committee at the August 2011 RUFORUM AGM held in Lilongwe, Malawi. Full details of the M&E Session at the AGM are presented in the Synthesis report of the AGM presented in Annex II. The deans further recommended to the Board (Vice Chancellors) that M&E capacity be a strong component of RUFORUM capacity building initiatives and university level activities. Annex III shows the PowerPoint Presentation made to the deans in 2011.

II. **Second Workshop:** A write-shop was organized as a follow-up to the first workshop and a validation forum for studies conducted hitherto. The objectives of the workshop were:

1. Review the RUFORUM TOC and indicators and get inputs from member universities regarding this (gaps, etc.) and their own roles and responsibilities with respect to this
2. Review existing M&E capacity and practices in member universities in light of this and identify key gaps and challenges that will need to be addressed
3. Validate and develop strategies for strengthening M&E capacity in member universities and identify how to operationalize them
4. Review existing M&E curricula in member universities and prepare the outlines of a cutting-edge M&E curricula/module based on inputs from members and experts
5. Agree on a work plan for taking this forward

This was necessitated by the results from additional studies, scoping and stakeholder engagement after the first workshop. By the time of this workshop, a draft Strategy was in place and the workshop was organized to refine and validated it. The workshop also was organized to draw up the new MSc and shot course curriculum and strategies for further resource mobilization and donor/university engagement to implement the MSc and short courses.

Project Implementation and Management

Activity-based Account of Achievement

Activity 1: Identify workshop participants

A total of 30 participants were identified to participate in the meeting. They represented the diversity in terms of country, gender, RUFORUM program, M&E expertise and university. This was done for the first workshop in June 2011. AT the second workshop in June 2012, a total 23 participants were invited from universities, M&E firms, research institutions and other non-university organizations. The participants for the second write-shop included the following.

Surname	Other Names	Gender	Institution	Country
Ogolla	Achola Nicanor	M	Maseno University.	Kenya
Hulela	Kebatenne	F	Botswana College of Agriculture.	Botswana
Limuwa	Moses	M	University of Malawi	Malawi
Khaila	Stanley	M	University of Malawi	Malawi
Bedadi	Bobe	M	Haramaya University	Ethiopia
Abera B.	Solomon	Mr	Mekelle University	Ethiopia
Muthoni	Rachel	F	PABRA – CIAT	Uganda
Akwango	Damalie	F	NARO	Uganda
Magambo	Ramzy	M	SASAKAWA GLOBAL 2000	Uganda
Kirinya	Julian Patrick	M	Makerere University	Uganda
Wamala Kalule	Stephen	M	Gulu University	Uganda
Thangata	Paul	M	ALINe/ Bt-Associates	Malawi
Ndengu	Joseph Davis	M	ALINe/ Bt-Associates	Malawi
Ling	Andre	M	ALINe / University of Sussex	UK
Kayobyo	Godfrey	M	NIDA	Uganda
Obua-Ogwal	Agnes	F	RUFORUM	Uganda
Ochola	Washington	M	RUFORUM	Uganda
Dlamini	Nodumo	F	RUFORUM	Uganda
Nampala	Paul	M	RUFORUM	Uganda
Osiru	Moses	M.	RUFORUM	Uganda
Ntwali	Claire	F	RUFORUM	Uganda
Rebecca	Mwima	F	RUFORUM	Uganda

Activity 2: Organize workshop logistics including travel

For the two workshops, various logistical arrangements were made to ensure the workshops succeed. These included travel, accommodation, background materials and other logistics for workshop. The RUFORUM Secretariat used its long-standing experience in regional workshop organization to hold the workshop. The workshops were both held at the Silver Springs Hotel Kampala

Activity 3: Conduct pre-workshop assessment

For the first workshop, RUFORUM PME Unit designed a checklist that was administered to selected university and research system representatives including some participants of the workshop prior to the workshop. The Survey tool administered via the RUFORUM *SurveyMonkey* platform (for selected results see http://www.surveymonkey.com/d.aspx?sm=kkLUu9d5U0R4E4RKUEe9c62fmb8oVGEbSEJT12cdjx0_3d). The purpose of this online survey was to collate information and ideas about current and future M&E practices and capacity development needs in Universities in Eastern, Central and Southern Africa. A total of 166 responses were received. The survey considered capturing respondent perception of practice of M&E in the universities, demand for M&E training, individual and institutional level skills, competencies and capacities for M&E.

For the second write-shop, participants were asked to provide write-ups and make presentations of the status of M&E practices, M&E training and capacity needs in their institutions. Existing short courses and modules/programs were also elicited to be used as input to the write-shop process. University visits were organized and consultancy firm (NIDA) hired to conduct surveys and report on existing M&E courses, capacity gaps and other M&E processes in universities. A report of this RUFORUM-wide study is presented in Annex I.

Other Project Management Issues

The initial start-up was delayed as RUFORUM was undergoing major operational restructuring. This led to a new Business Plan (See Annex IV) which has laid more emphasis on RUFORUM M&E system and capacity to track capacity building activities at the Secretariat, in the Universities and broader African Agriculture. This is instrumental to RUFORUM organization growth.

Although at the first Workshop, a decision was made to shift from original plan of designing mainstream short and long-term course to designing strategies for M&E capacity building, work after the workshop, demand from universities and emerging training needs necessitated the development of bot the MSc courses/short course curriculum and a comprehensive M&E capacity building strategy. This therefore called for a second workshop which was organized as a write-shop to finalize the curriculum and the documents. The project had to hire additional consultants to support finalization of the documents. Savings from previous workshop and additional funding from RUFORUM mainstream M&E activities were used to finance this extra work.

Project Outputs and Dissemination

Main outputs to date:

1. Consolidated and crisp understanding and documentation of various aspects and levels individual and institutional (university) capacities, capacity needs and demand for M&E and to teach and do research in M&E identified
2. Strategy for M&E capacity building for RUFORUM Secretariat, RUFORUM and its member universities
3. Various project documents for dissemination including brochure
4. Increased awareness on the M&E capacity gaps, demands and strategies for capacity building
5. Broad buy-in by university administration and RUFORUM corporate organs of the project, M&E capacity issues and how to address them
6. Increasing buy-in by other development partners to support future M&E capacity building initiatives
7. New regional M&E curriculum (See Annex II)
8. M&E Short Course Curriculum (See Annex II)
9.

Dissemination Mode/Strategy:

1. Various RUFORUM workshops and meeting of key organs:
    a. RUFORUM Secretariat internal meetings and communications
    b. Technical committee meetings
    c. RUFORUM Board and AGM
    d. Deans committee meetings and communications
2. Dissemination on the RUFORUM Newsletter – the November 2011 Issue has been dedicated to M&E issues and sharing of lessons. See Annex V for the article in the RUFORUM October Newsletter.
3. Production of Project activity Reports (See various Annexes with this final report)
4. Production of Project brochure and posters for distribution and display during regional and international meetings/conferences

5. A policy brief has been drafted and will be printed targeting university administrators, RUFORUM Board and governments on the need for M&E capacity development in support of African Agricultural training and research programs
6. Two abstracts were submitted for presentation at the *6th* African Evaluation Association Conference (Accra Ghana – 9th – 13th January 2012):
    a. *Developing university level M&E for agricultural training and research for development: Strategy, capacities, lessons and preliminary findings from a regional networking approach*
    b. *Monitoring and Evaluation Capacity: Strategies for University-led capacity development and practice for African Agricultural Research and Training for Development - Proposal for Roundtable/Panel Hosting at The 6th AfrEA Conference, 9-13 January 2012, Accra – Ghana*
7. RUFORUM has been invited to participate in the European Evaluation Association Conference (1-5 October in Helsinki, Finland). At the meeting RUFORUM will present a case study of scoping for M&E capacity building and cases of application of the M&E system in coordinating learning for smart agriculture and university capacity for climate change adaptation in agriculture in Africa.

Impact Indication

The project has enabled RUFORUM to raise the profile of M&E practice and capacity within the network. There are ongoing demands for review of existing postgraduate programs and course to ensure adequate coverage of M&E principles and practices. New programs being designed are borrowing the draft M&E curriculum for integration. While it is too early to assess any impacts, there are strong indications that M&E capacity is receiving attention and the project raises the profile of M&E in the universities. Haramaya and Mekelle Universities in Ethiopia, for instance, have indicated a desire to support and fund internal M&E capacity building for lecturers and administrators. Negotiations are being done on how RUFORUM can facilitate the in-house capacity building activities at the two universities with a hope of replicating this self-drive to other RUFORUM member universities.

The new MSc curriculum that has been developed is on demand and member universities through deans are requesting to be allowed to domesticate it for possible approval and accreditation by senates and councils. The strategies and training programs that have been designed emphasis on long changes in the practice of M&E in the universities, at RUFORUM and the wider agriculture and rural develop sector for which universities remain be key in building M&E capacity.

M&E Capacity remains a critical pre-requisite to the realization of the RUFORUM Theory of Change especially at the Universities, the wide network and agriculture sector in Africa. It is poised to remain key and demand for capacity building and professions in the agriculture sector with strong M&E competencies will be needed in all disciplines of agriculture.

Recommendations

The following recommendations have been advanced:

1. RUFORUM Secretariat and member universities to continue with strategic partnerships to fulfill the bigger demand for M&E capacity. Universities are encouraged to ensure M&E forms a critical part of their training, research and management
2. More elaborate efforts, led by the RUFORUM, PME and training and quality assurance unit to be put in place to roll-out the M&E curriculum and short courses. In order to do this the following will be necessary
    a. Continued awareness creation about the niche and rationale of the curriculum

b. Wide sharing of the curriculum
c. Retooling of lecturers on how to integrate the philosophy of the M&E in existing courses and to prepare them for teaching in the new curriculum
d. Design of separate module to be adopted by universities
e. Setting up of quality assurance mechanism to ensure regionality and standards for universities willing to launch the programs
f. On-line versions of the courses be developed to allow remote training of RUFORUM partners including research PIs, students in regional postgraduate programs, students in RUFORUM support graduate research grants and lecturers
g. Links be made to existing training service providers to synergize with the proposed course, provide additional opportunities and internationalize the curriculum
h. Roll-out strategy be designed to allow one-two universities to pilot the training with RUFORUM support for institutionalization and partnership

3. RUFORUM continues to mobilize additional resources to support comprehensive capacity development as envisioned in the draft M&E capacity building strategy
4. Other development partners including IDRC will be approached to support the next stage of M&E capacity development which may include implementation of regional MSC/short courses or running of short courses
5. RUFORUM to continue to be a broker of information/resources for universities to access M&E capacity building opportunities and funding in line with the business plan 2011 – 2016.
6. Universities are encouraged to mobilize own resources to organize in-house short courses for staff to bring them to speed with cutting edge M&E skills in response to the capacity gaps identified in the project.

ANNEXES

ANNEX I: REPORT OF UNIVERSITY LEVEL AND RUFORUM-WDIE M&E CAPACITY NEEDS ASSESSMENT

See attached workshop report

ANNEX II: RUFORUM M&E MSc/Short Course DRAFT Curriculum

See Attached PDF file

ANNEX III: RUFORUM M&E Capacity Building DRAFT Strategy

See Attached PDF file

ANNEX IV: PowerPoint Presentation to Writeshop II on M&E Capacity Strategy Curriculum Design

See Attached PDF file

ANNEX VI: RUFORUM Abstracts presented at 6th African Evaluation Association Conference

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Developing university level M&E for agricultural training and research for development: Strategy, capacities, lessons and preliminary findings from a regional networking approach

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ABSTRACT
The limited capacity and practice of M&E for driving agriculture in African universities is one of the main constraints to implementing the Comprehensive African Agricultural Development Program (CAADP) pillar 4 on agricultural research, extension and training. The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), a network of 29 universities in 17 eastern, central and southern African countries, in operationalizing its M&E strategy has conducted a series of studies and documented cases on the strategies, capacities and lessons from university level M&E using a regional networking approach. These have targeted postgraduate training and research for agricultural development and the endogenous as well as exogenous M&E capacity issues as part of tracking of institutional and individual transformation. In many African universities M&E systems are characterised by an increasing trend towards performance management and growing culture of being accountable to donors and stakeholders. This provides a demand for M&E information and capacity in the universities. The university level M&E mainly deals with monitoring activity implementation (resource utilisation, activities undertaken and to some extent translation of inputs into outputs) with little if any focus on outcome and impact monitoring. Likewise, M&E of research processes and outcomes is solely the responsibility of individual research implementers in the universities. Although there are units for approving, registering and cataloguing all research projects and coordination of research projects and programmes. M&E of research activities is relegated to mere provision of progress reports that is largely

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activity −based and not so much against performance indicators. In responding to the demand for tools, strategy and capacity for monitoring and evaluating performance, RUFORUM uses a networking approach to capacity development as well as impact assessment and has developed a robust M&E strategy as an elaborate and innovative M&E and performance management design. The application of the strategy has been through benchmarking and tracking of capacity building activities mounted for graduate training, research, university outreach and institution strengthening. This paper presents lessons and documents new frontiers as RUFORUM operationalizes its M&E strategy. It relates the principles and practices of M&E to the processes and lessons in a network organization. A conceptual basis driving the process is presented. Principles of both exogenous and endogenous rights, responsibility and accountability of various stakeholders in African agricultural tertiary education in capacity development programs are also elucidated. In highlighting the practice and responsibility of M&E for performance at universities and RUFORUM, the paper also presents selected findings and cases of university level capacity development, endogenous change and adaptation, performance as well as underlying M&E capacity issues in relation to university postgraduate training and research capacity development coordinated by RUFORUM since 2008.

Key Words: University, M&E responsibility, agricultural tertiary education, RUFORUM, networking, capacity development, agricultural training and research for development

ANNEX VII: Final Financial Report

See separate File (PDF)

ANNEX VII: M&E Capacity Building Project Brochure

See Attached PDF File

RUFORUM M&E CAPACITY ASSESMENT DRAFT REPORT

June 2012

M&E at Universities

Demand for M&E information

Trends towards performance management and the growing culture to be accountable provide a growing demand for M&E information in the universities. This is complemented by development of strategic plans spelling out strategic directions in terms of results the universities are trying to achieve; strategies which define how they will achieve the results and performance indicators which will enable the universities to know if they have achieved the results. However the strength of demand for M&E varies in the different university faculties and departments visited.

- In Kenya there is a government initiated focus on performance contracts for public institutions, including universities in their role as providers of public services. Consequently universities such as University of Nairobi (UoN), Jomo Kenyatta University of Agriculture and Technology (JKUAT), and Egerton University have a strong focus on performance management. Individual staff, departments, faculties and colleges are required to provide information in performance contract reports on a quarterly basis.

  Performance contracting is cascaded from the University of Nairobi to its colleges, faculties and eventually to departments. Performance contracting which is a government-led initiative provides a basis for setting targets and expectations (e.g. number of grants won, number of publications, etc.) and requires provision of evidence of progress. Performance contracts are signed by the college Principal and the faculty Deans but are not signed at departmental level. Nevertheless, the contracts stipulate the performance requirements at departmental level. The principal follows up the deans to ensure that the targets are achieved. Likewise the deans follow-up with the departments which track the individual staff. This system implies that each staff in the university has to contribute to the achievement of certain deliverables. UoN had for long operated without a strategic plan, vision, mission, etc. Performance contracting has facilitated the process of establishing and entrenching these. Staff undergo annual staff appraisals where they highlight any achievements, numbers of projects undertaken, number of publications, numbers of students supervised, number of conferences attended, and the like.

- A similar approach is also present in Ethiopia and Rwanda, although most likely missing from other countries represented in RUFORUM. Findings from the 2009 baseline study revealed that Rwanda had introduced performance management contracts for public servants while Ethiopia had a Business Process Reengineering (BPR) that culminated into redesigning of organizational processes for better performance.

- Use of exhibitions/fairs/open days to show case the training programs, and research outputs which can impact on societal development. Case study universities, colleges and faculties also participate in national fairs/exhibitions so as to market their programs. Compiling information for sharing during the national exhibitions/shows as well as

university or college field days provides a pull and an opportunity to use M&E information in the universities

- Makerere University established a communication office at central and college levels. The office is used to disseminate information on innovations from the university. Existence of the office offers demand for information related to results from college/university interventions. The university holds monthly press releases and the colleges have been encouraged to follow suit.
- ***The need to show progress towards achievement of strategic objectives, the derive towards performance management, need for information to feed the changing marketing strategies as well information sharing with the media provide a growing demand for M&E information in the universities***

It is vital to recognise the fact that universities are influenced by the domestic policy framework around performance management and the ability of RUFORUM to influence such frameworks may be limited. Consequently, and through a better understanding of the particular opportunities and constraints faced by member universities in different countries, RUFORUM will need to carefully consider its ambitions and strategies in terms of strengthening M&E practices.

Objectives and Performance indicators

Results-oriented M&E requires that clear objectives and performance indicators are agreed and developed from the on-set. Performance indicators are measures of inputs, processes, outputs, outcomes and impacts. Tracking, recording, analysing and reporting information related to the indicators is vital for assessing progress towards achieving the targets; early identification of discrepancies which can trigger timely corrective action to be taken at the operational level. The process also provided lessons and recommendations on areas for improvement, as well as modification of objectives, resources and implementation processes.

- Information collected from 13 RUFORUM member universities revealed that the universities and colleges/faculties have clear objectives and output targets. These are reflected in the strategic plans. The strategic plans have been cascaded up to department levels in the case of UoN, college level in case of UNIMA and faculty level in Gulu university.
- Eight out of the thirteen universities have also identified performance indicators and periodic targets with which they would track progress and extent of achievement of the stated results. In five universities there was no evidence that performance indicators are developed. Performance indicators and targets form the basis for reporting (UoN, JKUAT) while they were not consistently used in some universities (Gulu).
- The findings indicates a shift towards results performance indicators in the universities compared to findings of 2009 baseline survey which indicated that there was no evidence of development and use of performance indicators in the universities.

M&E strategies and plans

An M&E strategy gives a detailed description of measurements, analysis and reporting needed to monitor and evaluate an operation's implementation and achievement of results. Without a proper strategy and or plan, M&E will be done in an ad hoc and uncoordinated manner hence institutionalization and involvement of important stakeholders will be difficult. Findings reveal that as was the case in 2009, with the exception of UNIMA which has developed a template for M&E framework, none of the other universities/colleges/faculties have a consolidated M&E strategy or framework. Even in the case of Bunda, the framework was not fully implemented due to resistance from the universities.

Structures for M&E

Roles and responsibilities for M&E are assigned to particular units/offices in the universities. These include the following

- Quality Assurance (JKUAT, Egerton),
- College/faculty registrar/administrator
- Dean of post graduate studies and research (Gulu, Bunda)
- Directorate of Research (Mekele, Egerton)
- Program Coordination Office and Centre for Agricultural Research (Bunda-UNIMA)
- Directorate of planning (Gulu)

These units are complemented by the other management offices (College Principals, Faculty Deans, and Heads of departments) who play a key role in following up-requests for information, compilation of information from the entity they are in charge of for onward submission to the other offices.

Reporting

Varied institutionalisation of reporting M&E information in the universities.

- In universities where performance management contracts have taken root, individual staff, departments, faculties and colleges are required to provide information in performance contract reports on a quarterly basis. A request for performance information from the Chairperson/Head of Department (HOD) triggers self reporting by the individual staff (UoN, JKUAT, Egerton). This information is either reported verbally in departmental meetings or provided through emails addressed to the HOD. The HOD compiles the information from individual staff into a departmental report and forwards to Faculty Dean. Likewise the dean compiles information from the departments into a faculty report for onward submission to the college principal.
- At Bunda-UNIMA with the exception of a form from the Vice Chancellor's (VC) office which individual staff are expected to complete on an annual basis so as to provide information on research projects done, number of publications, conferences attended, number of students supervised, courses taught and the credit hours, there is no other formal reporting process for staff. There exists a system of annual reporting by Heads of Department although it is not harmonised. Departments are expected to produce reports which have to be consolidated into a faculty annual report and subsequently a

college annual report. However there is no standardised reporting templates followed hence aggregating the department reports into a faculty report or faculty reports into college report becomes a challenge as different departments/faculties puts emphasis on various aspects.

It was reported that there are task forces to follow up on each of the strategic outcomes from the UNIMA 2010-2015 strategic plan. Annual review meetings have been conducted since 2009 to review progress on the implementation of the strategic plan. Each department reports at the end of the year.

- At Gulu University, the Director of Planning developed a reporting format and sent it to faculties but only one institute responded to the request for information (Institute of Postgraduate Studies). This necessitates the physical movement of the officers to the respective faculties and departments to gather information. Reporting is not consistently aligned to targets. The template has been modified to focus on achievements in the calendar year, challenges faced, and suggestions on how to move forward. The university's Management Committee discusses the challenges and issues raised in the reports and delegates responsibility for following up to relevant organs. Faculty progress is reported on every six months. The Deans charge Heads of Department with the responsibility of generating reports which feed into the faculty reports which are then sent to the Directorate of Planning to feed into the university annual reports. In June 2011, the requirement to report to the University Council was initiated.
- No evidence of existence of electronic data bases for the information captured in through the existing reporting procedures in the case study universities. The information is stored as hardcopies in files or as MS word files. This impairs timely updating of information, as well as quick retrieval and analysis to generate different reports.

Use of M&E information for decision making

The practice of management meetings (monthly or otherwise) at senate, college, faculty or department levels provide an opportunity for use of M&E information to support informed decision making.

B. Practices for M&E in the universities by focus area.

Discrete parts of systems for M&E exist in all sample universities. However systems have been developed and implemented to varying levels.

M&E of teaching and learning processes

Across the study universities M&E of the teaching and learning processes is closely linked with systems for quality assurance.

i. Class attendance list

Student attendance of a certain proportion of classes of their respective program classes is a pre-requisite for sitting their exams for a given course is among the perquisites for fulfilment of the requirements for student progression in the university. Hence universities

have instituted class attendance lists as a measure for tracking whether students and lecturers attend the lectures.

- The attendance registers are signed by both students and lecturers (Egerton, JKUAT, and UoN). They also track whether the lecturer was on time, and whether each lecture was delivered for the stipulated time. In the event that the lecturer misses some hours, s/he has to indicate how they are going to compensate for that time.
- Practice not strictly adhered to in some universities. At Bunda-UNIMA, lecturers are expected to track student attendance of class however this is impaired by lack of timely availability of lists of students expected to attend a class. At MAK the large number of students in some under graduate classes has made it difficult for the lecturers to strictly adhere to the practice of filling attendance lists. Consequently no standard procedures are used to track undergraduate student attendance of lectures at MAK. Individual lecturers have informally devised own means of tracking student attendance of classes. Measures cited include use of unannounced quizzes whose marks are used as part of the continuous assessment process.

ii. Student course leaders track teaching by the lecturers.

The course leaders monitor delivery of topics, and adherence to stipulated lecture/contact hours (Bunda-UNIMA, MAK, Gulu) though no templates are in place to guide this process. In the event that a lecturer misses, they have to communicate to the students with a clear plan for make-up class at an agreed time and date. Then if the lecturer misses and fails to compensate, students report to the head of department, who follows up with the concerned lecturer. This process is reinforced by on spot checks by faculty Deans and head of departments who also track whether the lecturers teach the students, and have attained the minimum credit hours for the course.

iii. Student evaluation of course/lecturer

A composite tool is used to evaluate the course content, and delivery by the lecturers (that is, whether course content was given and was descriptive enough; coverage of the content; the way it was taught, whether tests were given marked and revised, among others). This is now a routine way of work in JKUAT, Egerton, Bunda-UNIMA and UoN, at both undergraduate and post graduate levels. This practice was only picked in the 2011/2012 academic year in Gulu university.

The questionnaires are analysed by the Directorate of Quality Assurance and results shared with the Dean, Head of Department (HOD) and the individual lecturer. The HOD discusses the results with the respective lecturers (JKUAT, Egerton, and UoN). Production of reports and timely sharing of results from the course evaluations is vital for learning and lecturers making improvements in teaching and delivery of the courses. However effectiveness of this practice is impaired by lack of feedback to lecturers (Bunda-UNIMA). It was noted that colleges/faculties face capacity challenges in terms personnel to undertake the data management and analysis (Bunda, MAK).

iv. Internal and external peer review/moderation of exams

End-of-semester university exams are subjected to a peer review process involving internal and external reviewers. The internal process involves vetting of exams during a department

meeting which may suggest improvements (MAK, Gulu, Bunda-UNIMA). The vetting exercise involves scrutinising whether the content is aligned to the curriculum and covers the sufficient scope in the course syllabus, whether the exams can be completed in the allocated time, the language used, balancing of theory, concepts and application of the knowledge, fairness, as well reviewing the corresponding marking guide/scheme. There are variations across universities in process followed to incorporate suggested improvements in the exams.

- The individual lecturer has a responsibility to incorporate the suggested changes and the head of department follows up to verify that the examiner has indeed made the corrections. The deans track whether the departments held examination vetting meetings (Bunda-UNIMA).
- After setting the exams, the lecturer hands over to the exam coordinator at department level who also incorporates the changes following the department vetting exercise (MAK).

External moderation of end of semester exams is conducted in the sample universities (JKUAT, Egerton, MAK, Bunda-UNIMA, Gulu and UoN). External examiners moderate the way questions are set (balance in scope, their clarity and strength, and their consistency with the course outlines) among other factors. Reports of the external examiners are shared with the HOD who uses the insights to inform staff members during subsequent department meetings. At Bunda faculty deans monitor whether the department engaged external examiners. The external examiners must be knowledge in the focus disciplines and their CVs are required as documentary evidence for their professional expertise. The external examiners CVs are vetted and approved during departmental meetings before they are sent to the deans. Minutes of the department meeting which approved the CVs are required as supporting documents.

v. Continuous Assessment Tests and Exams for student learning

vi. Supervision of exams

In case of written continuous assessment tests, the lecturer has to inform the students ahead of time and also communicate to the head of department so as to get support in course of invigilating the exams (Gulu, MAK, Bunda-UNIMA). With regards to the end of semester exams, there is a chief invigilator for each examination centre/room who tracks and records time the exam started, number of students in the examination room, challenges encountered, time exam ended. This information is submitted to the supervising dean who also prepares an overall report. It was noted that at Bunda the practice of invigilators submitting written reports started in 2010/11 academic year. Previously they would provide verbal reports to the supervising deans. The reports are shared during the management meetings at faculty and college levels.

At Gulu University, each exam is assigned two supervisors. The lecturer teaching that course is supposed to be present at the time of the exam to respond to any queries that may arise. Students are supposed to present examination cards as a pre-requisite for sitting exams. Examination attendance lists are issued during every exam and are signed by all students in attendance. This information is cross checked to ensure that the number of students present tallies with the number on the exam attendance lists. Attendance lists are filed in

the Deans' offices for future reference. An incidence form is also provided to track all unexpected incidents that may arise during the exam. The supervisors have to sign in the book in the deans' office to confirm that the exam was conducted. Exam results are presented during Faculty Board meetings during which the Board assesses student performance.

vii. **Internal and external tracking of marking of exams and compilation of exam results**

Various measures were cited for tracking whether the lecturers marked the exams and correctly recorded the student marks. These include:

- Use of external examiners' who physically take a random sample of the student examination scripts, mark them and verify the marks awarded by the internal examiner (Egerton, UoN)
- Lecturers entering the student examination numbers and marks into electronic spread sheets. This should capture information on the continuous assessments (quizzes, course works, practicals and written tests) as well the semester exams. This is intended to minimise mistakes due to adding or omission of student marks. HODs are expected to crosscheck the information in the spreadsheets submitted by the lecturers. For instance do all the students exist in the university, and were eligible to sit for the exams, did the actually sit the exam? The marks are then submitted to the faculty administrator/registrar with a copy to the deans.

viii. Tracer studies

Ideally universities would be expected to undertake tracer studies at the end of each cycle to track their former students absorption in the job market, get feedback from stakeholders as well as employer satisfaction with the graduates. Findings reveal that tracer studies are not done on a regular basis (UNIMA, Gulu and MAK). They are usually done when there is going to be a curriculum review. It was noted that training programmes mature at different times and systematic tracer studies are rare. It was noted that there is need to conduct systematic tracer studies as part of the M&E system. Nevertheless departments maintain informal links with past students in which case information is in the hands of individual lecturers/instructors, no clear mechanism for getting updates and no system for aggregating such information at faculty/college level.

M&E of Research and outreach activities in universities

Varied institutionalisation of procedures for tracking research and development projects, there outputs and outcomes.

- Unit responsible for registering, cataloguing all research and development projects in the university exist and these go by different names. At Bunda-UNIMA it is the Program Coordination Office and the Centre for Agricultural Research while it is the directorate of planning and dean of graduate studies at Gulu university. In Mekele university it is the Research Division. By and large monitoring and evaluation of research is project based. These units are effective in capturing projects commissioned by the university. For university commissioned projects at Bunda-UNIMA, hard copies of inventories of research conducted in these units exist. There is routine monitoring of the projects following the project implementation plans. It was noted that for such projects, reporting is against performance indicators with emphasis on result monitoring (tracking

outputs and outcomes) in addition to utilization of disbursed resources. Result monitoring was noted to have gradually increased in the college even for projects commissioned by other agencies. However these projects were noted to have a problem of poor documentation.

Monitoring of research at Bunda is also supposed to be undertaken by the Research and Publication Committee (RPC) with representation from all departmental members in the faculty, and the faculty if its at the college level. The committee is expected to reviews proposals, develop inventory of all research and receive progress reports from implementers. However, it was noted that the RPC committee has not been as effective in implementation of its activities.

- For grant projects commissioned by other agencies, information is the units mainly rely on finance departments to capture the title of project, objectives, amount of funds, and the source of funds in case the funding goes through the main university finance system. This limits the offices/units responsible for tracking research to only capturing the title, and objectives of the projects but not progress and their respective output (Bunda-UNIMA, MAK and Gulu University). This makes it more difficult for the college to gather the relevant information for monitoring purposes.
- Reporting is mainly driven by donor requirements. Nevertheless PIs are required to periodically provide information on project profiles (Gulu, UNIMA, UoN). Emphasis on implementation M&E where rresearchers report on progress on research against objectives and activities (Gulu, UNIMA). Funds are disbursed against activities and access to more funds is made possible upon submission of written reports.

  With effect from June 2011, Gulu University through the directorate of planning has instituted mechanism for tracking of research and development projects in the university. Using information from the accounts department on research and development grants as the starting point, the PIs in each faculty are required to provide progress reports (project profiles) to the directorate of planning through the faculty deans every six month. The reports capture the host faculty, start date, end date, Principal Investigator, implementers, source of funding, attached budget, title, objectives, expected outputs, and progress. Then the directorate of planning uses this information to isolate completed projects for which additional information related to extent of achievement of project objectives, key outputs and recommendations from the project and how the project outputs are going to benefit the community members and other stakeholders is captured. The information on research projects in the university is shared with council.
- By and large publications are the main research outputs tracked and these are linked to staff appraisal for promotion purposes. Generally there is no systematic tracking of research projects, there outputs and outcomes in the case study universities. Key informants at Bunda noted that there have been lots of research outputs generated by the college but there is no proper tracking and recording of information at the college level which limits visibility of the institution. Likewise tracking of research outputs from postgraduate students is limited to their theses. Similar situation exist at MAK, Gulu and UoN.

The Faculty of Agriculture at UoN lacks a formal system of tracking progress and achievements although the capacity to monitor exists. The M&E in the faculty is weak and there is no clear system besides the national system of performance contracting. The University of Nairobi does not possess a formal system of tracking research. Different faculties operate as stand-alone entities in this regard. Tracking is done through the administrative structures, that is, the Chairman of each department relays information to the Dean. However M&E is not well entrenched in the departments. Every research program has its own M&E system. Researchers with projects present verbal reports during departmental meetings and during workshops involving other staff members. Quarterly progress reports are produced by researchers, students and lecturers. Reports are made against activities, progress towards the achievement of targets, current project status and finances. Students are given timelines for milestones in their research such as deadlines for proposal submission, field work and the like as a means of ensuring that they adhere to the schedule. At the end of every semester, students write progress reports which are certified by their supervisors. Supervisors sign workplans which are also monitored to ensure that they deliver and supervise adequately.

- Evaluations of research projects are mostly externally driven and or restricted to projects undertaken in collaboration with governments, Non Governmental Organizations (NGOs) or CGIAR centers. Nevertheless instance of university research teams establishing participatory systems to track outcomes of their projects were encountered at Gulu and Bunda (UNIMA), those these are limited to specific projects. At Gulu University, the Institute of Peace and Strategic Studies' community outreach project for peace has established participatory M&E with community groups with regards to benefits of their interventions. Most agricultural research projects rely on informal feedback to get indications of their impact on the target communities.

  University wide evaluation studies were noted UoN as requirement to assess delivery of services as part of the performance contract for the university. Gulu University has plans to undertake evaluations to ascertain outcomes from complete research and outreach activities but this is yet to be implemented.

Gaps and Challenges in M&E in universities

An iterative process was used to identify the capacity gaps and challenges in the current M&E systems in the universities. The first involved review of findings for the 2009 M&E baseline survey and the July 2011 capacity building workshop. This was followed by key informant interviews during visits to case study universities. A synthesis of the gaps was followed by a presentation to participants in the workshop on development of strategy for strengthening M&E. This was followed by a plenary discussion and verification. The emerging gaps from this process are presented below

i. Inadequate planning for M&E which leads to second tier problems
   - Ad hoc M&E activities
   - Limited documentation of the lessons learned. There is no clear system for systematic documentation of lessons from implementation experiences and follow-up on implementation of recommendations. Lessons are often discussed in

department/faculty management meetings but based on ad hoc observations. Limited use of evidence based learning and improvement.

- Limited utilization of the information from the M&E

ii. No systematic tracking and reporting of outputs and outcomes of research and development projects. No systematic reporting system supported by clear reporting tools/templates and reporting schedules. For instance the Malawi National council of Science and Technology asked for a list of technologies developed at Bunda, but the college could not generate a full list. Likewise key informants from Gulu and MAK revealed that a lot of research is done by the universities but there is no proper documentation of the outputs. When university staff are collaborators on projects with funds directly going to the staff or department it very difficult for the university to track outputs of such work unless staff have cited publications. The poor reporting system is compounded by limited sharing of information on the projects by staff-passive resistance and laxity in response to request for M&E information and reporting by staff

iii. Weak structures for effective M&E

- Young/lack of specialized M&E entity/unit. Universities have no independent entity/unit to take the lead in setting, institutionalizing and implementing a harmonized M&E system. Consequently different aspects of M&E are guided by different entities.
- Inadequate resource allocation (financial, human, and physical) for M&E. Though M&E is often recognised as being vital for effective interventions, program implementation and management, resource allocation to M&E does not match this stand. The entities charged with M&E responsibility are poorly manned often with one staff member who also has other duties. For instance the dean graduate studies can not effectively handle tracking all staff and graduate student research on top of teaching, outreach and other administrative duties. A one person unit may be with a secretary may not be able to handle all data from student evaluation of lecturers hence delays in entry and analysis of the information.

iv. Inadequate incentives for systematic data recording, documentation and reporting.

- Organisational environment, policy guidelines, requirements and their follow-up. It was noted that to be effective requests for data/information from staff (adherence to reporting schedules and formants) would require an executive order and subsequent follow-up to by management to demand for the information. For instance it was noted that laxity in reporting is not a reflection of the lack of capacity but rather a inadequate management to drive to foster timely reporting. .
- Extractive data collection in the universities with little if any information to those who provide the information. Purpose for which information is requested not clearly communicated and no evidence of use of the information. Lack of clarity on purpose for which information is required and failure to provide feedback on how it is used demoralise the staff/students who have to fill in the forms to provide the information. Cases where information is routinely collected but staff not seeing any report from such information or getting feedback on areas for improvement or implications for

them as individuals or departments were cited as a hindrance to sustainable data collection and information management.

- Lack of formant for tracking research
- No proper system for management of data for quick retrieval, manipulation and sharing with users. No adequate planning for data handling and processing, inadequate staff to manage the information and lack of appropriate soft ware to store the data. Either data is in small databases spread in many centers, or large quantities of data are collected and the units find it extremely difficult to manage, process the data into information and ensure timely feedback and sharing with users

v. Inadequate knowledge and skills with regards to Planning Monitoring and Evaluation. It should be noted universities have individuals who are competent and experienced in the field of M&E. However inadequate skills were cited even among staffs who offer M&E courses especially with regards to cutting edge approaches and methods. The skills and competence gaps which hinder M&E are the limited pool of personnel with knowledge and skills in M&E, lack of appreciation for being monitored and evaluated as well as the failure to report adequately against set goals/targets where they exist.

Findings from an online survey on M&E capacity and training needs assessment mounted by RUFORUM revealed that there gaps in the knowledge and skills of teaching staff and those involved in research. Results reveal that majority of the respondents involved in teaching and research reported that their competence on rights based M&E, monitoring without indicators and outcome mapping was low (Table 1). Findings reveal that only one in every four respondents involved in teaching cited being highly competent in utilisation-Focused Evaluation, designing and negotiating terms of reference for an evaluation, current trends in M&E, design of results-based frameworks, building a learning culture in organisations, and impact assessments.

Table 1: Perceived Level of Competency on Specific M&E Elements

M&E Aspects	Teaching			Research			Administration/Mang't			Extension/Outreach		
	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
Rights based approaches to M&E	54	33	13	45	39	17	50	27	23	41	41	19
Monitoring without indicators (MSC - Most Significant Change)	52	24	25	50	22	28	48	21	32	37	32	32
Outcome Mapping	51	31	18	42	38	23	37	36	27	23	55	23
Utilisation-Focused Evaluation	45	32	24	43	33	23	39	29	34	27	41	32
M&E in the context of decentralisation	45	32	23	44	35	21	38	24	39	36	36	27
Building M&E capacity with organisations	43	26	31	38	31	30	43	19	38	27	41	32
How to design and negotiate the terms of reference for an evaluation	40	41	19	34	43	23	45	25	30	23	55	23
How to design a participatory M&E system	39	32	29	36	32	32	39	17	43	23	27	50
Evaluating partnerships and other relationships	37	34	29	33	36	31	38	24	39	10	55	36
Current trends in M&E	37	37	17	46	31	23	53	26	22	35	40	25
Make Strategic Plan evaluable	31	41	28	25	45	30	29	29	42	19	41	41
Design of results-based framework	33	44	23	30	45	25	28	45	28	18	45	37
How to build a learning culture	27	49	25	27	48	24	26	42	32	24	38	38
Impact Assessment (M&E for impact)	16	51	22	35	37	28	37	26	37	23	41	36
Meeting the requirements of donors	29	39	32	27	38	35	24	33	43	14	32	54
How to develop a Logical Framework	21	46	33	25	39	37	20	35	45	5	55	40
How to get the most value from a Logical Framework	27	44	28	27	40	34	26	42	31	18	41	41
Collecting, analysing and using qualitative data	8	42	50	9	30	62	10	25	65	5	29	67
Using surveys in an evaluation	9	44	48	8	30	63	15	25	60	0	28	78
Questionnaire design	14	38	49	11	28	61	15	25	60	5	18	77
Interviewing skills	11	30	60	9	22	69	10	30	60	0	23	77
Simple statistics for M&E	17	38	45	13	31	55	15	40	45	0	41	59
Using software packages to analyse data	19	43	38	24	35	40	25	25	50	14	23	64
Presenting M&E results	16	43	36	21	35	45	31	16	53	18	14	68
Using M&E results for decision making	22	38	35	26	31	43	25	25	50	9	27	64

The findings on staff rating of levels of skill/competence on M&E was further analysed by looking at another set aspects including indicator development and measurement, development of M&E strategy, designing M&E frameworks, methods for tracking performance data, data analysis, survey research, questionnaire based data collection among others. Results revealed that across aspects respondents who are involved in teaching registered lower average ratings relative those in outreach and extension. The average rating was below 3 implying low capacity with respect to indicator development and measurement, development of M&E strategy, designing M&E frameworks, using existing data sources for M&E, methods for tracking performance data, and estimating data quality (Figure 1). However findings reveal a high level of need for institutional and individual capacity on these elements of M&E (Figure 2)

Fig 1: Level of skill/competency in M&E aspects

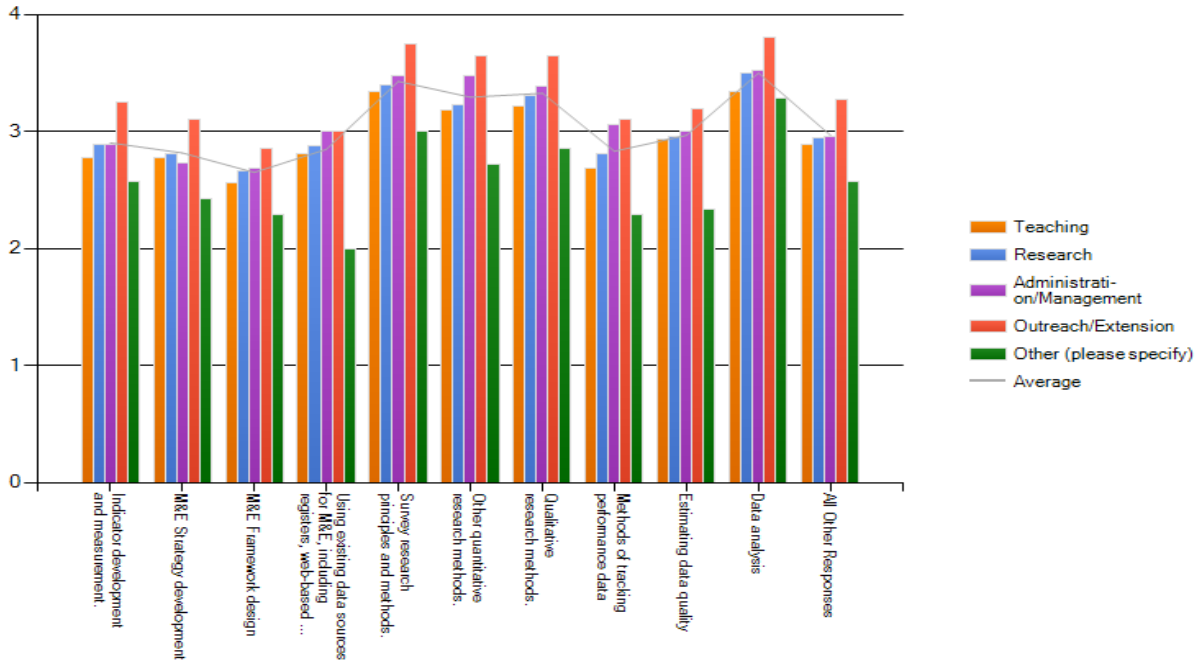
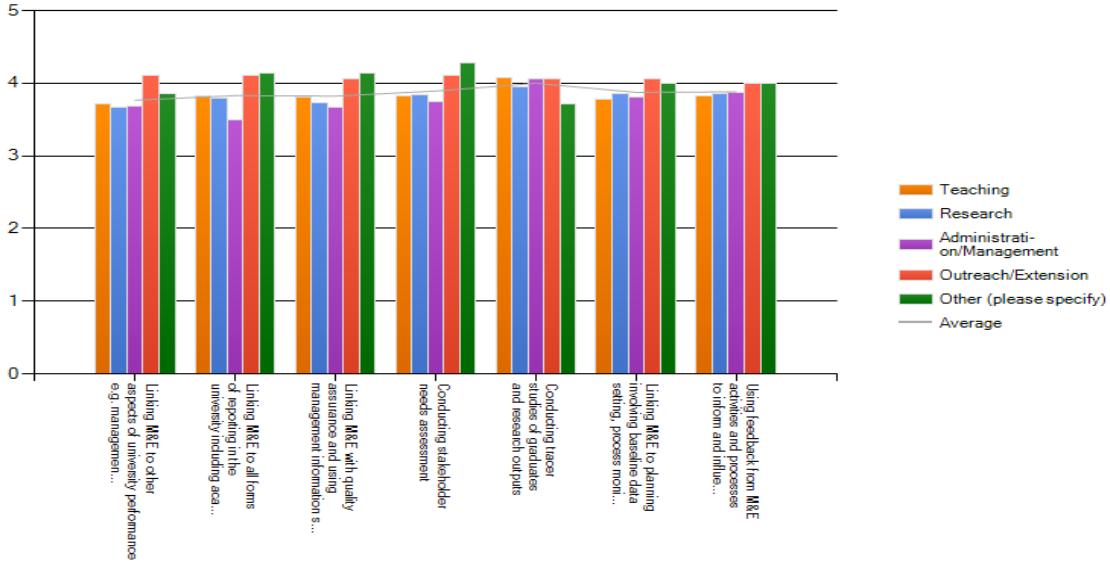


Fig 2: Rating on level of need for institutional and individual capacity on elements of M&E



Following the presentation, the emerging gaps were categorised into 7 areas. Then participants in the workshop on development of strategy for capacity strengthening of M&E were asked to rank the areas they felt were the main challenges constraining effective M&E in the university, and to again rank them with a view of identifying the most important areas which have to be addressed for M&E to function well in the universities. Results from this process are depicted in table 2 below. The results reveal that learning and improving based on evidence/data; enabling environment/context for operationalising Monitoring Evaluation and Learning systems; and clear roles and responsibilities and adequate resources to do M&E in that descending order were ranked as the most pressing challenges and important areas for M&E in universities.

Table 2: Performance dimension (challenges and importance)

Performance dimension	Rank (Challenge)	Rank (Importance)
Learning and improving based on evidence/data	1	1
Enabling context for operationalising M&E/Learning systems	2	2
Clear roles and responsibilities and adequate time allocation for staff to do M&E	3	3
M&E skills competencies of staff	3	5
Accessible data for reporting purposes	5	6
M&E performance management framework	7	4
Engaging key external stakeholders in M&E processes	6	7

Strategies for strengthening M&E in universities

i. Advocacy for/creating awareness of M&E. This should be done by both RUFORUM and university actors.
   - Enlighten management of gains to be got from having a good M&E system grounded on an M&E framework. VCs/Deans/other senior staff need to be sensitised on M&E if they are going to support it in an effective way. RUFORUM should take advantage of its organs notably the general assembly, board meetings, deans committee meetings as well as other events to create awareness on the value of having functional M&E systems to the universities. It is vital to note that increasingly RUFORUM supported programs (training programs and research grants) are not restricted to faculties of agriculture in the colleges – hence RUFORUM should devise strategy for engaging deans of other departments/faculties that implement RUFORUM grants or programs.
   - Creating awareness among staff on value of feeding information into the system for improvement of service delivery.
   - Inspirational talks for sharing of M&E practices
   - Through involvement of PIs for RUFORUM supported grants, demonstrate the value of a good M&E practices to the entire university system. RUFORUM should work towards converting the PIs into champions for good M&E.

- Take lessons from processes for establishment of quality assurance procedures in the universities. Improving the M&E system within the university should build on the existing structures and process.

ii. Facilitate sharing experiences, identify and promote best practices
   - RUFORUM should help M&E practitioners to find and link with each other – both within and then across universities.
   - Support setting up an M&E community of practice across member universities. Establishing communities of practices will require active facilitation by RUFORUM Secretariat especially in initial stages. RUFORUM should devise strategies to make the communities self-organising.
     - Priority should given to members of the M&E communities of practice in universities to undertake M&E related activities tasks commissioned by the their university.
   - The M&E practitioners within RUFORUM member universities should be encouraged to network with established entities such as the African Evaluation Association, M&E practitioners in the NARs in the ASARECA region and their members.
   - Take advantage of social networking to facilitate information sharing among communities of practice (students, staff and experts in the field on M&E topics). Establish e-platform/social network for M&E practitioners to keep in touch across universities
   - Support generating new knowledge in M&E. Commission research studies in the field of M&E which will help to push the boundaries of the field
     - Possibility of submitting M&E proposals under CGS or other calls

iii. Support short course on M&E for retooling of staff. The action points to operationalised this strategy include
   - Sharing research findings from M&E capacity assessment with staff to raise awareness on gaps and their importance
   - Conducting a needs assessment for staff
   - Organise a TOT regional training for key individuals. This could be done for staff who already have some experience during a 2-3 month vacation to sharpen their skills and bring them up to date. Then the TOTs should be supported to conducted university level trainings. This will ensure coverage of more people.

iv. Facilitate curriculum review to incorporate M&E in specific programs at undergraduate and post graduate levels.
   - Building practical elements in M&E training and engaging students, researchers and lecturers in actual M&E practice
   - Designing degree (MSc) and certificate courses in M&E building on existing M&E courses.
   - Through awareness raising, sensitising universities to the potential for introducing improved M&E courses. Retooled teaching staff can be motivated/encouraged to incorporate some of the new M&E elements into their courses (without restructuring the course). Restructuring a course to incorporate the new M&E modules can take place within a year but the course will only be provided for the new batch
   - Getting VCs to encourage all (relevant) courses to include M&E components. Incorporating M&E modules in courses that are newly being developed
   - Identify champions to facilitate introduction of the improved M&E curriculum in universities. Course design is primarily led by the responsible teaching staff (champions) who must convince others (e.g. deans, etc.) that this is necessary. Innovative ideas and curriculum changes can happen during the (5-year) strategic planning processes that already take place within the universities.

v. Strengthen knowledge management and dissemination of information from M&E

- Link data management and communication within the universities to evidence based learning for improving.
- Establish and continually update an M&E e-forum for sharing experiences, new developments and best practices on M&E in the ECSA region
- Take advantage of staff in universities (faculty /college registrars) and orient them on how to analyse and present data that is relevant and useful for evidence-based learning/decision-making in HE institutions.
- Capacity Building Trainings on data and information management so as to make use of feedback on evidence-based learning more generally
- Making performance data public/accessible within the universities

vi. Support universities to develop M&E systems
- It was noted that this is not RUFORUM mandate, but top management in universities tend to ask for this support. Hence RUFORUM can play a brokering role to help universities link up with actors who can do this.

THE REGIONAL UNIVERSITIES FORUM FOR CAPACITY BUILDING IN AGRICULTURE (RUFORUM)

MSc Program in Monitoring and Evaluation (M&E)

&

Short-Term Certificate Course in Monitoring and Evaluation (M&E)

DRAFT: July 15, 2012

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1. INTRODUCTION

Today, the African sub-continent has a vast number of NGOs involved in development aid. In addition to many governments' and donor initiatives to get the people of Africa out of poverty, there has been a growing concern about identifying the achievements of such initiatives. While there has been talk of monitoring and evaluation of such programs/projects, methodologies for assessing impacts are problematic. Additionally, there are different monitoring and evaluation guides developed to suit such programs and projects. Hence, checking performance of the effectiveness of individual projects, across sectors and country programs, remains an issue. At the same time, as articulated in the Paris Declaration on aid effectiveness (2005) which made explicit commitment to increasing the impact of aid through the Millennium Development Goals (MDGs), development partners are increasingly looking at the impact of aid and aid effectiveness, through the conduct of plausible impact assessment. These assessments require data derived from M&E systems. At the International Conference on Financing for Development in Monterrey in 2002, development partners re-emphasized this need by agreeing to focus on managing for development results. This agreement advocates a stronger orientation of monitoring systems towards development results. This means, the emphasis has shifted towards identifying what changes (benefits that have been achieved directly or indirectly by development interventions), as well as measuring what has been done. Ongoing reviews, assessments and learning are prioritized equally with end of project evaluation. For these reviews to take place it is important good M&E systems are incorporated at the planning phase and all levels of reporting.

The RUFORUM has concluded that one of the key problems emanates from the lack of capacity in Monitoring and Evaluation to understand the achievements of development efforts and translate these results into easy to understand impacts. To this effect, RUFORUM commissioned a study to look at universities that offer M&E training globally. The results (Annex 1) revealed that, while M&E is important, it is not offered as a stand-alone course at universities, globally. The M&E training falls under different departments and within other specializations. Therefore, the need for more systematic individual and institutional building is necessary. This is necessary in Sub-Saharan Africa where development projects face challenges such as lack of expertise, stringent and multi-donor reporting requirements, lack of baseline data, and inadequate finances. These challenges made it hard to effectively monitor and evaluate the development projects[1].

The need for quick results has led to an emphasis on fast impact assessment tools, usually without baseline data. Additionally the multitude of definitions of M&E has meant projects and programs can apply whatever tools and methods they know of, sometimes without clear

[1] Mark Muzinda. 2007. Monitoring and evaluation practices and challenges of Gaborone based local NGOs implementing HIV/AIDS projects in Botswana. A Dissertation submitted to the University of Botswana in partial fulfillment of requirements for a degree of MSc (Project Management).

understanding of the tools that are the most appropriate in the context being applied. But, if properly understood and used, monitoring and evaluation (M&E) systems offer powerful management tools in the public sector as well as other organizations. M&E systems can enhance accountability and, at the same time, provide a means for learning, in order to enhance and maximize outcomes and to help reach the goals set in a more efficient and effective manner. Enhanced accountability can contribute significantly to improving governance of public as well as other organizations.

Monitoring and evaluation are different but complementary functions, which mutually reinforce one another. Monitoring is a continuous function that uses the systematic collection of data on specified indicators to provide management and stakeholders with an update of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment (and increasingly independent) of an on-going or completed project, program or policy, its design, implementation and results, with the aim to determine the relevance and fulfillment of objectives, development efficiency, effectiveness, impact and sustainability. Therefore, Monitoring and Evaluation is a powerful public management tool that can be used to improve the way governments and organizations achieve results. Just as governments need financial human resources, and accountability systems, governments also need good performance feedback systems[2].

2. WHAT M&E SYSTEM

While there is no one "right" way of developing M&E systems for governments and organizations, the multitude of methods and design implementation of M&E systems may be a cause for confusion.

The field of M&E is confounded by diverse terminology on related topics such as performance measurement, management information, quality management, performance assessment, results-based management, and management by objectives. Some are synonymous, while others are labels for specific conventions for the presentation of program logic. All refer to the means by which data is gathered at various levels of the program to reach conclusions about effectiveness and efficiency. The terms input, output, purpose and goal normally appear in logical frameworks. Other conventions use input, output, outcome, impact/long term outcomes.

Today, most institutions use results-based management, which shows how activities, through a number of intermediate causal links, are expected to result in the realization of the goals of projects, programs and policies. The focus of M&E has shifted from monitoring implementation to tracking results. Traditionally M&E systems were implementation-focused and included

[2] (see: Kusek & Rist (2004): World Bank- Ten Steps to a Results-Based Monitoring and Evaluation System)

tracking of input mobilization, activities undertaken and completed, and outputs delivered. However, the implementation-focused approach does not provide managers, stakeholders, or policy-makers with an understanding of failure or success of the project in reaching the desired outcomes (Kusek and Rist, 2004). Results-based systems build upon and add to traditional implementation-focused systems, emphasizing project outcomes.

However, there is a general agreement that monitoring and evaluation is the process of collecting and analyzing information about the project that tells us whether planned projects are on track to reach desired objectives, and whether or not the project achieved or contributed to the desired impact. In order to know whether or not projects are on track to achieving program objectives, one must monitor the project during implementation as well as evaluate its impact at the end of the project. Monitoring the progress of the project allows for the adaptation of the program as needed to ensure the attainment of project objectives. It is necessary to plan for monitoring and evaluation at the program design stage; this will help to design an effective program and ensure that plans (and budget) are in place for appropriate monitoring and evaluation activities.

More importantly, M&E systems are seen today as tools that provide government officials, development managers, the private sector and civil society with better means for learning from past experience, improving service delivery, planning and allocating resources and demonstrating results as part of accountability to all key stakeholders.

3. BUILDING M&E CAPACITY

Monitoring and Evaluation (M&E) of project performance, outcomes, and impact has been a significant challenge. Recently, demand for data, analyses, methods and tools has grown exponentially in a market where resources for development are becoming increasingly competitive. This has led to the need to make these available in formats that are culturally acceptable, understandable and practically relevant for different user groups. There has been demand for organizations, including governments, to share best practices; methods and tools so that they can be adapted to meet their needs and contexts. These issues and the increased focus of donors and borrowers on impact have resulted in a high demand for expertise in M&E. Therefore, capacity building to implement good quality M&E arrangements is both good development practice and a valuable investment. Building M&E systems and their required capacities should therefore be:

1. A long-term effort required to sustain support at different levels
2. Aimed at going beyond merely doing M&E well for a particular initiative, but aim to foster sustainable M&E skills, systems and practices such that a ‘performance culture’ is embedded within organizations.

Capacity development is of central importance to institutional performance. The World Bank[3] has highlighted that agricultural R&D projects that typically seek productivity impacts, usually require institutional development to bring about the desired impacts, and provide a basis for continued innovation and sustainable impact on productivity. It is therefore important that institutional development, thus the capacity of an institution to reflect systematically and rigorously upon its role and function and learn constructively from its experiences, and better enable it to carry out its responsibilities, are critically important elements.

Since it is the institutional development initiatives that in turn bring about productivity impacts, the development of capacities for M&E should be a pre-requisite requirement. The IDRC[4] has argued that capacity strengthening is an ongoing process by which people and systems, operating within dynamic contexts, learn to develop and implement strategies in pursuit of their objectives for increased performance in a sustainable way. The strengthening of capacity is a complex, problem-solving process, and one for which there is no single formula for success. However, the creation of effectively performing institutions is central to a country's development. Hence, there is no end to capacity development and strengthening with the aim of empowerment.

Therefore, RUFORUM as a grouping of academia as a major source of skilled manpower, met to first review the need to establish M&E training in the regions. There was a general agreement on initial training in M&E within East and Southern Africa universities. The process took the following steps:

i). Review of M&E systems in Universities (See report: NADA-1999)
ii). Review of M&E systems in Universities (See report: IDFS-2012)
iii). Review of M&E training World-wide (See report: M&E review Thangata 2012-Annex 1)
iv). Workshop validation report (See workshop report: RUFORUM-2012)

This report, therefore, details suggested MSc and Short-Term Certificate (STC) M&E courses to be supported under RUFORUM.

As suggested in this report, the purpose of the MSc training is to produce top-level skilled professional staff with an interdisciplinary understanding of M&E, able to support analytical understanding of the impact of development initiatives in Africa and their comparison globally. On the other hand, the STC training is meant to produce skilled M&E staff already working in development projects by upgrading their understanding, learning and skills. The aim is to quickly and effectively train a team that will be able to support the newly trained MSc professionals.

[3] Riikka Rajalahti, Johannes Woelcke, and Eija Pehu, 2005. Monitoring and Evaluation for World Bank Agricultural Research and Extension Projects: A Good Practice Note. Agriculture and Rural Development Discussion Paper 20. The International Bank for Reconstruction and Development / The World Bank

[4] Lusthaus, C., Anderson, G., and Murphy, E. 2005. Institutional Assessment: A Framework for Strengthening Organizational Capacity for IDRC's Research Partners. International Development Research Centre, Ottawa, Canada. xiii + 67 p.

4. IMPLEMENTATION OF THE M&E CAPACITY BUILDING AGENDA

Reviews conducted at several universities in the region have shown that there are differences in the content of what is taught at the universities as M&E. It was therefore felt that the RUFORUM M&E training should adopt a three-pronged training agenda. This is meant to strengthen the monitoring and evaluation (M&E) skills of individuals and in-house staff at organizations and build their capacity to identify data needs, collect and analyze technically sound data, and use that data to improve program planning and decision making.

4.1. Trainer of Trainers M&E Capacity Building Program

This level of training will bring together the first team of lecturers from 2-3 universities that will be the first to adopt the MSc and STC training. The training will be an intensive 2-3 months training targeting those who have taught any element of M&E at their respective universities.

4.2. Short-Term Certificate (STC) Program in M&E

This will target people already working as M&E specialists but who require certification and more M&E in-depth training. The specialists may come from NGOs, public and private institutions. These could be researchers, program managers, trainers, policy makers, students, and other agricultural and natural resource management professionals. The aim is to have in place a team of M&E specialists who will be able to communicate with the first cohort of the M&E training. The respective universities, with support from RUFORUM, will work out details regarding the student selection process.

4.3. Masters Level Degree Program in M&E

This will target BSc graduates who want to specialize in M&E. This group will be the first to go for the full, rigorous training in M&E. As part of the course requirements, this team will be attached to the STC team. Incentives will have to be created to make sure that those who went through the STC training are able to network with the MSc team. Depending of the course structure provided, the respective universities will be able to decide if this will be either a 1 or 2-year course. Additionally, it will be the responsibility of each respective university to decide on admission requirements, thesis requirements and other university related issues.

5. MASTERS & SHORT TERM LEVEL MONITORING AND EVALUATION COURSES

5.1. Course Title: ADVANCED EVALUATION: THEORY, METHODS AND PRACTICE

Course background and objectives

The course will provide an advanced step-by-step training for the development of coordinated monitoring and evaluation systems and how to conduct impact assessments. Impact assessment is an aspect of evaluation that focuses on ultimate benefits. It sets out to assess what has happened as a result of the intervention and what may have happened without it. Where possible, impact assessment tries to differentiate between changes that can be attributed to the program from other external factors that may have contributed as well as examining unintended changes alongside those intended. Therefore, the course will focus on major underlying theories and methodologies of social program evaluation, strategies of research design, methods of collecting and analyzing materials, and the political and social contexts of evaluation.

Course description

This course is designed to provide program evaluation and assessment in M&E. Students will explore a variety of assessment methods and techniques and apply their learning skills to a real-world assessment problem.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- M&E Concepts, Definitions and Debates
- Project Cycle and M&E
- Development of indicators
- Data design, analysis and reporting
- How to manage data in advanced evaluations
- How to write credible reports on evaluations
- Equity evaluation
- Advanced practical techniques for evaluations
- Using monitoring data
- Advanced methods of evaluation
- Impact assessment
- Setting, reviewing and using evaluation
- Knowledge management for effective evaluation

Learning and outcomes

Students completing this course should be able to:

- Critique theories, methods and practice
- Review emerging theories of development
- Design and facilitate evaluation learning
- Design practical tools and practices
- Understand M&E processes in different contexts - social, political etc.

- An understanding of how to integrate M&E into project cycle management, and how to use evaluation techniques.
- Design M&E processes for different development projects
- Design of program/project impact assessments
- Design evaluations for varying types of development projects/sectors

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentations.
- There will be weekly readings, which will form the basis on which students will prepare assignments and in-class presentations.
- Case studies discussions
- Student practicum experience e.g. Attachment to evaluation processes taking place
- Conferences/Seminars
- Desk research

5.2. Course Title: INTRODUCTION TO MONITORING AND EVALUATION

Course background and objectives

The success of an M&E system depends on the quality of data. The introduction to M&E training will start with an overview of the M&E theory. The aim is to ensure that participants understand the linkages between the organizational or project theory of change and the results framework and associated indicators. M&E technical terms will be explained.

The main objective of this course is for students to understand principles of M&E and the need for good data management.

Course description

The course will have both theory and a practical focus to ensure relevance and enhance understanding.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Introduction to M&E and its purpose
- Understanding M&E concepts and their validity (internal and external)
- Baseline information: the collection, use and analysis of information that shows the situation at the beginning of a piece of work in order to compare progress at a later date.
- Introduction to monitoring tools: the different mechanisms that are used for recording, generating or analyzing information
- Participation: who participates in different M&E processes, how and why.

- Information disciplines: the use of evaluations, impact assessments, appraisals, assessments, situational analyses, research studies and other disciplines.
- Indicators: the selection, collection and use of indicators, and how indicators are linked between different levels.
- Data collection instruments
- Data analysis: how information is used for different purposes at different levels of an organization.
- Reporting of M&E results
- Risks and Complications – bias, contamination, structural issues, etc.

Learning and outcomes

Students completing this course should be able to:

- Understand 'how-to' approaches for undertaking M&E including definitions of basic M&E terminology, and indicators.
- Understand different kinds of data and how it is collected
- Be familiar with different question types and the most common types of data collection instruments.
- Understand data collection instrument design consideration
- Understand practical methods of reporting M&E data in results based management

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation.
- Introducing the M&E concepts explained through real-project examples
- Practical group work to allow for contextualized learning and results in practical outputs for participants.

5.3. Course Title: M&E FOR CONTEMPORARY AND COMPLEX SITUATIONS

Course background and objectives

Complex organizations that work on different levels to achieve their goals, tend to run or support different projects in different programs across more than one country or region. Examples of such complex organizations are international NGOs (INGOs) and global networks based mostly in Europe. All organizations, including these complex development organizations are expected to have systems that enable them to collect, analyze, summarize and use information. However, few M&E systems cut across countries and programs. Available M&E systems focus on systems at project or program level, rather than at country, regional or international levels.

The objective of this course is to help students understand the need for methodologies that can be applied to any organization carrying out different types of work in different locations. This will help the design of an M&E system within and for complex organizations, with multiples goals at

different localities. It will touch upon components that support effective data collection systems with managing information and common interfacing of the data.

Course description

This course will review some complex organizations and review their M&E systems. Cases will be used to review the purposes of the organizations, and review whether their M&E systems are sufficient for their purposes.

Students will be asked to develop an imaginary complex organization and design its new M&E system to allow them to be both accountable to different stakeholders and to learn in order to improve performance in current or future projects or programs. The M&E system designed will be aimed at instituting a learning culture to improve accountability and performance.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Rationale for context based M&E
- M&E tools for different contexts
- Designing and executing M&E in different sectors
- Learning and scaling up
- Organizational culture

Learning and outcomes

Students completing this course should be able to:

- Define different development contexts
- Relate and design M&E processes to different development contexts – social, economic and political
- Compare/contrast M&E use in different contexts
- Develop M&E systems for organizations

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation.
- There will be weekly readings, which will form the basis on which students will prepare assignments and in-class presentations.
- Case studies discussions
- Conferences/Seminars
- Desk research
- Internships/apprenticeships
- Field work
- Talks

5.4. Course Title: M&E FOR LEARNING

Course background and objectives

Monitoring and evaluation (M&E) processes can be among the most effective ways to foster learning for sustainable capacity development. Unfortunately, that has not been the primary focus of M&E systems in the past, as in the development sector M&E has most usually been framed and designed by the need for accountability. Until recently, M&E has primarily met donor needs for proving or legitimizing the purpose of the program by demonstrating the effective use of resources. The primary focus has predominantly been upward accountability and it is now recognized that the intended beneficiaries are often the most neglected stakeholder group. Yet, even though there are now many innovative approaches that recognize the importance of learning in M&E, there has yet to be a significant paradigm shift towards adopting these new approaches for all capacity development initiatives.

There is a growing awareness of the need for practitioners to conduct their own evaluation activities in order to increase understanding of development results, which in turn lead to increased learning within their organization. The learning function enhances organizational and developments learning to increase the understanding of why some interventions have been successful while others have not. This understanding informs decision-making and can help improve performance.

The objective of this course is to integrate learning into M&E of capacity development initiatives.

Course description

This course will help students to:

- Focus on getting the process right in addition to recognizing the results
- Foster a broad learning approach to implementation;
- Understand the need for being more inclusive and working to bring beneficiary and participant perspectives into consideration;
- Promote the use of the theory of change and creating an environment for managing for impact
- Promote an evaluative culture in which enhanced learning, multiple accountabilities, transparency and organizational understanding of change and impact become the norm.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- M&E tools for learning and for qualitative and quantitative data management
- Integrate the action-reflection-learning-planning cycle into implementation activities
- Action research for M&E
- M&E, Systems thinking and Learning Systems
- M&E Tools and Learning

- Outcome Mapping
- Theory of capacity
- Managing for impact, Results Base Management, and Results Based M&E
- Leadership skill and strategic planning
- Learning across systems/programs
- Organizational and individual performance management processes

Learning and outcomes

Students completing this course should be able to:

- Facilitate learning events and processes
- Understand that continual learning is essential for sustainable capacity change.
- Understand the need to involve multiple stakeholder groups in ways that balance their interests and priorities, including accountability to participants and beneficiaries.
- Be aware of the need to combine methods that generate both quantitative and qualitative data, which together lead to more comprehensive understanding.
- Use iterative, continual reflective feedback approaches to determine what is happening in the capacity development process and why it is happening
- Understand leadership and management in organizations
- Bring learning from M&E of implementation into policy-making dimensions
- Understand outcomes as changes in the behavior, relationships, activities, or actions of the people, groups, and organizations with whom a program works directly.

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Participate in Learning events
- Seminars to review/report learning theories, processes, reports

5.5. Course Title: M&E RESEARCH METHODS AND TOOLS

Course background and objectives

Data collection is a key activity in the implementation of an M&E strategy. It is therefore important that it is planned carefully in order to provide information that allows project staff to assess achievements and changes connected to program/project operations.
This course's main objective is to provide research methods used in M&E, including an overview of quantitative and qualitative data collection tools and methods, describing their strengths and weaknesses, as well as when it is appropriate to use each of them. The course also aims at providing experience with the logic and process of designing a research project.

Course description

This course will focus on a broad range of research methods used during the problem selection and research design phase. The course provides a platform on how to understand, evaluate, and carry out competent research methodologies, collecting data, analyzing the data, interpreting the results, and then communicating the results.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Frameworks and indicators for M&E
- Results-oriented approaches for M&E
- Sampling procedures and sample size calculations
- Probability sampling versus Non-probability sampling
- Going beyond surveys, KIIs and FGDs
- Quantitative, Qualitative and Mixed research methods
- Gender sensitive M&E (Gender Analysis)
- Proposal writing techniques and presenting research topics
- Dissemination of research findings for M&E
- Applied Research and M&E
- Developing tools for M&E
- Selection of treatment and control groups
- Dealing with primary and secondary data
- Before-after and with-without comparisons
- Cross-sectional comparison of the beneficiary group against a counterfactual
- Controlling for the effects of contamination of the impact evaluation results
- Dealing with selection bias versus self-selection bias
- On-farm trials
- Problem identification and risks
- Design, identification and reporting
- Attributing cause and effect (impact)
- Tools and methods for M&E
    - Appreciative inquiry
    - Biophysical measurements
    - Case studies
    - Content analysis
    - Contribution analysis
    - Cost-Benefit Analysis (CBA)
    - GIS mapping
    - Historical trends and timelines
    - Impact evaluation
    - Impact flow diagram
    - Institutional linkage diagram
    - Interviews and learning alliances
    - Learning-oriented evaluation

- Matrix scoring
- Net-Map
- Non-random sampling
- Observation
- Outcome mapping
- Participatory Impact Pathways Analysis
- Problem and objectives trees
- Random sampling
- Ranking
- Rapid appraisal methods
- Relative scales or ladders
- SWOT
- Seasonal calendars
- Social mapping or well-being ranking
- Stakeholder analysis
- Surveys and transects

Learning and outcomes

Students completing this course should be able to:

- Develop M&E research proposals and conduct research in M&E
- Write technical reports
- Understand research methods in M&E systems and be able to utilize the developed research techniques for M&E
- Develop research and problem-solving skills required for M&E
- Understand the process of data collection and management in order to answer research questions, and interpretation of results in both technical and non technical terms
- Understand suitable research methods for both quantitative and qualitative research.
- Develop skills required during the write-up phase of student's final projects/thesis
- Classify and evaluate the strengths and weaknesses of the research methods

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Tutorials on-line or DSTV
- Lectures/problem solving
- Guest Lecturers
- Field work
- Case studies

5.6. Course Title: M&E IN AGRICULTURAL DEVELOPMENT

Course background and objectives

Like other rural development programs, agricultural programs have multiple stakeholders. Making sure that the intended benefits of the program get to the people it was intended to help requires understanding of the program objectives. It is also important to understand the needs of the different stakeholders, from donors to farmers. The relationships among the multitude of stakeholders need to be understood and managed well.

The course aims at ensuring that students have a field experience of M&E in agriculture research for development.

Course description

The course provides a contextual setting of specific M&E concepts in agricultural and rural development projects.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Agriculture for Development
- Food security and Poverty Analysis
- PM&E concepts for food security
- Principles of M&E and impact
- Stakeholder analysis
- Baselines and collecting data
- Understanding indicators
- Selecting indicators and setting targets
- Monitoring upstream and downs team research
- Value chain analysis and M&E

Learning and outcomes

Students completing this course should be able to:

- Use specific M&E
- Describe key concepts of M&E
- Design food security projects and its M&E strategy
- Conduct M&E in the field of Agriculture
- Understand Agriculture Research for Development
- Define indicators in the context of M&E for Development
- Develop tools for M&E of agriculture programs
- Assess effectiveness of stakeholder involvement
- Demonstrate skills and knowledge from the M&E coursework through fieldwork experience
- Develop a proposal that reflects on how M&E will be applied during the practicum session.

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Seminars
- Workshops
- Modules in a course
- Stakeholder round tables

5.7. Course Title: ICT FOR M&E

Course background and objectives

Information and communication technology (ICT) can complement measuring the effectiveness of a project or plan in monitoring and evaluation. Using ICT procedures will definitely add special dimensions in assuring program efficiency for policy makers among many other different actors in development management. Social mapping tools along with key theories and methods are essential for supporting M&E for communicating research.

The course aims at using information communication tools in improving the monitoring and evaluation process for effective decision-making.

Course description

The course will help students understand the use of some ICT in M&E. The aim is to improve analysis and the communication of M&E results. The course will require students to understand the use of ICT including some programming.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- M&E strategies
- ICT and M&E Technologies

Learning and outcomes

Students completing this course should be able to:

- Use data base technology in M&E
- Understand the use of automation in M&E
- Design real time automated M&E Systems

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Seminars
- Workshops

- Modules in a course
- Practical in laboratory and field
- Case studies
- Attachments

5.8. Course Title: PARTICIPATORY M&E

Course background and objectives

Participatory monitoring and evaluation (PME) is gaining importance in the development and monitoring of demand-driven ARE systems and projects. The basic idea in PME is to allow active involvement of key stakeholders in the M&E process in order for them to learn about and affect the process and impact of a development intervention. If resources are limited, it is better to identify carefully when and how to apply PME rather than sacrifice the quality of the process and results generated. However, with PME, it is important to use triangulation to generate information about the same topics. Triangulation is a means of compensating the use of single data collection methods and a simple study design with the use of several information sources and different methods simultaneously.

The main objective of the course is develop an understanding of the how participatory M&E can be used in concert with traditional M&E, while being considered a different and separate process useful to all stakeholders involved in monitoring and evaluation program for achieving intended outcomes.

Course description

The course focuses on participatory methods in monitoring and evaluation, where different actors are included in the process of planning, collecting, interpreting data that helps continuous improvement of monitoring and evaluation systems. The course will apply various tools and methods that emphasize the concept of working together for a decision-making process in M&E by various participating practitioners.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Principles and typology of participation
- Process of PM&E
- Performance indicators
- Managing PM&E sessions/projects
- PM&E tools and approaches
- Qualitative Methods: Individual Interviews versus Group Interviews
- Facilitation in PM&E
- The role of triangulation by combining multiple data sources and methods.
- Evaluating and reporting on PM&E

- Data collection and analysis in PM&E
- PM&E and stakeholder analysis and engagement
- Results-based management and participatory evaluation
- Participatory impact assessment
- Ethics in participatory evaluation

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Describe principles of participatory approaches
- Explain processes of PM&E
- Understand the use of triangulation as a means of compensating the use of single data collection methods
- Design/plan PM&E interventions using various tools
- Develop specific M&E tools
- Facilitate PM&E sessions with good understanding of the tools involved

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Facilitated seminars/workshops
- Class work
- E-Learning
- Field work
- Case studies

5.9. Course Title: APPLIED STATISTICAL METHODS FOR M&E

Course background and objectives

The course will focus on statistical analysis especially on quantitative methods used in monitoring and evaluation systems and other disciplines. The course will provide a platform in understanding techniques for obtaining, analyzing and presenting data in numerical form; regression analysis, applicability of probability and sampling theory and data interpretation among many other statistical topics

Course description

The course will cover fundamental concepts in statistics and therefore expects students taking this course to demonstrate an understanding of the terminology and underlying assumptions of statistical methods such as: the theory of modern regression analysis, statistical techniques and statistical computing packages and be able to apply and analyze correctly models that are applied in monitoring and evaluation programs. Students will also be expected to be conversant with the use of statistical software, and assumes basic knowledge of statistics by students. This will be a compulsory course for MSc students.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Concise sampling techniques and application
- Use of statistics for data analysis and interpretation
- Design, collection, analysis, presentation, and reporting of M&E statistical data
- Sampling designs and procedures
- Categories of Sample Surveys: Probability Sample Surveys and Non-probability Sample Surveys
- Experimental, quasi-experimental and non-experimental design
- Basic concepts of statistics
- Basic concepts of M&E
- Linking statistics and M&E
- Qualitative and quantitative M&E data analysis
- Primary and secondary data collection methods
- Interpretation and evaluation of research
- Models of program evaluation
- Design of experiment
- Survey research methods
- Random and non-random sampling methods
- Confidence interval and margin of error
- Statistical measurement and research
- Propensity score matching
- Introductory and intermediate statistics
- General linear models
- Multilevel models
- Multivariate statistics
- Psychometric theory

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Use and apply knowledge of statistical methods and software in M&E
- Summarize, describe, generate/ analyze, present and interpret M&E data
- Relate M&E data and parameters statistics
- Design of data management protocol tools
- Create, read, and interpret graphs, charts, histograms, etc
- Understand the significance of statistics and probability in the real world
- Organize and synthesize information and apply it in M&E

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Laboratory assignments and problem solving

- Practical sessions (Statistical software)

5.10. Course Title: M&E FOR PROJECT MANAGEMENT

Course background and objectives

A project is a set of well-defined resources dedicated to achieving specific results in a defined period of time. A project has a clear time frame (start and end), and a clear strategy of how to use resources to produce results. In general, projects are designed and implemented to address developmental needs or problems, and all projects are based on assumptions about the nature of the needs or problems, the interventions needed to address them, and how the project interventions incrementally achieve the changes. Therefore, behind each project is a theory of action – a set of beliefs held by those who plan a project about how change will come about and why.

A project management cycle refers to the various stages required to conceive of and deliver a project. In general the following stages are known: situation analysis, identification and design, project approval and funding, implementation, evaluation, monitoring, reporting and communication. Often the cycle is repeated again for multiple phases of projects. In project management, the validity of the connection between project initiatives and outcomes and impacts depends on the existence of conditions necessary for success, otherwise known as assumptions. The course will define and map out project conditions or assumptions to provide a clearer road map of how activities lead to eventual results. This is the basis of the results framework monitoring and evaluation system concept. A result chain approach on M&E is now the standard for planning in most development projects.

Course description

The course will focus on project design and management and developing and testing concepts and approaches for M&E systems in different settings. The intention of this course is to provide students with a common understanding of core concepts of planning, monitoring and evaluation. This course is intended to strengthen the understanding of core PM&E concepts, hence prior understanding of PM&E concepts is a pre-requisite. The course will also provide students with the skills to advance women's equal participation in projects, to reduce gender inequalities in access to and control over the resources and benefits of development.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Concepts and theories of PM
- Principles and applications of the PM cycle
- Skills and competencies of project management
- Project /Program organization
- PM strategies, tools, and approaches
- Project appraisals

- Project performance management
- Project quality management
- Managing projects for impact and sustainability
- Using M&E for project management
- Using M&E for project reviews
- Integrating Gender Equality
- The Logical Framework Approach
- Results based monitoring and evaluation (RBM&E)
- Results based management (RBM)
- Performance indicators
- Theory-based evaluation

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Develop projects based on a thorough understanding of the situation in which an intervention is planned.
- Involve stakeholders in a participatory process of project design and evaluation.
- Develop a set of clear logical objectives that can realistically be achieved within a specific timeframe and budget
- Understand and develop project higher-level development objectives.
- Understand the cause and effect relationships and external factors that influence or underpin the project's planned and desired results and impacts.
- Understand the need to advance women's equal participation in projects, to reduce gender inequalities in access to and control over the resources and benefits of development.
- Explain project management cycle
- Design projects in agriculture and other fields
- Explain the skills and competencies for PM
- Develop and apply PM tools (LFA, data capturing tools, plans etc.)
- Manage projects

Teaching and learning approach

- Lectures will be mixed with class exercises, small group discussions, and presentation
- Seminars and group exercises
- Attachments and practicals
- Project management exercises
- Field visits to projects/online project
- E-learning

5.11. Course Title: FUNDAMENTALS OF M&E FOR DEVELOPMENT SEMINAR

Course background and objectives

The course will be a seminar series that will ensure that specific theories designed for M&E for development activities that can influence policies and development practices at national level among various sectors are well understood. The course will aim to demonstrate the evolution of different comprehensive M&E approaches that could help in decision-making among various actors.

Course description

The course provides knowledge and skills in development theories and practices of the monitoring and evaluation designed for development intervention programs.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Different M&E topics from a wide range or organizations
- Theories of development
- Theories of M&E processes in relation to developmental change (Research on M&E and development)
- Development concepts and planning
- Measuring developmental Change
- Applications of M&E to development projects

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Explain development theories/ relevance of M&E
- Explain M&E theories and how they affect development outcomes/change
- Apply specific theories in designing various M&E for development activities and tools
- Understanding the evolution and Knowledge base for M&E

Teaching and learning approach

- Class seminars
- Small group discussions, and presentation
- Guest speakers
- Internet/web search

5.12. Course Title: RESEARCH FIELD PRACTICUM AND INTERNSHIP

Course background and objectives

The field practicum and internship experience will offer students the opportunity to learn through interacting with experienced practitioners, local communities, and agencies and organizations working on development related programs and projects. Students will have the opportunity to experience first hand realities in problem solving outside the classroom.

Course description

MSc students will be required to take a minimum of 6 months of internship. Students may be attached to government institutions, NGOs, international organizations, private sector, farmer organizations and other community based organizations

Learning and outcomes
The course will provide students knowledge and skills in:

- Team work and relationship building
- Understanding field work conditions
- Understand first-hand the complexities of planning M&E in real settings
- Apply classroom M&E knowledge, skills and understandings to a range of professional settings.
- Identify possible research projects.

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Understand how M&E principles are applied in real settings
- Write a field experience report
- Draft a Master's research proposal

Teaching and learning approach

- Research field internship

5.13. Course Title: MSc RESEARCH PROJECT

Course background and objectives

Students will be expected to write a final thesis on their chosen work. This are of research will be chosen with the support of the major adviser.

The aim is to give students time required to write research projects.

Course description

Each respective university will decide the length of the research thesis. Students will be expected to show mastery of their field by applying methods and tools learnt in the Masters course work.

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Apply the M&E principles leant both in class and during the field internship.

Teaching and learning approach

- One on one contact with project adviser

- Support from research project partners, where applicable.

5.14. Course Title: COMMUNICATION IN M&E

Course background and objectives

The way research results are communicated to different stakeholders is very important. Project results have to be communicated with policy makers, donors, beneficiaries and other stakeholders. The multitude of stakeholder requires different communication techniques. The ultimate aim of monitoring and evaluation is to learn what has worked and what has not. This requires the collection and use of data at different levels. The way results are communicated can be useful for others to know about what has worked and not.

The main objective of this course is provide students with a background in both communication and M&E. The aim is to bring about a culture of evidence based communication of project results.

Course description

The course will provide the basics of communication and how M&E results can best be communicated to the different stakeholders.

Course content outline

Some suggested topics/sub-topics to be covered include the following:

- Research methodology
- Communication, Networking and Information Technology
- Different M&E Reporting
- Collating, analyzing and storing information
- Interviewing techniques used in individual and group interviews or discussions
- Learning mechanisms: the different tools, techniques and procedures used to share information and learning within and between different levels of an organization.
- Data storage: how information is stored and retrieved at different levels.
- Design, data analysis, interpretation and reporting
- People management skills e.g. Communication, negotiation etc.
- Participatory communication tools
- Principles of Advocacy
- Communication options for maximum utilization of evaluation results
- Understanding Resource Mobilization for M&E and Accountability

Learning and outcomes

Upon successful completion of this course, students will be able to:

- Generate a range of reports at different levels of an organization.
- Design how to store and retrieve information at different levels.

- Understand how information flows between different people, how information is reviewed at different levels and how an organizations deal with the reporting of mistakes and failures.
- Share and communicate M&E findings with different stakeholders
- Review feedback from M&E findings
- Design policy briefs for policy communication:

Teaching and learning approach

- Class seminars
- Small group discussions, and presentation
- Guest speakers

ANNEX 1: A brief Review of Global Monitoring and Evaluation (M&E) Long and Short-Term Courses

THE REGIONAL UNIVERSITIES FORUM FOR CAPACITY BUILDING IN AGRICULTURE (RUFORUM)

A Review of Monitoring and Evaluation (M&E)

for

Long and Short-Term Courses

June 15, 2012

1. INTRODUCTION

The paper describes a literature review of academic courses that focus on monitoring and evaluation (M&E) in various universities across the globe such as United States, Europe, Africa and Australian. Evaluation programs have been increasingly prominent throughout the world by policymakers, effective practitioners, policy implementers, and program managers. Understanding the systematic process involved in M&E is essential since this can be used to effectively inform decision-making and make preferred adjustments for improvement and future planning strategies (Frankel & Gage, 2007). Additionally, monitoring and evaluation is an ongoing process of any program that can be considered as an indispensable element of any intervention, project, or program of many organizations (2007).

Developing programs that address monitoring and evaluation programs can be challenging. However, understanding the framework and the analytical procedures needed to achieve the required outcomes in M&E programs can assist in the overall improvement of project development for institutions, local government, and non-governmental organizations among many others. Research has supported claims that knowledge and skills in monitoring and evaluation are crucial in providing mechanism of feedback in various disciplines. Kusek and Rist (2004) have justified that a monitoring and evaluation system is fundamentally a managerial decision-making tool, which is continuously used to measure and evaluate the outcomes and outputs achieved by various stakeholders. Furthermore, an M&E system can serve as a mechanism for reducing uncertainty thus improving program effectiveness and management. According to the Frankel & Gage (2007), a self-guided minicourse manual on M&E fundamentals show that monitoring and evaluation can help policy implementers in a number of ways and these include: make informed decisions based on the set of objectives for any designed project in order to ascertain the effectiveness of project resources, to allow policy implementers to measure the extent of impact of the intended outcome, areas of their success.

In regard to this brief review of M&E courses in the specific regions understudy (Europe, USA Africa and Australia), we found that all regions in the selected universities have a diversification of curricula. Most of the degrees are offered for postgraduate degrees as a short-term course (Certificate level) and long-term course (Masters Level). These courses on M&E are offered in the context of public health, nutrition programs, education, social work and management development. We present the findings of this brief review first by presenting the components of long term courses followed by certificate program courses.

2. COMPONENTS OF LONG-TERM COURSES

2.1. University of Pretoria, South Africa

2.1.1. Master of Public Health with concentration in M&E

At the University of Pretoria, the university is offering Master of Public Health with concentration in Monitoring and Evaluation. The course aims at building quantitative and qualitative skills for planning, monitoring and evaluating population and health programs among Sub-Saharan African professionals. Full-time Master of Public Health degree student are accepted into the program with a concentration in monitoring and evaluation track. Students require 18-24 months to complete coursework and research requirements (University of Cape Pretoria, 2012). The following are the main components of the courses offered:

- Epidemiology
- Demography`
- Health informatics
- Biostatistics
- Qualitative research methods
- Quality assurance
- Program monitoring and evaluation
- Reproductive health
- Research methodology

2.2. Jimma University, Ethiopia

2.2.1. Post Graduate Diploma and MSc in Health M&E

According to Jimma University's website (2012) - in Ethiopia, the university offers a Post Graduate Diploma and MSc in Health in Monitoring and Evaluation. Their program is described as being, "designed to prepare professional evaluators with skills in theory and practice of M&E, technical and analytic areas of evaluation, IT, report writing, presentation and management skills." Depending upon the field that professionals and students go into, the tools they are using are interpersonal communication, technological, research, and analytical skills that will be applied to understanding and monitoring whether or not a program is affective. Additionally, the program offered at Jimma University is a one year program including a two month field assignment focusing on M&E that provides students with the analytical skills in the following four major tracks:

- **Track one**: Social Political Economy and Cultural & context of health
- **Track two**: Logical Models of Health Problems and National Responses
- **Track three**: Logical Models of Evaluation
- **Track four**: Communication, Networking and Information Technology

2.3. University of Cape Town, South Africa

2.3.1. Masters degree in Monitoring and Programme Evaluation,

The Masters degree programme at University of Cape Town consists of two parts: a coursework section and a research dissertation. In order for graduate students to graduate from this program, students are required to finish coursework as well as writing a dissertation. The coursework part consists of the following modules:

- Principles of programme evaluation
- Research design for impact evaluation
- Monitoring
- Statistics for evaluation
- Programme theories

For the research dissertation students are required to assess an existing social problem and write at least a 20,000-word paper as a fulfillment of this program (University of Cape Town, 2012).

2.4. University of Bucharest, The Netherlands

2.4.1. Masters in Social Work Evaluation and Monitoring.

Under the program of master's level in Social Work Evaluation and Monitoring at University of Bucharest, graduates work in case management inside public local authorities which offer social work services to various vulnerable groups. In order to complete the program the following courses are offered for duration of 15 months:

- Social work system
- Social problems diagnosis
- Monitoring in Social Work
- Professional and business ethics
- Social work evaluation and monitoring
- Standards, monitoring and evaluation in social work
- Organizational culture
- Social inclusion policies
- Quality standards Monitoring in social work services
- Family and Child Social Work
- Risk Groups Social Work

2.5. Duquesne University, UK

2.5.1. Masters in Program Evaluation

The master's degree in Program Evaluation at Duquesne University is designed to enhance the theoretical understanding of evaluation and improve in the knowledge and skills about evaluation methods. The course work offered at this university emphasizes the integration of evaluation in program planning and evaluation practice in various disciplines such as education, public administration, criminal justice, health care and other fields that use evaluation strategies to measure their outcomes (Duquesne University, 2012). To fulfill the requirements of the masters program, the following courses are offered and can be taken either on-line or on campus:

- Educational Measurement I
- Program Evaluation Practice
- Decision-Oriented Educational Research
- Program Evaluation Practicum
- Statistics II
- Qualitative Research Methods II

2.6. Boston College, USA

2.6.1. Masters of Education: educational research, measurement, and evaluation

The Master of Education: educational research, measurement, and evaluation at Boston College provides students with the opportunity to examine educational programs, design quantitative research studies, develop assessment instruments, and analyze educational data to help inform policy-making. The program can take a period of 1-2 years depending on the pace of the student and if summer courses are taken. The curriculum includes coursework in research design, statistics, classroom assessment, large-scale data collection, program evaluation, and education policy (Boston College, 2012). To finish the program participants are requested to take the following courses that cover three main focus areas:

Research design & methods

- Interpretation and evaluation of research
- Models of program evaluation
- Design of experiments
- Survey research methods
- Seminars in educational measurement and research

Statistical methods

- Introductory and intermediate statistics
- General linear models
- Multivariate statistics
- Psychometric theory
- Multilevel models
- Seminars in statistical and measurement topics

Testing & assessment

- Classroom assessment
- Large scale assessment
- Public policy
- Seminar on current issues in testing and assessment
- Practicum in technology enhanced assessment

3. COMPONENTS OF SHORT-TERM COURSES (CERTIFICATE PROGRAM)

3.1. University of North Carolina

For short courses on M&E in the USA, the University of North Carolina offers short courses. The following are the components of the courses being offered:

- Identify the basic purposes and scope of M&E;
- Differentiate between monitoring functions and evaluation functions;
- Describe the functions of an M&E plan;
- Identify the main components of an M&E plan;
- Identify and differentiate between conceptual frameworks, results frameworks and logic models;
- Describe how frameworks are used for M&E planning;
- Identify criteria for the selection of indicators;
- Describe how indicators are linked to frameworks;
- Identify types of data sources; and
- Describe how information can be used for decision-making.

3.2.Duquesne University, UK - Certificate in Program Evaluation

The certificate programs in Program Evaluation at Duquesne University are designed to increase the theoretical understanding of evaluation and enhance skills in evaluation methods. In order to obtain a certificate in this program, students are required to take 21 credit core courses (Duquesne University, 2012). The following courses are offered under the certificate program:

- Program Planning and Evaluation
- Proposal and Grant Writing

- Business and Project Management
- Statistics I
- Research Methods
- Qualitative Research Methods I
- Supervised Practicum in Program Evaluation

3.3. Certificate Program in Monitoring and Programme Evaluation, University of Cape Town

The Institute for Monitoring and Evaluation (IME) offers short courses for a certificate program (University of Cape Town, 2012). The following courses are offered under the certificate program:

- Introduction to Monitoring and Evaluation
- Monitoring
- Implementation Evaluation
- Evaluation of Outcomes and Impact
- Quantitative Evaluation Methods
- Qualitative Evaluation Methods
- Technology and Evaluation

4. CONCLUSION

Although the concepts of Monitoring and Evaluation seem to be similar across the regions, the courses offered either at Masters Level or Certificate Level are different. This might be due to different experiences and desired outcomes of these specific regions since most of the courses have a specific topic to be addressed under the M&E. The findings also show that there is no University offering a Monitoring and Evaluation course at the Masters Level. The findings can serve as a monitoring and evaluation framework to effective practitioners interested in expanding or introducing similar approaches in African Universities.

References

Boston_College. (2012). Boston College. Lynchh Scool of Education Retrieved June 1, from http://www.bc.edu/content/bc/schools/lsoe/academics/departments/erme/mederme.html

Duquesne_University. (2012). Master's degree in Program Evaluation Retrieved May 27, 2012, from http://www.duq.edu/program-evaluation/index.cfm

Frankel, N., & Gage, A. (2007). M&E Fundamentals: A Self-Guided Minicourse. Chapel Hill: University of North Carolina.

Jimma University. (2012). Post Graduate Diploma and MSc in Health Monitoring and Evaluation. Retrieved May 4, 2012, from http://www.ju.edu.et/cphms/node/86

Melbourne Graduate School of Education. (2012). Course Information on Post Graduate Certificate in Evaluation and Master of Evaluation Retrieved 06/06, 2012, from http://www.edfac.unimelb.edu.au/cpe/courses/index.html

Kusek, J. Z., & Rist, R. C. (2004). Ten steps to a results-based monitoring and evaluation system. Washington DC: The World Bank.

University of Bucharest. (2012). Master Level course in Social Work Evaluation and Monitoring. , from http://www.mastersportal.eu/students/browse/programme/19563/social-work-evaluation-and-monitoring.html

University of Cape Town. (2012). Master of Public Health with concentration in Monitoring and Evaluation Retrieved May 28, 2012, from http://www.commerce.uct.ac.za/Managementstudies/Courses/BUS5037W/

University of Johannesburg. (2012). Postgraduate Masters Coursework Programme in Policy Evaluation Retrieved 06/06, 2012, from http://www.uj.ac.za/EN/Faculties/humanities/departments/publicgov/coursesandprogrammes/Pages/Postgraduate.aspx

University of Pretoria. (2010). Master of Public Health with concentration in Monitoring and Evaluation Retrieved May 15, 2012, from (http://shsph.up.ac.za/measure_evaluation/home.html

APPENDIX 1: Masters Degree in Monitoring and Programme Evaluation, University of Cape Town

1. Coursework Modules

1.1 Principles of programme evaluation

This module provides a systematic overview and introduction to programme evaluation and its methods. We focus on the logic of programmes and how evaluation tracks this logic' we explore different evaluation questions and consider questions of programme integrity and strength. We also deal with stakeholder relations' user-friendly client reports and the ethics of programme evaluation.

1.2 Research design for impact evaluation

A typical impact evaluation question would be: Did this programme (and not anything else) cause a change in the state of affairs or the condition of the recipients? In this module we shall concentrate on building a causal argument by means of research designs in order to answer this question to the best of our ability. The module will make use of published evaluation results to show how we use quasi-experimental and experimental designs to provide us with answers to our evaluation questions. We shall also focus on how poor design does not lead to useful answers.

1.3 Monitoring

Monitoring refers to tracking the progress of a programme. In order to do this' we need to understand monitoring terminology and be able to track programme implementation and outcomes over time. In specific instances' we also need to know about local and global monitoring indicators or the monitoring requirements of funders. In this module you will learn how to produce appropriate indicators' measures and standards for specific programme outcomes and track programme progress against these. In addition' you will be able to design a monitoring framework for programme implementation by formulating appropriate data collection questions for coverage' service delivery and programme organization.

1.4 Statistics for evaluation

The main aim of this module is to teach students how to link statistical analysis techniques to programme evaluation questions. Statistics provides a well-grounded collection of tools that can assist us in sense-making and decision-making. The primary value of statistics within the context of programme evaluation is in extending and enhancing the capacity of stakeholders to understand' improve and judge policies and programmes. In other words' statistical analyses can help us answer the evaluation questions we have – and sometimes even those we were not smart enough to ask in advance. In this course' we apply statistical tools to answer evaluation questions and we learn how to write about statistics in a client-friendly manner.

1.5 Programme theories (Specialists in the chosen fields)

A plausible programme theory is a well-researched explanation of what works and what does not work in a specific field. In this module' six specialists will examine the programme theories of some policies and assess whether specific theories of people management' mass communication' HIV/Aids and poverty alleviation programmes work.

APPENDIX 2: University of Cape Town, Short Courses: Certificate in Program Evaluation

2. Short Courses: Certificate in Program Evaluation

2.1.Program Evaluation Practicum Prerequisite: Program Evaluation Practice*

This course provides an overview of evaluation models and the theory and techniques of conducting program evaluations. Content includes measuring variables, reporting evaluation findings, using the results, and the relationships among policy, planning and evaluation.

2.2.Proposal and Grant Writing

This course provides an overview of the process of identifying funding sources and receiving and responding to requests for proposals. Content includes an examination of resources for locating funding sources (including electronic resources), requests for proposals, and the component parts of a grant proposal, writing and submitting proposals, budget planning and justification.

2.3.Business and Project Management

This course provides an overview of the principles and practice of managing programs and projects. Content is taught as a business course and includes basic business administration principles, leadership, record-keeping and reporting, and the legal and ethical responsibilities of project management.

2.4.Statistics I

This course is a study of basic statistical concepts. Content includes descriptive statistics correlation, t-test, chi-square and the use of computer programs for data analysis.

2.5.Research Methods

This course provides an overview of the foundations of research design and the uses and interpretation of research results. Content includes reviewing the literature; developing the research problem/questions; hypothesis testing; experimental, quasiexperimental and other research designs; and the evaluation of research studies.

2.6.Qualitative Research Methods I

This course is a study of the philosophical and methodological foundations of qualitative inquiry combined with practical experience gained from conducting a project. Content includes

theoretical principles and models, data collection and interpretation, and examining qualitative research studies.

*2.7.**Supervised Practicum in Program Evaluation*** *Prerequisite: Advisor Approval

In this course, students register for supervised work on a project approved by their advisors. The required research paper/evaluation report must demonstrate a student's ability to perform independent work and show evidence of professional-level writing skills.

2.8.Educational Measurement I

This course provides an overview of the theory and practice of testing and measurement in educational settings. Content includes assessment purposes, validity and reliability, assessment techniques and communicating assessment findings.

APPENDIX 3: Master's degree in Program Evaluation, Duquesne University, UK

3. Coursework Modules

3.1 Program Evaluation Practice* *Prerequisite: Program Planning and Evaluation*

This course is an advanced study of evaluation models, theory and techniques in program evaluation. Content includes experimental design, cost analysis, public program evaluation and ethics. Students participate in field applications.

3.2 Decision-Oriented Educational Research* *Prerequisite: Research Methods*

This course focuses on the vital role of research for improving educational policy and managing educational systems. Content includes the systems approach to educational research and evaluation, client and stakeholder participation, monitoring educational systems, and developing and using management information systems.

3.3 Program Evaluation Practicum* *Prerequisite: Program Evaluation Practice*

This course is designed for students seeking advanced understanding and skill development in program evaluation. Students participate in field-site program evaluations under the supervision of an approved faculty member.

3.4 Statistics II* *Prerequisite: Statistics I*

Content includes theoretical concepts and procedures for simple and multiple regressions, ANOVA and ANCOVA, and the use of computer programs for data analysis.

3.5 Qualitative Research Methods II* *Prerequisite: Qualitative Research Methods I*

This course is designed for students seeking advanced understanding of and practice in qualitative inquiry, with a focus on a specific qualitative application, a project which will employ the use of qualitative data, or a publishable paper. This course can be taken independently.

APPENDIX 4: University of Johannesburg: Department of Public Governance

4.1. Masters Coursework Programme in Policy Evaluation

Courses offered:

Module 1: Technologically Integrated Public
Module 2: Policy Evaluation Theories, Models & Processes
Module 3: Policy Indicator Development & Application
Module 5: Policy Evaluation Research Methodology
Module: Minor Dissertation
Masters Coursework Programme in Policy Evaluation, University of Johannesburg

Module 1: Technologically Integrated Public

- Describe & explain the characteristics of policy decision making in the public sector and the factors that influence it.
- Describe & explain the role of electronic management information and computer support systems in policy decision-making.
- Experience with the use of electronic aids for improved policy decisions through practical assignments
- Select and apply selected electronic aids for facilitating and optimizing public policy decision-making.

Module 2: Policy Evaluation Theories, Models & Processes

- Define and explain and monitoring and evaluation.
- Describe and explain monitoring and evaluation as higher order policy managements functions and policy management tools.
- Describe and explain the context of monitoring and evaluation in the public sector.
- Describe and explain the steps to establishing and institutionalizing an outcome-based monitoring and evaluation system.
- Describe and explain various approaches and techniques for monitoring and evaluation.
- Describe and explain reporting requirements for monitoring and evaluation.

Module 3: Policy Indicator Development & Application

- Describe and explain the role and importance of indicators
- Describe and explain the requirements and characteristics of “good” indicators
- Describe and explain various types and classifications of indicators

- Identify and describe problems with the current indicators used in their environment
- Systematically improve or develop more appropriate indicators for various levels of the programme, project or policy system
- Develop indicators for assessing and measuring sustainable development

Module 5: Policy Evaluation Research Methodology

- Explain the real world context within which evaluations take place
- Explain and apply the seven steps of the real world evaluation approach
- Explain and apply the use of programme theories and programme logic in real world evaluations
- Explain and apply appropriate real world quantitative and qualitative evaluation designs.
- Explain and apply appropriate real world quantitative and qualitative evaluation methods
- Explain and apply mixed methods approaches to real world evaluation designs
- Apply optimal evaluation designs and methods in real world conditions

Module: Minor Dissertation

- Identify an appropriate research problem and goals to study
- Identify an optimal research design and methodology to investigate the problem
- Undertake and complete the research successfully
- Write the research report

APPENDIX 5: Melbourne Graduate School of Education

5.1 Master of Evaluation

The program aims at developing professionals interested in management skills in program evaluation. Under this program students can choose to undertake one of two streams in the Master of Evaluation - Coursework or Coursework and Thesis which can be completed in two years part-time or one year full-time. The following courses are taken:

- Debates in Evaluation
- Recent Approaches to Evaluation
- Evaluation Capacity Development and Change
- Qualitative Methods
- Introduction to Quantitative Methods
- Mixed Methods Research and Evaluation
- Evaluation Project
- Impact Evaluation: Principles and Practice

5.1 Post Graduate Certificate in Evaluation

This is a professional development course for students who wish to take a leadership role in program evaluation. Students in this program can enroll as fulltime (6 months completion) or part-time (1 year completion), as well as on-campus or off-campus. According to the Melbourne Graduate School of Education website, the components of the graduate certificate course aims to enable students to:

- demonstrate knowledge and understanding of evaluation theory and practice;
- develop strong data collection and analysis skills; and importantly
- apply these skills and understandings to a range of professional settings.

Regional Universities Forum for Capacity Building in Agriculture

Monitoring and Evaluation Capacity Building Strategy

Strengthening Member University Capacity for M&E/Learning

Prepared by ALINe

July 2012 DRAFT

Table of Contents

1. Introduction

RUFORUM is a coalition of Universities that works to strengthen the capacity of universities to produce high-quality, demand driven agricultural research aligned to national priorities and small-holder farmers needs as well as to train the next generation of agriculture sector professionals, equipped with the knowledge, skills and attitude required to become dynamic change-makers in this complex and challenging domain. RUFORUM is served by the RUFORUM Secretariat (RS), which supports universities – and more specifically agricultural faculties – through a variety of intervention strategies, including: making grants to support improved research processes, providing various forms of on-going support to Principle Investigators (PIs), putting in place quality assurance mechanisms, reviewing curricula and training programs, building the capacity of training coordinators in universities, developing and promoting a variety of short but cutting-edge skill enhancement courses, supporting various university capacity development activities (e.g. related to ICTs, M&E, gender policies) and facilitating the functioning and governance of RUFORUM itself.

To support this work, the development of a robust, effective and usable approach to Monitoring Evaluation and Learning (MEL) is key to enabling RUFORUM to keep track of its activities, to assess its performance and to learn and improve on the basis of evidence about what works and what does not. Accordingly, the RS has been working to develop a MEL framework that will help it to navigate the changes to which it seeks to contribute by gathering and using various kinds of evidence in a systematic manner. While this MEL framework is presently oriented primarily toward serving the needs of the RUFORUM Secretariat, there is a strong recognition that member universities would benefit substantially from having their own MEL frameworks and systems in place; and that RUFORUM as a whole would benefit if member universities were integrated in appropriate ways with the current RUFORUM Secretariat MEL framework.

More broadly, the recent of capacity assessment commissioned by RUFORUM of M&E capacity within a sample of member universities revealed that universities' own M&E/Learning systems are weak. For the most part, the systems they have in place are ad hoc, there is a lack of dedicated or specialised staff assigned to working on M&E/Learning and information that is collected is generally not stored in an accessible manner. Having said this, there do exist a variety of quality assurance and performance management mechanisms of different kinds. Typically, however, these tend to be restricted in scope to a relatively narrow range of conventional measures (e.g. student performance) and are not particularly oriented to measuring the contribution made by universities to outcomes at the community or national levels. During the workshop conducted in June, representatives of 5 member universities reflected on some of the key aspects (performance dimensions) of M&E/Learning within their universities that presented the greatest challenge. The top three challenges identified were in the areas of:

1. Learning and improving on the basis of evidence;
2. Enabling context for operationalising M&E/Learning systems;
3. Clear roles and responsibilities and adequate time allocation for staff to do M&E;

Beyond the universities, in the wider agricultural sector, there is also evidence that indicates critical capacity limitations in the field of M&E, particularly in the agricultural sector. At present there is a notable absence in universities providing high quality training programmes in

M&E/Learning. Wherever M&E is being taught it is usually as a sub-component within project management. There are also no full length MScs in M&E available within the region. As such, RUFORUM Secretariat has initiated a process of developing course modules for both short and long courses in M&E that could be provided within the region. However, in order to ensure that these courses are delivered effectively, the required capacities – both within the universities and beyond – will need to be harnessed and developed.

The following section of this document proposes a broad set of strategies to strengthen the capacity of member universities (faculties) in terms of (1) their own M&E/Learning practices and systems and (2) their ability to deliver high quality training to prepare professionals who can respond to the demands of the sector. The strategies presented herein are based on (a) earlier work carried out by RUFORUM since 2009 focusing on capacity assessment and the initial identification of strategies to strengthen university capacity for M&E in 2012; (b) a recent capacity assessment conducted in 2012 by NIDA to update the capacity assessment and explore issues of curriculum in more depth; (c) a workshop with representatives of 5 member universities as well as a number of M&E experts from the region to develop M&E course modules and to review M&E capacity gaps in member universities and strategies to address them.

The final section indicates the way forward and includes a table containing proposed short and long term strategies for strengthening the M&E capacity of member universities in both the practice and teaching streams.

2. Strategies for strengthening M&E capacity

Capacity for M&E/learning in member universities is required both for universities to implement their own M&E/learning systems for continuous improvement and for universities to be able to provide high impact training on M&E/learning to prepare professionals for the emerging needs of the region. This section is divided into two parts. The first part outlines strategies for strngthening university capacity to do their own M&E/Learning. The second part outlines strategies for strengthening university capacity to teach M&E/Learning.

2.1. Capacity for doing M&E/Learning

Strengthening the capacity of universities in terms of M&E/Learning demands much more than the provision of training and information. Universities are large organisations with well-established structures, protocols and procedures and their own internal dynamics. RUFORUM currently works primarily with five categories of individuals at the university level: Vice Chancellors (VCs), Deans (of the agricultural faculties), Principle Investigators (PIs) and Training Coordinators (TCs) and students through its various support activities. Consequently, any strategy aimed at strengthening university capacity for doing good M&E must (a) build on existing capacities; (b) work with and through existing structures; (c) work strategically with key individuals within the universities.

Furthermore, strategies to strengthen M&E capacity at the university level should be careful to pay attention both the expected role of universities in the RS M&E framework *and the universities' own M&E/Learning requirements*. While a considerable degree of convergence may be desirable and advantageous, this should not be taken for granted. *It is important to recognise that the success of an M&E/Learning system is fundamentally tied to its relevance to its users*.

In order for universities to be able to do their own M&E/Learning well some key elements need to be in place. These include: [list of key elements based on the list prepared during the workshop]

2.1.1. Creating an enabling environment

In order for M&E and Learning to be successfully deployed, the creation of an enabling environment is key. The enabling environment refers to a wide range of contextual factors that can facilitate or encourage the allocation of adequate resources to M&E/Learning activities.

Key elements here include a **supportive leadership** that:

- Has a basic grasp of M&E;
- Recognises its importance and the contribution it could make to improved university performance;
- Creates the time and space for staff to engage in M&E activities;
- Encourages openness about failures and challenges;
- Rewards and recognises learning based on evidence;
- Prioritises M&E and Learning at a strategic level.

Beyond this it is necessary to promote incentives that encourage M&E/Learning. Thus, building M&E requirements into the provision of grants provided by RUFORUM Secretariat, influencing other concerned actors including national governments and donors to similarly demand evidence of results as well as evidence that universities are implementing M&E/Learning systems can play an important role. More generally, raising the profile of M&E and learning in all relevant RUFORUM Secretariat publications, communications and during events can contribute to sensitising member universities of the value and importance of doing good M&E. Additionally, as the RUFORUM Secretariat begins to operationalise its own M&E/Learning system, it will be able to regularly communicate the evidence and lessons learned through using this system to all member universities.

2.1.2. Advocating for improved M&E

As revealed by the capacity assessment study and reflections from staff, current understanding and appreciation of the value and contribution of M&E remains somewhat limited. Raising awareness about the status of current practice, with a particular emphasis on highlighting key gaps, challenges and opportunities, can help to sensitise key actors within the university system about areas where a focused effort to strengthen M&E could add value. Particular attention should be given to using results emerging from the recently conducted capacity assessment study and inputs received during the recent M&E workshop. The identified key issues can then be communicated through a variety of media, including:

- Directly with VCs and Deans through the regular meetings of the corresponding governance bodies
- With all concerned staff through the General Assembly and through other events organised with them (e.g. orientations, workshops and other training events)
- Through a short document (e.g. brochure) highlighting the status of current practice, key issues and opportunities, and suggested initiatives for strengthening university level M&E. This could be sent to all PIs and also posted on the RUFORUM website

Ideally, all face-to-face interactions to share these findings should be linked to dialogue about relevant practices and systems within the respective universities (e.g. quality assurance mechanisms) and the gaps and challenges associated with them. This will help the concerned actors reflect on the gap between current practice in their respective contexts and what is proposed.

Furthermore, RS can identify leading M&E/Learning practitioners – both from within its network and beyond, depending on their availability – and invite them to give informative and inspirational talks that explain the value and gains from implementing M&E using real world examples. This can be included as part of any M&E-related workshops for university staff and also through special events conducted in selected universities, based on demand/interest.

2.1.3. Linking discussions on M&E within universities to the RUFORUM Secretariat M&E/Learning framework

Another critical starting point for the RS to amplify the focus on M&E within universities is to link

its discussion on M&E within universities to its own ongoing work on developing the RUFORUM M&E/Learning framework and strategy. Through the process of developing the RS M&E/Learning framework, the Secretariat has become aware of a number of elements – including outcomes, indicators and specific tools – that could benefit from deeper engagement and consultation with staff within universities. Thus for example, various indicators related to changes to which the Secretariat aims to contribute within the universities could benefit from being discussed with the universities. This would not only help to ensure that there is a mutual understanding of how performance is to be measured, but also to ensure that the indicators and tools used by the Secretariat are appropriate. More generally, engagement of key individuals within the universities in discussions regarding the ToC and corresponding outcomes and indicators will serve to both sensitise them to the Secretariat's current knowledge and practices and also provide them with the opportunity to enrich the Secretariat's own thinking. This process can help to arrive at a more comprehensive and shared framework for assessing the performance of RUFORUM; one to which all members have contributed and over which they have a sense of ownership. This can also serve as an entry point to more detailed discussions about M&E within individual universities/faculties.

In addition to this, RS can make effective use of its own ongoing M&E activities including, in particular, its work with PIs working on RUFORUM supported grants. Here RS has the possibility of both communicating its own emerging M&E framework, orienting PIs on the use and value of the M&E system and generating evidence by using the system that can be used to communicate the benefits and advantages of a robust and user-friendly M&E system. In addition to actively communicating and sharing the data and lessons learned from the use of the RS M&E system with key actors in universities (VCs, Deans, PIs, etc., including from other universities), PIs can be supported in advocating for improved M&E practices within the universities. In particular, they can use their deepened understanding of M&E to help effectively communicate the benefits and appropriate approaches to strengthening M&E within the university to their colleagues and managerial staff within the university.

2.1.4. Building individual capacities

In addition to raising awareness about the importance and value of M&E, there is a need to build the capacity of university staff on practising improved M&E. The capacity assessment has clearly revealed that individual staff capacity (both in terms of theoretical knowledge and practical skills) remains a challenge that needs to be addressed, particularly concerning how effective M&E can be established and put in place. Unless individuals possess the required competencies in M&E, they will not be in a position to implement the M&E system. In order to address this the following actions (beyond those already discussed above) are recommended:

- Conduct a detailed needs assessment of university staff with respect to M&E training. This can build on the existing capacity assessment but should be more closely linked to identifying the specific needs and demands of staff in the universities for specific skill enhancement on M&E.
- A training of trainers (TOT) can then be organised to prepare a cadre of skilled M&E trainers (e.g. drawn from each country) who can then play a strategic role in training their colleagues and co-workers in their own university and in other universities in their respective country. Participants in the TOT can be drawn from the pool of PIs, TCs and

Deans currently engaged in RUFORUM activities. They should be individuals who already have knowledge and experience of M&E, with the focus of the TOT being to sharpen their skills, bring them up to date and agree on appropriate university and country level follow-up strategies and actions. Ideally, these trainings could be conducted during the 2-3 month vacations when university staff are likely to have more time available to participate in a residential training.

2.1.5. Connecting individuals to each other

Linked to the above, connecting individuals engaged in M&E related activities is an important part of enabling them to become effective M&E practitioners and champions. While the specific strategies for connecting individuals to each other can be further developed as part or the above-mentioned TOT, the following constitute some key suggested actions:

- Establishing communities of practice (CoP) at the university, country and regional levels. It should be noted here that there is no logical sequence university → country → region. Rather CoPs should be established simultaneously at each level based on the energy and enthusiasm of the individuals participating in them. Connections *across different institutions* and countries can often be easier to establish *and* more functional and vibrant than those within a single institution. They also provide for a more distributed process of learning and sharing, and can help to provide solutions to those working within universities, e.g. finding the most effective ways of setting up CoPs in their respective institutes, identifying effective strategies for promoting/advocating M&E in their respective institutions, sharing knowledge on tools, resources and approaches, etc. RUFORUM can play a critical role in facilitating the establishment of such CoPs by:
    - Identifying interested individuals within universities (PIs, TCs, Deans, etc.) through a web-survey or email;
    - Helping interested individuals to link up with each other, for example, by establishing an e-platform/social network for these individuals;
    - Organising occasional regional workshops or events for these individuals to share experiences, formulate strategies and interact with leading M&E practitioners (e.g. 'M&E clinic' for individuals to work together to solve each others' problems);
    - Providing initial facilitation inputs until the CoPs becomes self-sustaining;
    - Encouraging universities to ensure that the development and implementation of key M&E/Learning strategies are assigned to active participants in the CoPs;
- Beyond these CoPs, RS should help to link individuals within universities to wider M&E-related networks including the African Evaluation Association (AfrEA), which organises periodic regional conferences, as well as to other M&E practitioners in the NARS. In some countries there may be scope for linking with national evaluation associations, though many of these platforms are not functional.
- The RS can also contribute by supporting the generation of new knowledge on M&E, for

example by commissioning research on M&E and supporting research grant proposals address M&E-related issues.

2.1.6. Developing M&E plans and learning strategies

Although most universities develop strategic plans that set out objectives and targets for a number of aspects of their work and a number of universities have established some form of quality assurance mechanism, evidence indicates that there is significant scope for improving the way this is done. Thus, for example, the scope of most quality assurance mechanisms remains limited with the rhetoric of quality control and performance management exceeding the practice. This led to some workshop participants referring to them as 'window dressing' and remarking that often they do not contribute very significantly to evidence-based learning and improvement. Furthermore, many universities gather data that they require on an ad-hoc basis through circulars, emails and other mechanisms. Often the data gathered in this manner is not stored in a retrievable format and the process can prove time-consuming and inefficient. Furthermore, significant elements of what may well prove useful for universities to measure may not have been factored in and there are concerns that the data is not used in the most effective manner.

By going through a process to establish clear M&E plans and learning strategies, universities can gain the opportunity to (a) reflect on their strategic focus by clearly defining the outcomes they seek to achieve and how they will contribute to achieving them; (b) establish clear and systematic monitoring plans and Management Information Systems to capture, store and share data; (c) ensure that they are putting in place the required mechanisms and processes that enable staff and teams within the universities to use the evidence generated to make decisions and improve their performance. Attention can be paid during this process to ensuring the optimal degree of alignment between the RS M&E/Learning framework and the universities' own frameworks.

At present, however, it should be noted that the level of demand for such new M&E plans and learning strategies within universities remains to be determined. Furthermore, it is beyond the scope of RUFORUM to directly support the development of university-level M&E plans and learning strategies. Though there may be some scope for working specifically on M&E plans and learning strategies within agriculture faculties, universities tend not to want the establishment of new systems and approaches to be limited to just agricultural faculties. On the other hand, there may be considerable scope for RS in helping universities link with reputed practitioners who could then provide the required support.

2.1.7. Building on existing systems and processes

It has been emphasised repeatedly throughout both the capacity assessment and workshop processes that attempts to strengthen M&E/Learning processes should build on existing systems and processes that are currently in place within universities. However, in order to build on these systems and processes it is necessary first to adequately map them and to identify the specific opportunities and challenges that they present. This work can best be carried out by those currently working within universities, and particularly VCs, Deans and champions from amongst the PIs and TCs (ideally those also connected to the CoPs). Providing the required support to these

individuals through the CoPs, through periodic M&E/Learning related workshops and through brokering linkages with experts and consultants, as noted in point 2.1.5 above.

2.2. Capacity for teaching M&E

Alongside building capacity at the university level for improving the way that M&E/Learning is practised so as to manage and improve university performance, the demand for the creation of specialised long (i.e. MSc) and short courses on M&E/Learning have also been highlighted. A series of proposed modules is currently being developed. As noted earlier, none of the member universities have any full-length or standalone M&E/Learning courses at the Bachelors or Masters level. Rather, where M&E is being taught, it is primarily in the form of a module within a more general course, often with a primary focus on project management. Typically, the practical component of such courses remains absent. There is, therefore, a significant gap to be filled through the provision of a variety of specialised short and long courses on M&E/Learning that can equip graduates with the knowledge, attitude and skills that they require to become high-performing M&E professionals.

2.2.1. Conducting a needs assessment of teaching staff

The first step in building the capacity of teaching staff to deliver high quality M&E courses is to ensure that they have the required skills and knowledge. To achieve this, a needs assessment of teaching staff can be conducted by the RUFORUM Secretariat, on the basis of the completed modules (N.B. Steps for completion of the curriculum design for the M&E processes is not documented here). This can be rolled out on-line and will provide the basis for design of the retooling training.

2.2.2. Intensive retooling of teaching staff within universities

Once the M&E curricula/modules that are currently under development have been prepared, a needs assessment of teaching staff can be conducted to identify training needs. On the basis of this assessment, residential training can be provided to teaching staff on the relevant courses and modules. Such a training will equip staff (who already have knowledge and experience of M&E) with the up-to-date knowledge and skills required for them to carry out the various steps involved in refining the course design for launching them in their respective universities. Furthermore, those participating in these courses will be in a position to serve as ToTs back in their respective universities and countries.

2.2.3. Encouraging retooled staff to update modules in existing courses

Retooled teaching staff can be motivated and encouraged by RUFORUM and by their Deans or VCs to incorporate elements from the new training courses into existing courses without necessarily reviewing or redesigning the course as a whole. This will help to bring marginal improvements in quality and provide the teaching staff with the opportunity to apply and test their new knowledge directly with students, building their capacity and confidence at the same time as generating important lessons about the practical delivery of the courses. It can also, potentially, contribute to

building awareness and recognition of M&E within the universities.

It should be noted that in order for Deans and VCs to provide the required motivation and support for this at the university level, it is is important that they are well-oriented on M&E.

2.2.4. Exploiting opportunities for reviewing/introducing courses

Opportunities for reviewing or introducing new courses typically arise as a result of various ongoing processes within universities, such as the preparation of strategic plans or the completion of a fixed term training programme. As such, if changes are to be made it is important that the opportunities for doing this are identified in advance.

2.2.5. Creation of a pool of regional M&E experts

In order to ensure that the courses are of a high quality, RUFORUM Secretariat can help to establish a pool of regional M&E experts who can contribute to the delivery of the various modules. Identifying regional and international experts who specialise in different aspects of M&E/Learning will help to ensure that course content is up-to-date and filled with relevant practical cases from contemporary regional contexts.

2.2.6. Linking M&E teaching staff to the M&E CoP

M&E teaching staff should be linked to the M&E CoP in order to support on-going learning amongst teaching staff and to facilitate the on-going improvement of the courses over time.

3. The way forward

The strategies for building capacity set out in this document outline some of the critical interventions that the RUFORUM Secretariat can carry out in order to strengthen capacity of member universities to both practice and teach M&E/Learning. The strategies for strengthening practice and for strengthening teaching are to some extent complementary, particularly as engaging in both aspects, if carefully coordinated can generate synergies at the university level. Having said this, the establishment of training courses can still go ahead even without universities doing work on their own M&E/Learning systems and processes. Similarly, universities may strengthen their own M&E practice without necessarily providing training for students. In either case, RUFORUM Secretariat will need to conduct an assessment of the readiness and interest of different universities to engage with both streams of work and to foster the appropriate linkages between the individuals within universities in both streams.

	Practising M&E	**Teaching M&E**
Short-term (first 6 months)	• Communicate results of M&E capacity assessment and recent workshop along with the latest ToC diagram to Deans, VCs, PIs and TCs using appropriate opportunities (Deans Committee and board meetings, Biennial, PI orientation sessions, etc.). Use these occasions to validate but also to build interest and consensus around strategies for strengthening M&E in member universities. • Organise more detailed discussions with key individuals in universities on those elements of the RUFORUM Secretariat ToC that will require support and contribution of the universities for data collection. Provide required training and orientation to concerned staff to ensure that they understand what is required of them. • Identify interested individuals in each university with experience in M&E who are interested in becoming part of a CoP. Connect them to each other through a social networking platform through which	• Review and finalise the modules by: (1) circulating to workshop participants for comments; (2) circulating to an expert review committee; (3) finalising course documents. Once prepared, the course documents should be circulated to all member universities and should also be made accessible on-line. • Identify a pool of regional experts to support training delivery, drawing on individuals from the regional M&E CoP where possible. • Prepare a strategy for piloting the roll-out of the M&E MSc in selected universities. • Conduct a needs assessment of teaching staff in universities to identify their retooling needs (on the basis of the newly proposed modules) • Provide a retooling training to teaching staff to equip them to teach. • Advise Deans and VCs to support teaching staff and encourage them

	they can elaborate their M&E experience, areas of expertise and what they want to learn more about.	to incorporate elements from the new M&E modules into their existing courses wherever possible.
Medium-term (beyond 6 months)	• Provide ongoing support to M&E champions within universities, helping them think through how they can strengthen M&E practice within their own universities. • Facilitate the social network and encourage the establishment of CoPs within and across universities and countries. Help individuals within these CoPs connect to other individuals beyond the RUFORUM network. Provide organisational support to CoPs to help them become more independent and self-driven. • Wherever universities demonstrate interest in developing their own M&E/Learning frameworks and systems, help broker linkages with consultants, experts and donors who may be in a position to provide the required support. • Organise periodic workshops for CoP members to have face-to-face interactions for learning/sharing and for further developing strategies to strengthen M&E practice within the universities.	• Roll out the MSc course and short courses on a pilot basis according to the piloting strategy that has been developed. • Monitor implementation on an on-going basis to learn from the process. For the MSc course conduct an evaluation at the end of each year of the course. For the short-course conduct the evaluation upon completion of the course. Follow the RS Monitoring Plan for more detailed guidance on this.

M&E Capacity Building Workshop
18-20 June 2012

M&E Capacity Building

Background, Design, Activities, Status and Way Forward

Washington O. Ochola

The RUFORUM M&E System Overview

- Background to Project
  - Context of M&E for agricultural research, training and development
  - M&E practice at Secretariat and Universities
  - Gaps in M&E Capacity
- Project Design and Activities
- Implementation Status
- Future/Upcoming Activities and Operationalizing the Recomendations

Background

- Tracking agricultural production, agricultural training, research and extension systems would rely on skills and competencies in processionals and institutions
- Decades of limited institutional change, poor funding and neglect for professional performance management and M&E have lead to current capacity gaps in the region.

Rationale

M&E is for managing and assessing the **relevance, quality, efficiency, effectiveness** and **impact** of investments in agricultural training, research and extension.

The reported inadequate capacity for M&E among agricultural and development experts and researchers calls for a regional approach to university support; designing and implementing short and long term courses in M&E.

Assessing the Situation (1)

2009 baseline survey on M&E established that there exist at varying levels of rudimentary M&E systems.

- increasing trend towards performance management and growing culture of being accountable to donors and stakeholders.
- Mainly monitoring activity implementation (resource utilization, activities undertaken and to some extent translation of inputs into outputs) with little if any focus on outcome and impact monitoring
- Many universities currently fuse and confuse M&E of teaching and learning processes with systems for quality assurance in teaching alone

Assessing the Situation (2)

2009 baseline survey on M&E established that there exist at varying levels of rudimentary M&E systems.

- M&E of research processes and outcomes is solely the responsibility of individual research implementers in the universities.
- Units exist for approving, registering and cataloguing all research projects and coordination of research projects and programs
- M&E of research activities is relegated to mere provision of progress reports that is largely activity–based and not so much against performance indicators.

Assessing the Situation (3)

2009 baseline survey on M&E established that there exist at varying levels of rudimentary M&E systems.

The evaluation of university research projects is mostly externally driven and or restricted to donor audience.	Attempt to inventorize research but this information is seldom databased to enhance cross-thematic searching and sharing	There is also no formal M&E training whether at graduate or undergraduate level

Capacity Challenge

- Exacerbated by **institutional challenges** relating to the diverse objectives of agricultural research, training and extension programs
- **Complexity** of cause-and-effect impact of agricultural development due to many and diverse factors
- Inherent **uncertainty** in research, training and extension outcomes and technology adoption, making it difficult establishing timeframes for technology development

Calls for a dynamic but long-term regional M&E capacity strengthening programs and projects.

The Project Objectives

- **M&E Capacity & Capacity Needs**
  - Secretariat
  - University
- **Strategy**
  - Short-term capacity building in M&E
  - Long term M&E capacity building
- **Design**
  - Modules and elements of short course/MSc level M&E

Output: "Enhanced capacities in M&E for agricultural research, training and outreach in the RUFORUM network.

OP1	•documentation of specific individual and university capacities and capacity needs for M&E
OP2	•Strategies for short-term courses for M&E capacity enhancement
OP3	•Strategy and elements of a long term M&E training course
OP4	•Status and demand for M&E capacity building

Activities

- Scoping Studies
- Workshop
- SurveyMonkey – online survey
- University visits and survey
- RUFORUM Mini-reviews (I and I)M&E Strategy Development
- M&E Course Development

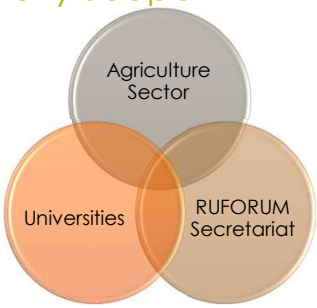
M&E Issues

- Does it take place in research, in training programs, in partnerships?
- What courses exist? Do a rapid assessment of existing curricula: what topics does it cover? In which course / program is it housed? What reference material (books, websites, journals) are referenced?
- Who are the teaching staff, and what is their expertise?

Capacity Building Strategy

- Who requires capacity building?
- What type of capacity building is required?
- What can RUFORUM accomplish?
  - Short term
  - Medium term
  - Long term

Capacity Scope



How to Improve M&E Capacities Structures and Systems of the RUFORUM Secretariat and the Grantees.

- **Obj. 1:** How to effectively manage, monitor and evaluate grants (CGS)
- **Obj. 2:** To effectively manage, monitor and evaluate RUFORUM funded regional post- graduate programs
- **Obj. 3:** To effectively use the results of M&E to build evidence based knowledge for dissemination and advocacy

How to Improve M&E Capacities in the Universities

- Obj. 1: Universities having capacity to monitor and evaluate their activities
  - Senior management in universities
  - Mid-level management
  - Deans, Finance & QA Managers
  - Lecturers & researchers
  - Principal Investigators
  - Postgraduate student supervisors, young lecturers who have interest in M&E (champions)
  - Students
  - University as an organization
  - Technicians & support staff
- Obj. 2: Building M&E capacity of universities and for the wider agriculture sector
  - Students and professionals who come for training
  - Mid-career professionals already in training

Project Termination and Way Forward

- Additional studies, scoping and stakeholder engagement on-going
- Draft Strategy in place, to be validated in this workshop
- Draft M&E module to the finalized in and after this workshop
- Project comes to an end 30th June 2012
- Design of new proposal()s to operationalize the strategy
- On-going negotiations with IDRC to fund next phase

Appreciation of Support

Scoping for M&E Capacity Building Strategies and Programs

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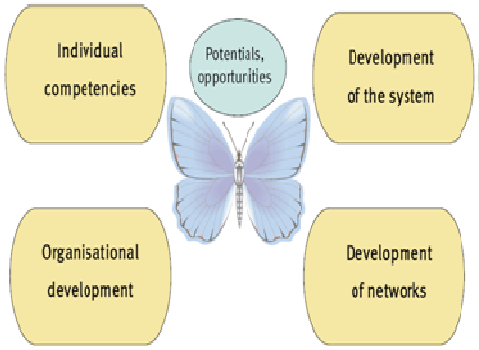

Regional Universities Forum for Capacity Building in Agriculture

M&E Capacity

Objectives

1. Collate university specific and regional M&E capacity enhancement needs and niche
2. Design strategies for short-term M&E capacity strengthening courses
3. Design a new regional M&E MSc programme including the niche, graduate profile, course design, learning outcomes, module description and annotated 1. outline/content
4. Design strategies for mobilizing resources for implementing the short-term M&E course as well as the propose regional MSc programme in M&E for agricultural development.

University M&E Capacity

Background

Agriculture remains the main engine for socio-economic development. Continent-wide master plans like the African Union's New Partnerships for African Development (AU-NEPAD's) Comprehensive African Agriculture Development Programme (CAADP) recognizes this and has set the goal of 6% per annum growth for the sector. Very robust agricultural performance tracking systems are however lacking in the region. This is coupled with week agricultural productivity information management systems.

Tracking agricultural production, agricultural training, research and extension systems would rely on skills and competencies in processionals and institutions to track processes, quality, achievements and impacts of agricultural production and other development systems. Decades of poverty and neglect for professional performance management and M&E have lead to current capacity gaps in the region. There is therefore a need for advancements in monitoring and evaluation and a results-based agricultural productivity management.

There is need for a significant production, from universities and other agricultural tertiary institutions, high caliber professions training in M&E as well as resident, elaborate and innovative capacity for M&E in various institutions and government systems.

Regional Workshop

A regional scoping workshop on *"Strengthening Capacity for Monitoring and Evaluation of Agricultural Training and Research in Eastern, Central and Southern Africa"* was held from 20th to 22nd July, 2011 in Kampala, Uganda. It was attended by representatives from twelve RUFORUM member universities, National Research Institutions, private consultants and NGOs. The workshop was organized to:

1. Collate university specific and regional M&E capacity, capacity needs and demand for conducting M&E as well as for teaching and doing research in M&E
2. Design a strategy for short-term M&E capacity strengthening courses
3. Design a strategy for developing and institutionalising a long-term M&E training within RUFORUM universities and how that strategy would be developed and rolled out
4. Design strategies for mobilising resources for implementing the short-term M&E course as well as the long -term training programmes in M&E for agricultural development

RUFORUM
Capacity Building in Agriculture

IDRC CRDI

M&E Practice, Research and Training

- Enabling and Empowering RUFORUM & member Universities to Track Effectiveness and Impact of Agricultural Training & Research
- Universities capacity to monitor and evaluate their activities for improved performance management and effectiveness in outreach
- Cadre of M&E professionals within RUFORUM member universities and the broader agricultural sector that is able to mange performance and change.

Scoping for M&E Capacity Building Strategies and Programs

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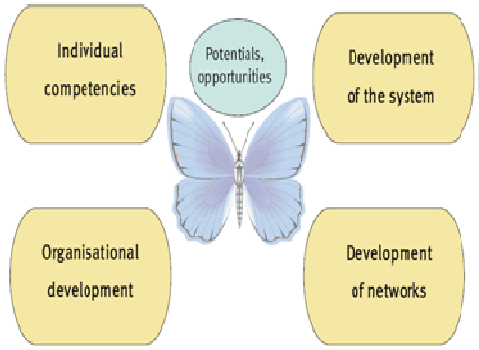

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